

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



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

TCEQ

TEXAS COMMISSION ON ENVIRONMENTAL QUALITY

PLAIN LANGUAGE SUMMARY FOR TPDES OR TLAP PERMIT APPLICATIONS

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

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

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

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

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

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

Keenan North Development, Ltd. (CN TBD) proposes to operate Keenan North WWTP (RN TBD), a domestic wastewater treatment plant. The facility will be located at approximately 1 mile northwest of the intersection of Keenan Cutoff Rd and FM 2854, in Montgomery, Montgomery County, Texas 77355. Requesting to permit a WWTP to treat up to 0.495 MGD.

Discharges from the facility are expected to contain five-day carbonaceous biochemical oxygen demand (CBOD5), total suspended solids (TSS), ammonia nitrogen (NH3-N). Domestic wastewater will be treated by a complete mix mode of activated sludge process, including screening, aeration, final clarification, and disinfection..

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

AGUAS RESIDUALES DOMESTICAS /AGUAS PLUVIALES

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

Keenan North Development, Ltd. (CN TPD) propone operar Keenan North WWTP RN TBD, una planta de tratamiento de aguas residuales. La instalación estará ubicada en aproximadamente 1 milla al noroeste de la intersección de Keenan Cutoff Rd y FM 2854, en Montgomery, Condado de Montgomery, Texas 77355. La solicitud es para la instalación de WWTP por 0.495 MGD.

Se espera que las descargas de la instalación contengan bioquímica de oxígeno carbonoso (CBOD5), solidos suspendidos totales (TSS), nitrógeno amoniacal (NH3-N). Las aguas residuales domésticas. estará tratado por un modo de mezcla completa del proceso de lodos activados, que incluye cribado, balsas de aireación, clarificadores, digestores aerobios y desinfección.

TEXAS COMMISSION ON ENVIRONMENTAL QUALITY



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

PROPOSED PERMIT NO. WQ0016686001

APPLICATION. Keenan North Development, Ltd., 28408 Sweetgum Road, Suite B3, Magnolia, Texas 77354, has applied to the Texas Commission on Environmental Quality (TCEQ) for proposed Texas Pollutant Discharge Elimination System (TPDES) Permit No. WQ0016686001 (EPA I.D. No. TX0147095) to authorize the discharge of treated wastewater at a volume not to exceed a daily average flow of 495,000 gallons per day. The domestic wastewater treatment facility will be located approximately 1.0 mile northwest of the intersection of Farm-to-Market Road 2854 and Keenan Cutoff Road, near the city of Montgomery, in Montgomery County, Texas 77316. The discharge route will be from the plant site to Mound Creek Tributary No. 54, thence to Mound Creek, thence to Lake Creek. TCEQ received this application on December 11, 2024. The permit application will be available for viewing and copying at Charles B. Stewart – West Branch Library, public records viewing area, 202 Bessie Price Owen Drive, Montgomery, in Montgomery County, Texas prior to the date this notice is published in the newspaper. The application, including any updates, and associated notices are available electronically at the following webpage:

https://www.tceq.texas.gov/permitting/wastewater/pending-permits/tpdes-applications. This link to an electronic map of the site or facility's general location is provided as a public courtesy and not part of the application or notice. For the exact location, refer to the application.

https://gisweb.tceg.texas.gov/LocationMapper/?marker=-95.6625,30.332222&level=18

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

ADDITIONAL NOTICE. TCEQ's Executive Director has determined the application is administratively complete and will conduct a technical review of the application. After technical review of the application is complete, the Executive Director may prepare a draft permit and will issue a preliminary decision on the application. Notice of the Application and Preliminary Decision will be published and mailed to those who are on the countywide 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 www.tceq.texas.gov/goto/cid. Search the database using the permit number for this application, which is provided at the top of this notice.

AGENCY CONTACTS AND INFORMATION. All public comments and requests must be submitted either electronically at https://www14.tceq.texas.gov/epic/eComment/, or in writing to the Texas Commission on Environmental Quality, Office of the Chief Clerk, MC-105, P.O. Box 13087, Austin, Texas 78711-3087. Please be aware that any contact information you provide, including your name, phone number, email address and physical address will become part of the agency's public record. For more information about this permit

application or the permitting process, please call the TCEQ Public Education Program, Toll Free, at 1-800-687-4040 or visit their website at www.tceq.texas.gov/goto/pep. Si desea información en Español, puede llamar al 1-800-687-4040.

Further information may also be obtained from Keenan North Development, Ltd. at the address stated above or by calling Mr. Jonathan Liu, P.E., A&S Engineers, Inc., at 713-942-2700.

Issuance Date: March 18, 2025

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. WQoo16686001

SOLICITUD. Keenan North Development, Ltd., 28408 Sweetgum Road, Suite B3, Magnolia, Texas 77354 ha solicitado a la Comisión de Calidad Ambiental del Estado de Texas (TCEO) para el propuesto Permiso No. WQ0016686001 (EPA I.D. No. TX 0147095) 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 495,000 galones por día. La planta está ubicada aproximadamente 1.0 milla al noroeste de la intersección de Farm-to-Market Road 2854 y Keenan Cutoff Road, cerca de la ciudad de Montgomery, en el Condado de Montgomery, Texas 77316. La ruta de descarga será desde el sitio de la planta hasta el afluente No. 54 de Mound Creek, de allí a Mound Creek y de allí a Lake Creek. La TCEO recibió esta solicitud el diciembre 11, 2024. La solicitud para el permiso está disponible para leerla y copiarla en 202 Bessie Price Owen Drive, Montgomery, em el condado de Montgomery, 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=-95.6625,30.332222&level=18

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

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

OPORTUNIDAD DE UNA AUDIENCIA ADMINISTRATIVA DE LO CONTENCIOSO.

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

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

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

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 DE LA TCEQ. Todos los comentarios escritos del

público y los para pedidos una reunión deben ser presentados a la Oficina del Secretario Principal, MC 105, TCEQ, P.O. Box 13087, Austin, TX 78711-3087 o por el internet at www.tceq.texas.gov/about/comments.html. Tenga en cuenta que cualquier información personal que usted proporcione, incluyendo su nombre, número de teléfono, dirección de correo electrónico y dirección física pasarán a formar parte del registro público de la Agencia. Si necesita más información en Español sobre esta solicitud para un permiso o el proceso del permiso, por favor llame a El Programa de Educación Pública de la TCEQ, sin cobro, al 1-800-687-4040. La información general sobre la TCEQ puede ser encontrada en nuestro sitio de la red: www.tceq.texas.gov.

También se puede obtener información adicional del Keenan North Development, Ltd. a la dirección indicada arriba o llamando a Mr. Jonathan Liu, P.E., A&S Engineers, Inc. al 713-942-2700.

Fecha de emisión 18 de marzo de 2025

Texas Commission on Environmental Quality



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

NEW

PERMIT NO. WQ0016686001

APPLICATION AND PRELIMINARY DECISION. Keenan North Development, Ltd., 28408 Sweetgum Road, Suite B3, Magnolia, Texas 77354, has applied to the Texas Commission on Environmental Quality (TCEQ) for new Texas Pollutant Discharge Elimination System (TPDES) Permit No. WQ0016686001, to authorize the discharge of treated domestic wastewater at a daily average flow not to exceed 495,000 gallons per day. TCEQ received this application on December 11, 2024.

The facility will be located approximately 1.0 mile northwest of the intersection of Farm-to-Market Road 2854 and Keenan Cutoff Road, in Montgomery County, Texas 77316. The treated effluent will be discharged to an unnamed tributary of Mound Creek, thence to Mound Creek, thence to Lake Creek in Segment No. 1015 of the San Jacinto River Basin. The unclassified receiving water uses are limited aquatic life use for the unnamed tributary of Mound Creek, minimal aquatic life use for Mound Creek (upstream of Appendix D section), and high aquatic life use for Mound Creek. The designated uses for Segment No. 1015 are primary contact recreation, public water supply, and high aquatic life use. In accordance with 30 Texas Administrative Code §307.5 and TCEQ's 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 Mound Creek (Appendix D section), which has been identified as having high 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=-95.6625,30.332222&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 Charles B. Stewart – West Branch Library, public records viewing area, 202 Bessie Price Owen Drive, Montgomery, in Montgomery County, Texas. The application, including any updates, and associated notices are available electronically at the following webpage: https://www.tceq.texas.gov/permitting/wastewater/pending-permits/tpdes-applications.

ALTERNATIVE LANGUAGE NOTICE. Alternative language notice in Spanish is available at 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 www.tceq.texas.gov/goto/cid. Search the database using the permit number for this application, which is provided at the top of this notice.

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

Further information may also be obtained from Keenan North Development, Ltd. at the address stated above or by calling Mr. Jonathan Liu, P.E., A&S Engineers, Inc., at 713-942-2700.

Issuance Date: October 1, 2025

Comisión De Calidad Ambiental Del Estado De Texas



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

NUEVO

PERMISO PROPUESTO NO. WQoo16686001

SOLICITUD Y DECISIÓN PRELIMINAR. Keenan North Development, Ltd., 28408 Sweetgum Road, Suite B3, Magnolia, Texas 77354, ha solicitado a la Comisión de Calidad Ambiental de Texas (TCEQ) un nuevo Permiso para el Sistema de Eliminación de Descargas Contaminantes de Texas (TPDES), No. WQ0016686001, para autorizar la descarga de aguas residuales domésticas tratadas con un caudal promedio diario que no exceda los 495,000 galones por día. La TCEQ recibió esta solicitud el 11 de diciembre de 2024.

La planta está ubicada en aproximadamente a 1.0 milla al noroeste de la intersección de Farmto-Market Road 2854 y Keenan Cutoff Road, cerca de la ciudad de Montgomery, en el Condado de Montgomery, Texas. El efluente tratado es descargado al tributaria sin nombre de Mound Creek, de allí a Mound Creek, y de allí a Lake Creek in Segmento No. 1015 de la Cuenca del Río San Jacinto. Los usos no clasificados del agua receptora son uso limitado de vida acuática para Mound Creek. Los usos no clasificados del agua receptora son uso limitado de vida acuática para Mound Creek, uso mínimo de vida acuática para el afluente sin nombre y uso intensivo de vida acuática para Mound Creek. Los usos designados para el Segmento No. 1015 son recreación de contacto primario, suministro público de agua y uso intensivo de vida acuática.

De acuerdo con la 30 TAC §307.5 y los procedimientos de implementación de la TCEQ (Enero 2010) para las Normas de Calidad de Aguas Superficiales en Texas, fue realizada una revisión de la antidegradación de las aguas recibidas. Una revisión de antidegradación del Nivel 1 ha determinado preliminarmente que los usos de la calidad del agua existente no serán perjudicados por la acción de este permiso. Se mantendrá un criterio narrativo y numérico para proteger los usos existentes. Una revisión del Nivel 2 ha determinado preliminarmente que no se espera ninguna degradación significativa en Mound Creek, el cual se ha identificado que tiene alto usos en la vida acuática. Los usos existentes serán mantenidos y protegidos. La determinación preliminar puede ser reexaminada y puede ser modificada, si se recibe alguna información nueva.

Este enlace a un mapa electrónico de la ubicación general del sitio o de la instalación es proporcionado como una cortesía y no es parte de la solicitud o del aviso. Para la ubicación exacta, consulte la solicitud.

https://gisweb.tceq.texas.gov/LocationMapper/?marker=-95.6625,30.332222&level=18

El Director Ejecutivo de la TCEQ ha completado la revisión técnica de la solicitud y ha preparado un borrador del permiso. El borrador del permiso, si es aprobado, establecería las condiciones bajo las cuales la instalación debe operar. El Director Ejecutivo ha tomado una decisión preliminar que si este permiso es emitido, cumple con todos los requisitos normativos y legales. La solicitud del permiso, la decisión preliminar del Director Ejecutivo y el borrador del permiso están disponibles para leer y copiar en Charles B. Stewart – West Branch Library, 202 Bessie Price Owen Drive, Montgomery, Montgomery County, Texas. La solicitud (cualquier actualización y aviso inclusive) está disponible electrónicamente en la siguiente página web: https://www.tceq.texas.gov/permitting/wastewater/pending-permits/tpdes-applications.

AVISO DE IDIOMA ALTERNATIVO. El aviso de idioma alternativo en español está disponible en

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

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 de la fecha límite para presentar comentarios públicos, el Director Ejecutivo considerará los comentarios y preparará una respuesta a todos los comentarios públicos relevantes y materiales, o significativos. A menos que la solicitud sea remitida directamente para una audiencia de caso impugnado, la respuesta a los comentarios se enviará por correo a todos los que enviaron comentarios públicos y a aquellas personas que estén en la lista de correo para esta solicitud. Si se reciben comentarios, el correo también proporcionará instrucciones para solicitar una audiencia de caso impugnado o reconsiderar 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, 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.

Tras el cierre de todos los periodos de comentarios y solicitudes aplicables, el Director Ejecutivo remitirá la solicitud y cualquier solicitud de reconsideración o de una audiencia de caso impugnado a los Comisionados de la TCEQ para su consideración en 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.

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 oportunamente 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 envía comentarios públicos, una solicitud de 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 futuros avisos públicos enviados por correo por la Oficina del Secretario Oficial. Además, puede solicitar ser colocado en: (1) la lista de correo permanente para un nombre de solicitante específico y número de permiso; y/o (2) la lista de correo para un condado específico. Si desea ser colocado en la lista de correo permanente y / o del condado, especifique claramente qué lista (s) y envíe su solicitud a la Oficina del Secretario Oficial de la TCEQ a la dirección a continuación.

Todos los comentarios públicos escritos y las solicitudes de reunión pública deben enviarse a Office of the Chief Clerk, MC 105, TCEQ, P.O. Box 13087, Austin, TX 78711-3087 o electrónicamente a www.tceq.texas.gov/goto/comment dentro de los 30 días a partir de la fecha de publicación de este aviso en el periódico.

CONTACTOS E INFORMACIÓN DE LA AGENCIA. Los comentarios y solicitudes públicas deben enviarse electrónicamente a www.tceq.texas.gov/goto/comment, o por escrito a Texas Commission on Environmental Quality, Office of the Chief Clerk, MC-105, P.O. Box 13087, Austin, Texas 78711-3087. Cualquier información personal que envíe a la TCEQ pasará a formar parte del registro de la agencia; esto incluye las direcciones de correo electrónico. Para obtener más información sobre esta solicitud de permiso o el proceso de permisos, llame al Programa de Educación Pública de 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 información adicional del Keenan North Development, Ltd. a la dirección indicada arriba o llamando a Mr. Jonathan Liu, P.E., A&S Engineers, Inc., al 713-942-2700.

Fecha de emission: el 1 de octubre de 2025.



November 23, 2024

Texas Commission on Environmental Quality Applications Review and Processing Team (MC 148) 12100 Park 35 Circle Austin, Texas 78753

Re: Domestic Wastewater Discharge Permit - New

Permit No. WQ TBD

NPDES Permit No. TX TBD Keenan North Development, Ltd. A & S Project No. 540008.02

Ladies and Gentlemen:

Keenan North Development, Ltd. seeks a TCEQ permit for a wastewater treatment plant to serve a proposed single family residence development. Attached is a Permit Application for the wastewater treatment plant.

Enclosed are one (1) original and three (3) copies of the Application. The fee is being sent under separate cover to the Revenues Section (MC 214).

If you have any questions or comments, please feel free to call me at (713) 942-2700.

Sincerely,

Eric Williams, P.E. Project Manager

bether

Enclosures: TPDES Permit Application Package for Keenan North Development, Ltd.

cc w/enclosures: Mr. Ahmet Ozan, Keenan North Development, Ltd.

TCEQ-Houston

THE TONMENTAL OUR LEVEL OF THE TONE OF THE

TEXAS COMMISSION ON ENVIRONMENTAL QUALITY

DOMESTIC WASTEWATER PERMIT APPLICATION CHECKLIST

Complete and submit this checklist with the application.

|--|

PERMIT NUMBER (If new, leave blank): WQ00 Click to enter text.

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

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

For TCEQ Use Only	
Segment NumberExpiration DatePermit Number	County Region

THE THE PART OF TH

TEXAS COMMISSION ON ENVIRONMENTAL QUALITY

DOMESTIC WASTEWATER PERMIT APPLICATION ADMINISTRATIVE REPORT 1.0

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

Section 1. Application Fees (Instructions Page 26)

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

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

Minor Amendment (for any flow) \$150.00 □

Mailed	Check/Money Order Number: Click to enter text.
	Check/Money Order Amount: Click to enter text.
	Name Printed on Check: Click to enter text.
EPAY	Voucher Number: Click to enter text.
Copy of Payr	nent Voucher enclosed? Yes □

Section 2. Type of Application (Instructions Page 26)

a.	Che	ck the box next to the appropriate authorization type.
		Publicly-Owned Domestic Wastewater
	\boxtimes	Privately-Owned Domestic Wastewater
		Conventional Wastewater Treatment
b.	Che	ck the box next to the appropriate facility status.
		Active Inactive

c.	Check the box next to the appropriate permit type.						
	□ TPDES Permit						
	□ TLAP						
	☐ TPDES Permit with TLAP component						
	☐ Subsurface Area Drip Dispersal System (SADDS)						
d.	Check the box next to the appropriate application type						
	⊠ New						
	□ Major Amendment <u>with</u> Renewal □ Minor Amendment <u>with</u> Renewal						
	☐ Major Amendment <u>without</u> Renewal ☐ Minor Amendment <u>without</u> Renewal						
	☐ Renewal without changes ☐ Minor Modification of permit						
e.	For amendments or modifications, describe the proposed changes: Click to enter text.						
f.	For existing permits:						
	Permit Number: WQ00 Click to enter text.						
	EPA I.D. (TPDES only): TX Click to enter text.						
	Expiration Date: Click to enter text.						
Se	ection 3. Facility Owner (Applicant) and Co-Applicant Information (Instructions Page 26)						
	<u> </u>						
Α.	The owner of the facility must apply for the permit.						
	What is the Legal Name of the entity (applicant) applying for this permit?						
	<u>Keenan North Development, Ltd.</u>						
	(The legal name must be spelled exactly as filed with the Texas Secretary of State, County, or the legal documents forming the entity.)						
	If the applicant is currently a customer with the TCEQ, what is the Customer Number (CN)? You may search for your CN on the TCEQ website at http://www15 tceq texas gov/crpub/						

CN: 606265080

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

Last Name, First Name: Ozan, Ahmet Prefix: Mr.

Credential: Click to enter text. Title: President

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

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

Click to enter text.

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

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

CN: Click to enter text.

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

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

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

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

C. Core Data Form

Complete the Core Data Form for each customer and include as an attachment. If the customer type selected on the Core Data Form is **Individual**, complete **Attachment 1** of Administrative Report 1.0. <u>Exhibit 20</u>

Section 4. Application Contact Information (Instructions Page 27)

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

A. Prefix: Mr. Last Name, First Name: Liu, Jonathan D.

Title: Project Manager Credential: P.E.

Organization Name: A&S Engineers, Inc.

Mailing Address: 10377 Stella Link Road City, State, Zip Code: Houston, TX 77025-5445

Phone No.: 713-942-2700 E-mail Address: jdl@as-engineers.com

Check one or both: \square Administrative Contact \boxtimes Technical Contact

B. Prefix: Mr. Last Name, First Name: Toumajian, Louis

Title: Project Coordinator II Credential: E.I.T.

Organization Name: A&S Engineers, Inc.

Mailing Address: 10377 Stella Link Road City, State, Zip Code: Houston, TX 77025-5445

Phone No.: 713-942-2700 E-mail Address: lat@as-engineers.com

Check one or both: \square Administrative Contact \square Technical Contact

Section 5. Permit Contact Information (Instructions Page 27)

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

A. Prefix: Mr. Last Name, First Name: Ozan, Ahmet

Title: President Credential: Click to enter text.

Organization Name: Keenan North Development, Ltd.

Mailing Address: <u>28408 Sweetgum Road</u> City, State, Zip Code: <u>Magnolia, TX, 77354</u>

Phone No.: 832-375-9897 E-mail Address: OZAN TWIST@HOTMAIL.COM

B. Prefix: Mr. Last Name, First Name: Liu, Jonathan D.

Title: <u>Project Manager</u> Credential: <u>P.E.</u>

Organization Name: A&S Engineers, Inc.

Mailing Address: 10377 Stella Link Road City, State, Zip Code: Houston, TX 77025-5445

Phone No.: <u>713-942-2700</u> E-mail Address: <u>jdl@as-engineers.com</u>

Section 6. Billing Contact Information (Instructions Page 27)

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

Prefix: Mr. Last Name, First Name: OZAN, AHMET

Title: President Credential: Click to enter text.

Organization Name: Keenan North Development, Ltd.

Mailing Address: <u>28408 Sweetgum Road</u> City, State, Zip Code: <u>Magnolia, TX, 77354</u> Phone No.: 832-375-9897 E-mail Address: OZAN_TWIST@HOTMAIL.COM

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

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

Prefix: Mr. Last Name, First Name: OZAN, AHMET

Title: President Credential: Click to enter text.

Organization Name: Keenan North Development, Ltd.

Mailing Address: <u>28408 Sweetgum Road</u> City, State, Zip Code: <u>Magnolia, TX, 77354</u> Phone No.: <u>832-375-9897</u> E-mail Address: <u>OZAN_TWIST@HOTMAIL.COM</u>

Section 8. Public Notice Information (Instructions Page 27)

A. Individual Publishing the Notices

Prefix: Mr. Last Name, First Name: Liu, Jonathan D.

Title: Project Manager Credential: P.E.

Organization Name: A&S Engineers, Inc.

Mailing Address: 10377 Stella Link Road City, State, Zip Code: Houston, TX 77025-5445

Phone No.: Click to enter text. E-mail Address: jdl@as-engineers.com

B.		thod for Receiving Notice of Receipt and Intent to Obtain a Water Quality Permit ckage					
	Indicate by a check mark the preferred method for receiving the first notice and instructions:						
	\boxtimes	E-mail Address					
		Fax					
		Regular Mail					
C.	Coı	ntact permit to be listed in the Notices					
	Pre	fix: <u>Mr.</u> Last Name, First Name: <u>Liu, Jonathan D.</u>					
	Titl	le: Click to enter text. Credential: <u>P.E.</u>					
	Org	ganization Name: <u>A&S Engineers, Inc.</u>					
	Mai	iling Address: <u>10377 Stella Link Road</u> City, State, Zip Code: <u>Houston, TX 77025-5445</u>					
	Pho	one No.: Click to enter text. E-mail Address: jdl@as-engineers.com					
D.	Pul	olic Viewing Information					
	-	he facility or outfall is located in more than one county, a public viewing place for each inty must be provided.					
	Puk	olic building name: Charles B. Stewart-West Branch Library					
	Location within the building: Public Records Viewing Area						
	Phy	vsical Address of Building: 202 Bessie Price Owen Dr.					
	City	y: <u>Montgomery</u> County: <u>Montgomery</u>					
	Coı	ntact (Last Name, First Name): <u>Wilson, Mat</u>					
	Pho	one No.: <u>936-522-2799</u> Ext.: Click to enter text.					
E.	Bili	ingual Notice Requirements					
		is information is required for new, major amendment, minor amendment or minor dification, and renewal applications.					
	be:	is section of the application is only used to determine if alternative language notices will needed. Complete instructions on publishing the alternative language notices will be in ur public notice package.					
	obt	ase call the bilingual/ESL coordinator at the nearest elementary and middle schools and tain the following information to determine whether an alternative language notices are uired.					
		Is a bilingual education program required by the Texas Education Code at the elementary or middle school nearest to the facility or proposed facility?					
		⊠ Yes □ No					
		If no , publication of an alternative language notice is not required; skip to Section 9 below.					
		Are the students who attend either the elementary school or the middle school enrolled in a bilingual education program at that school?					
		lacksquare Voc. $lacksquare$ No.					

	3.	Do the location	students n?	at these	e schools a	attend a	a bilingua	ıl educa	ition pro	gram a	t another
			Yes	\boxtimes	No						
	4.		the schoo out of th							ogram l	out the school has
			Yes	\boxtimes	No						
	5.		•	-	•						tive language are enter text.
F.	Pla	in Lang	guage Sun	nmary T	Геmplate						
	Co	mplete	the Plain l	Languag	ge Summa	ry (TCE	Q Form 2	20972) a	and inclu	ıde as a	ın attachment.
	At	tachme	nt: <u>Exhibit</u>	21							
G.	Pu	blic Inv	olvement	Plan F	orm						
											plication for a
	ne	w perm	it or majo	or amen	dment to	a pern	nit and in	iclude a	s an atta	ıchmen	t.
	At	tachme	nt: <u>Exhibit</u>	22							
C -		0	D T	-1-1-1	7	. J.D.		1.04.	T - C		(Tarata and Laran
Se	CU	on 9.	Regui Page 2		entity a	na Pe	rmitted	1 S 1te .	Inform	iation	(Instructions
A.				ly regul		CEQ, pr	ovide the	e Regula	ated Enti	ty Num	ber (RN) issued to
			TCEQ's C				/www15.	tceq.tex	<u>as.gov/c</u>	crpub/	to determine if
B.	Na	me of p	roject or s	site (the	name kn	own by	the com	munity	where lo	cated):	
	Ke	enan No	rth WWTP								
C.	Ov	vner of	treatment	facility	: <u>Keenan N</u>	orth De	velopmen	t, Ltd.			
	Ov	vnership	of Facilit	y: 🗆	Public	\boxtimes	Private		Both		Federal
D.	Ov	vner of l	land wher	e treatn	nent facili	ty is or	will be:				
	Pre	efix:			Las	t Name	, First Na	me:			
	Tit	le:			Cre	dential	Click to	enter to	ext.		
	Or	ganizati	ion Name:	Keenan	North Dev	<u>elopme</u>	nt, Ltd.				
	Ma	iling Ac	ddress: <u>28</u>	408 Swe	etgum Roa	<u>ıd</u>	City, State	e, Zip C	ode: <u>Ma</u> g	gnolia, T	X, 77354
	Ph	one No.	: <u>832-375-</u>	9 <u>897</u>	E-r	nail Ad	dress: <u>OZ</u>	ZAN TW	VIST@HC	<u>OTMAII</u>	<u>COM</u>
			lowner is i						or co-aj	pplican	t, attach a lease
		Attach	ment: Clic	ck to en	ter text.						

F.

E.	Owner of effluent disposal site:	
	Prefix:	Last Name, First Name:
	Title:	Credential: Click to enter text.
	Organization Name:	
	Mailing Address:	City, State, Zip Code:
	Phone No.:	E-mail Address:
	If the landowner is not the same agreement or deed recorded ease	person as the facility owner or co-applicant, attach a lease ement. See instructions.
	Attachment: Click to enter te	xt.
F.	Owner sewage sludge disposal si property owned or controlled by	te (if authorization is requested for sludge disposal on the applicant)::
	Prefix: Click to enter text.	Last Name, First Name: Click to enter text.
	Title: Click to enter text.	Credential: Click to enter text.
	Organization Name: Click to ente	er text.
	Mailing Address: Click to enter to	ext. City, State, Zip Code: Click to enter text.
	Phone No.: Click to enter text.	E-mail Address: Click to enter text.
	If the landowner is not the same agreement or deed recorded ease	person as the facility owner or co-applicant, attach a lease ement. See instructions.
	Attachment: Click to enter te	xt.
Se	ection 10. TPDES Discharg	ge Information (Instructions Page 31)
A.	Is the wastewater treatment facil	ity location in the existing permit accurate?
	□ Yes ⊠ No	
		on, please give an accurate description:
	Approximately 1 mile northwest of Montgomery County.	the intersection of Keenan Cutoff Rd and FM 2854 in
В.	Are the point(s) of discharge and	the discharge route(s) in the existing permit correct?
	□ Yes ⊠ No	
	point of discharge and the discharge TAC Chapter 307:	ermit application, provide an accurate description of the arge route to the nearest classified segment as defined in 30
	Montgomery County. Discharge in	the intersection of Keenan Cutoff Rd and FM 2854 in to Mound Creek Tributary No. 54 then to Mound Creek, Lake Jacinto River, then to San Jacinto River
	City nearest the outfall(s): Montgo	omery
	County in which the outfalls(s) is	s/are located: <u>Montgomery</u>
C.	Is or will the treated wastewater a flood control district drainage	discharge to a city, county, or state highway right-of-way, or ditch?
	□ Yes ⊠ No	

	If yes , indicate by a check mark if:
	\square Authorization granted \square Authorization pending
	For new and amendment applications, provide copies of letters that show proof of contact and the approval letter upon receipt.
	Attachment: N/A
D.	For all applications involving an average daily discharge of 5 MGD or more, provide the names of all counties located within 100 statute miles downstream of the point(s) of discharge: $\underline{\text{N/A}}$
-	
Se	ection 11. TLAP Disposal Information (Instructions Page 32)
A.	For TLAPs, is the location of the effluent disposal site in the existing permit accurate?
	□ Yes □ No
	If no, or a new or amendment permit application , provide an accurate description of the disposal site location:
	Click to enter text.
В.	City nearest the disposal site: Click to enter text.
	County in which the disposal site is located: Click to enter text.
	For TLAPs , describe the routing of effluent from the treatment facility to the disposal site:
	Click to enter text.
Е.	For TLAPs , please identify the nearest watercourse to the disposal site to which rainfall runoff might flow if not contained: Click to enter text.
Se	ection 12. Miscellaneous Information (Instructions Page 32)
	Is the facility located on or does the treated effluent cross American Indian Land?
	□ Yes ⊠ No
B.	If the existing permit contains an onsite sludge disposal authorization, is the location of the sewage sludge disposal site in the existing permit accurate?
	\square Yes \square No \boxtimes Not Applicable
	If No, or if a new onsite sludge disposal authorization is being requested in this permit application, provide an accurate location description of the sewage sludge disposal site.
	Click to enter text.

C.	Did any person formerly employed by the TCEQ represent your company and get paid for service regarding this application?
	□ Yes ⊠ No
	If yes, list each person formerly employed by the TCEQ who represented your company and was paid for service regarding the application: Click to enter text.
D.	Do you owe any fees to the TCEQ?
	□ Yes ⊠ No
	If yes , provide the following information:
	Account number: Click to enter text.
	Amount past due: Click to enter text.
E.	Do you owe any penalties to the TCEQ?
	□ Yes ⊠ No
	If yes , please provide the following information:
	Enforcement order number: Click to enter text.
	Amount past due: Click to enter text.
C	sation 12 Attackments (Instructions Dogs 22)
56	ection 13. Attachments (Instructions Page 33)
	dicate which attachments are included with the Administrative Report. Check all that apply:
In	dicate which attachments are included with the Administrative Report. Check all that apply: Lease agreement or deed recorded easement, if the land where the treatment facility is
Inc	dicate which attachments are included with the Administrative Report. Check all that apply: Lease agreement or deed recorded easement, if the land where the treatment facility is located or the effluent disposal site are not owned by the applicant or co-applicant.
Inc	Lease agreement or deed recorded easement, if the land where the treatment facility is located or the effluent disposal site are not owned by the applicant or co-applicant. Original full-size USGS Topographic Map with the following information: • Applicant's property boundary • Treatment facility boundary • Labeled point of discharge for each discharge point (TPDES only) • Highlighted discharge route for each discharge point (TPDES only) • Onsite sewage sludge disposal site (if applicable) • Effluent disposal site boundaries (TLAP only) • New and future construction (if applicable) • 1 mile radius information • 3 miles downstream information (TPDES only)
Ino	Lease agreement or deed recorded easement, if the land where the treatment facility is located or the effluent disposal site are not owned by the applicant or co-applicant. Original full-size USGS Topographic Map with the following information: • Applicant's property boundary • Treatment facility boundary • Labeled point of discharge for each discharge point (TPDES only) • Highlighted discharge route for each discharge point (TPDES only) • Onsite sewage sludge disposal site (if applicable) • Effluent disposal site boundaries (TLAP only) • New and future construction (if applicable) • 1 mile radius information • 3 miles downstream information (TPDES only) • All ponds.

Section 14. Signature Page (Instructions Page 34)

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

Permit Number: Click to enter text.

Applicant: Keenan North Development, Ltd.

Certification:

County, Texas

I certify under penalty of law that this document and all attachments were prepared under my direction or supervision in accordance with a system designed to assure that qualified personnel properly gather and evaluate the information submitted. Based on my inquiry of the person or persons who manage the system, or those persons directly responsible for gathering the information, the information submitted is, to the best of my knowledge and belief, true, accurate, and complete. I am aware there are significant penalties for submitting false information, including the possibility of fine and imprisonment for knowing violations.

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

Signatory name (typed or printed): Ahmet Ozan				
Signatory title: President				
Signature:	Description of the Party of the			
(Use blue ink)				
Subscribed and Sworn to before me by the said Ahmet Ozan				
on this day of November , 2024.				
My commission expires on the 11 day of October, 2027.				
Notary Public LUISA FERNANDEZ Notary ID #132209420 My Commission Expires October 11, 2027 [SEAL]				
.00				

DOMESTIC WASTEWATER PERMIT APPLICATION ADMINISTRATIVE REPORT 1.0

The following information is required for new and amendment applications.

Section 1. Affected Landowner Information (Instructions Page 36)

Α.	. 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: in 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					
	\boxtimes	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					
В.	⊠ addı	Indicate by a check mark that a separate list with the landowners' names and mailing resses cross-referenced to the landowner's map has been provided.					
C.	Indicate by a check mark in which format the landowners list is submitted:						
		☑ USB Drive □ Four sets of labels					
D.	Prov	ride the source of the landowners' names and mailing addresses: MCAD					
E.	As required by <i>Texas Water Code § 5.115</i> , is any permanent school fund land affected by this application?						
		□ Yes ⊠ No					

ch area ge is to or left
ge is to or left
lowing ned by
et.
ng
1

DOMESTIC WASTEWATER PERMIT APPLICATION SUPPLEMENTAL PERMIT INFORMATION FORM (SPIF)

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

Attachment: Exhibit 23

WATER QUALITY PERMIT

PAYMENT SUBMITTAL FORM

Use this form to submit the Application Fee, if the mailing the payment.

- Complete items 1 through 5 below.
- Staple the check or money order in the space provided at the bottom of this document.
- Do Not mail this form with the application form.
- Do not mail this form to the same address as the application.
- Do not submit a copy of the application with this form as it could cause duplicate permit entries.

Mail this form and the check or money order to:

BY REGULAR U.S. MAIL

BY OVERNIGHT/EXPRESS MAIL

Texas Commission on Environmental Quality

Texas Commission on Environmental Quality

Financial Administration Division Financial Administration Division

Cashier's Office, MC-214
P.O. Box 13088
Austin, Texas 78711-3088
Cashier's Office, MC-214
12100 Park 35 Circle
Austin, Texas 78753

Fee Code: WQP Waste Permit No: Click to enter text.

1. Check or Money Order Number: Click to enter text.

2. Check or Money Order Amount: \$1250.00

3. Date of Check or Money Order: Click to enter text.

4. Name on Check or Money Order: Click to enter text.

5. APPLICATION INFORMATION

Name of Project or Site: <u>Keenan North Development, Ltd.</u> Physical Address of Project or Site: <u>Keenan North WWTP</u>

If the check is for more than one application, attach a list which includes the name of each Project or Site (RE) and Physical Address, exactly as provided on the application.

Staple Check or Money Order in This Space

ATTACHMENT 1

INDIVIDUAL INFORMATION

Section 1. Individual Information (Instructions Page 41)

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

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

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

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

Date of Birth: Click to enter text.

Mailing Address: Click to enter text.

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

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

E-mail Address: Click to enter text.

CN: Click to enter text.

For Commission Use Only:

Customer Number:

Regulated Entity Number:

Permit Number:

DOMESTIC WASTEWATER PERMIT APPLICATION CHECKLIST OF COMMON DEFICIENCIES

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

application until the items below have been addressed.				
Core Data Form (TCEQ Form No. 10400) (Required for all application types. Must be completed in its entirety and signed. Note: Form may be signed by applicant representative.)				
Correct and Current Industrial Wastewater Permit Application Forms (TCEQ Form Nos. 10053 and 10054. Version dated 6/25/2018 or later.)				
Water Quality Permit Payment Submittal Form (Page 19) (Original payment sent to TCEQ Revenue Section. See instructions fo	r mai	iling ad	⊠ Idress	Yes
7.5 Minute USGS Quadrangle Topographic Map Attached (Full-size map if seeking "New" permit. 8 ½ x 11 acceptable for Renewals and Amendments)				Yes
Current/Non-Expired, Executed Lease Agreement or Easement	\boxtimes	N/A		Yes
Landowners Map (See instructions for landowner requirements)		N/A	\boxtimes	Yes
 Things to Know: All the items shown on the map must be labeled. The applicant's complete property boundaries must be de boundaries of contiguous property owned by the applican. The applicant cannot be its own adjacent landowner. You landowners immediately adjacent to their property, regar from the actual facility. If the applicant's property is adjacent to a road, creek, or on the opposite side must be identified. Although the proapplicant's property boundary, they are considered potent if the adjacent road is a divided highway as identified on map, the applicant does not have to identify the landown the highway. 	nt. mus dless strea pperti tially the U	t identics of how am, the les are a r affectors	ify th v far lande not a ed lar pogra	e they are owners djacent to ndowners. aphic
Landowners Cross Reference List (See instructions for landowner requirements)		N/A	\boxtimes	Yes
Landowners Labels or USB Drive attached (See instructions for landowner requirements)		N/A		Yes
Original signature per 30 TAC § 305.44 – Blue Ink Preferred (If signature page is not signed by an elected official or principle execution)	cutive	e office	×.	Yes

a copy of signature authority/delegation letter must be attached)

Plain Language Summary

Yes

THE TONMENTAL OUR LEVEL OF THE PROPERTY OF THE

TEXAS COMMISSION ON ENVIRONMENTAL QUALITY

DOMESTIC WASTEWATER PERMIT APPLICATION TECHNICAL REPORT 1.0

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

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

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

A. Existing/Interim I Phase

Design Flow (MGD): <u>0.165</u> 2-Hr Peak Flow (MGD): <u>0.66</u>

Estimated construction start date: <u>01/01/2026</u> Estimated waste disposal start date: <u>08/01/2026</u>

B. Interim II Phase

Design Flow (MGD): <u>0.33</u> 2-Hr Peak Flow (MGD): <u>1.32</u>

Estimated construction start date: <u>01/01/2027</u> Estimated waste disposal start date: <u>10/01/2027</u>

C. Final Phase

Design Flow (MGD): <u>0.495</u> 2-Hr Peak Flow (MGD): 1.98

Estimated construction start date: <u>01/01/2028</u> Estimated waste disposal start date: <u>10/01/2028</u>

D. Current Operating Phase

Provide the startup date of the facility: 08/01/2026

Section 2. Treatment Process (Instructions Page 43)

A. Current Operating Phase

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

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

The ultimate plant is designed for 495,000 gpd. The aeration basins are planned to be equipped with fine bubble diffusers with a submergence of 10 feet. Chlorine contact tank is designed to add a second activated Sludge basin to increase total plant capacity to 495,000 gpd (Peak of 1,890,000 gpd). Each phase will be an 165k gpd. The final build out will have 4- aeration basins, 3 digesters, 2 clarifiers and 1 chlorine contact basin.

B. Treatment Units

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

Table 1.0(1) - Treatment Units

Treatment Unit Type	Number of Units	Dimensions (L x W x D)

C. Process Flow Diagram

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

Attachment: Exhibit 7

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

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

• Latitude: <u>30°19'</u> 56.06"W

• Longitude: 95°39' 50.01"W

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

Latitude: <u>N/A</u>Longitude: <u>N/A</u>

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: Exhibit 10

Provide the name and a des	cription of the area se	erved by the treatment	facility.
K <u>eenan Cut Off North Subdiv</u> single family residences in Mo		esidential subdivision of	approximately 220
Single running residences in 1430	singomery county, 121.		
Collection System Informati	ion for wastewater T i	PDES permits only: Pr	ovide information for
each uniquely owned collection systems.	ction system, existing	and new, served by th	is facility, including
examples.	riease see the mstru	ictions for a detailed t	explanation and
Collection System Informatio	n		
Collection System Name	Owner Name	Owner Type	Population Served
Keenan North WWTP Collection	Keenan North Development, Ltd.	Privately Owned	
		Choose an item.	
		Choose an item.	
		Choose an item.	
	/ -	D (T)	
Section 4. Unbuilt P	Phases (Instruction	ons Page 45)	
Is the application for a rene	wal of a permit that c	ontains an unbuilt ph	ase or phases?
□ Yes ⊠ No			
If yes, does the existing per	_	hat has not been cons	tructed within five
years of being authorized b	y the TCEQ?		
□ Yes □ No			
If yes, provide a detailed dis Failure to provide sufficient	nt justification may r	esult in the Executive	
recommending denial of th	e unbuilt phase or p	nases.	
Click to enter text.			
Section 5. Closure I	Plans (Instruction	ns Page 45)	
Have any treatment units be out of service in the next fiv		ce permanently, or wil	l any units be taken
□ Yes ⊠ No			

If y	yes, was a closure plan submitted to the TCEQ?
	□ Yes □ No
If y	yes, provide a brief description of the closure and the date of plan approval.
Se	ection 6. Permit Specific Requirements (Instructions Page 45) r applicants with an existing permit, check the Other Requirements or Special
	ovisions of the permit.
Α.	Summary transmittal
	Have plans and specifications been approved for the existing facilities and each proposed phase?
	□ Yes ⊠ No
	If yes, provide the date(s) of approval for each phase: Click to enter text.
	Provide information, including dates, on any actions taken to meet a <i>requirement or provision</i> pertaining to the submission of a summary transmittal letter. Provide a copy of an approval letter from the TCEQ, if applicable .
	N <u>/A</u>
B.	Buffer zones
	Have the buffer zone requirements been met?
	⊠ Yes □ No
	Provide information below, including dates, on any actions taken to meet the conditions of the buffer zone. If available, provide any new documentation relevant to maintaining the buffer zones.
	N <u>/A</u>

	su	bes the <i>Other Requirements</i> or <i>Special Provisions</i> section in the existing permit require bmission of any other information or other required actions? Examples include otification of Completion, progress reports, soil monitoring data, etc.
		□ Yes ⊠ No
		yes, provide information below on the status of any actions taken to meet the nditions of an <i>Other Requirement</i> or <i>Special Provision</i> .
	C	lick to enter text.
D.		it and grease treatment
	1.	Acceptance of grit and grease waste
		Does the facility have a grit and/or grease processing facility onsite that treats and decants or accepts transported loads of grit and grease waste that are discharged directly to the wastewater treatment plant prior to any treatment?
		□ Yes ⊠ No
		If No, stop here and continue with Subsection E. Stormwater Management.
	2.	Grit and grease processing
		Describe below how the grit and grease waste is treated at the facility. In your description, include how and where the grit and grease is introduced to the treatment works and how it is separated or processed. Provide a flow diagram showing how grit and grease is processed at the facility.
		Click to enter text.
	3.	Grit disposal
		Does the facility have a Municipal Solid Waste (MSW) registration or permit for grit disposal?
		□ Yes □ No
		If No , contact the TCEQ Municipal Solid Waste team at 512-239-2335. Note: A registration or permit is required for grit disposal. Grit shall not be combined with treatment plant sludge. See the instruction booklet for additional information on grit disposal requirements and restrictions.

C. Other actions required by the current permit

		Describe the method of grit disposal.
		Click to enter text.
	4.	Grease and decanted liquid disposal
		Note: A registration or permit is required for grease disposal. Grease shall not be combined with treatment plant sludge. For more information, contact the TCEQ Municipal Solid Waste team at 512-239-2335.
		Describe how the decant and grease are treated and disposed of after grit separation.
		Click to enter text.
E.	Sto	ormwater management
	1.	Applicability
		Does the facility have a design flow of 1.0 MGD or greater in any phase?
		□ Yes ⊠ No
		Does the facility have an approved pretreatment program, under 40 CFR Part 403?
		□ Yes ⊠ No
		If no to both of the above, then skip to Subsection F, Other Wastes Received.
	2.	MSGP coverage
		Is the stormwater runoff from the WWTP and dedicated lands for sewage disposal currently permitted under the TPDES Multi-Sector General Permit (MSGP), TXR050000?
		□ Yes □ No
		If yes , please provide MSGP Authorization Number and skip to Subsection F, Other Wastes Received:
		TXR05 Click to enter text. or TXRNE Click to enter text.
		If no, do you intend to seek coverage under TXR050000?
		□ Yes □ No
	3.	Conditional exclusion
		Alternatively, do you intend to apply for a conditional exclusion from permitting based TXR050000 (Multi Sector General Permit) Part II B.2 or TXR050000 (Multi Sector General Permit) Part V, Sector T 3(b)?
		□ Yes □ No

	If yes, please explain below then proceed to Subsection F, Other Wastes Received:
	Click to enter text.
4.	Existing coverage in individual permit
	Is your stormwater discharge currently permitted through this individual TPDES or TLAP permit?
	□ Yes □ No
	If yes , provide a description of stormwater runoff management practices at the site that are authorized in the wastewater permit then skip to Subsection F, Other Wastes Received.
	Click to enter text.
5 .	Zero stormwater discharge
	Do you intend to have no discharge of stormwater via use of evaporation or other means?
	□ Yes □ No
	If yes, explain below then skip to Subsection F. Other Wastes Received.
	Click to enter text.
	Note: If there is a potential to discharge any stormwater to surface water in the state as the result of any storm event, then permit coverage is required under the MSGP or an individual discharge permit. This requirement applies to all areas of facilities with treatment plants or systems that treat, store, recycle, or reclaim domestic sewage, wastewater or sewage sludge (including dedicated lands for sewage sludge disposal located within the onsite property boundaries) that meet the applicability criteria of above. You have the option of obtaining coverage under the MSGP for direct discharges, (recommended), or obtaining coverage under this individual permit.
6.	Request for coverage in individual permit
	Are you requesting coverage of stormwater discharges associated with your treatment plant under this individual permit?
	□ Yes □ No
	If yes , provide a description of stormwater runoff management practices at the site for which you are requesting authorization in this individual wastewater permit and describe whether you intend to comingle this discharge with your treated effluent or discharge it via a separate dedicated stormwater outfall. Please also indicate if you

		it to water in the state.
		Click to enter text.
		Note: Direct stormwater discharges to waters in the state authorized through this individual permit will require the development and implementation of a stormwater pollution prevention plan (SWPPP) and will be subject to additional monitoring and reporting requirements. Indirect discharges of stormwater via headworks recycling will require compliance with all individual permit requirements including 2-hour peak flow limitations. All stormwater discharge authorization requests will require additional information during the technical review of your application.
F.	Di	scharges to the Lake Houston Watershed
	Do	es the facility discharge in the Lake Houston watershed?
		□ Yes ⊠ No
		yes, attach a Sewage Sludge Solids Management Plan. See Example 5 in the instructions. ck to enter text.
G.	Ot	her wastes received including sludge from other WWTPs and septic waste
	1.	Acceptance of sludge from other WWTPs
		Does or will the facility accept sludge from other treatment plants at the facility site?
		□ Yes ⊠ No
		If yes, attach sewage sludge solids management plan. See Example 5 of instructions.
		In addition, provide the date the plant started or is anticipated to start accepting
		sludge, an estimate of monthly sludge acceptance (gallons or millions of gallons), an
		estimate of the BOD ₅ concentration of the sludge, and the design BOD ₅ concentration of the influent from the collection system. Also note if this information has or has not
		changed since the last permit action.
		Click to enter text.
		Note: Permits that accept sludge from other wastewater treatment plants may be required to have influent flow and organic loading monitoring.
	<i>2.</i>	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

intend to divert stormwater to the treatment plant headworks and indirectly discharge

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

Click to enter text.

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

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

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

□ Yes ⊠ No

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

Click to enter text.			

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

Is the facility in operation?

□ Yes ⊠ No

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

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

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

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

Pollutant	Average Conc.	Max Conc.	No. of Samples	Sample Type	Sample Date/Time
CBOD ₅ , mg/l					
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					
E.coli (CFU/100ml) freshwater					
Entercocci (CFU/100ml) saltwater					
Total Dissolved Solids, mg/l					
Electrical Conductivity, µmohs/cm, †					
Oil & Grease, mg/l					
Alkalinity (CaCO ₃)*, mg/l					

^{*}TPDES permits only †TLAP permits only

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

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

Section 8. Facility Operator (Instructions Page 50)

Facility Operator Name: TBD

Facility Operator's License Classification and Level: TBD

Facility Operator's License Number: TBD

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

VV VV	TP'S Biosonds Management Facility Type
Che	eck all that apply. See instructions for guidance
	Design flow>= 1 MGD
	Serves >= 10,000 people
	Class I Sludge Management Facility (per 40 CFR § 503.9)
	Biosolids generator
	Biosolids end user - land application (onsite)
	Biosolids end user - surface disposal (onsite)
	Biosolids end user – incinerator (onsite)
ww	TP's Biosolids Treatment Process
Che	eck all that apply. See instructions for guidance.
	Aerobic Digestion
	Air Drying (or sludge drying beds)
	Lower Temperature Composting
	Lime Stabilization
	Higher Temperature Composting
	Heat Drying
	Thermophilic Aerobic Digestion
	Beta Ray Irradiation
	Gamma Ray Irradiation
	Pasteurization
	Preliminary Operation (e.g. grinding, de-gritting, blending)
	Thickening (e.g. gravity thickening, centrifugation, filter press, vacuum filter)
	Sludge Lagoon
	Temporary Storage (< 2 years)
	Long Term Storage (>= 2 years)
	Methane or Biogas Recovery
	Other Treatment Process: Click to enter text

C. Biosolids Management

B.

Provide information on the *intended* biosolids management practice. Do not enter every management practice that you want authorized in the permit, as the permit will authorize

all biosolids management practices listed in the instructions. Rather indicate the management practice the facility plans to use.

Biosolids Management

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

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

D. Disposal site

Disposal site name: TBD

TCEQ permit or registration number: <u>TBD</u> County where disposal site is located: <u>TBD</u>

E. Transportation method

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

Name of the hauler: TBD

Hauler registration number: TBD

Sludge is transported as a:

Liquid ⊠	semi-liquid 🗆	semi-solid \square	solid □
----------	---------------	----------------------	---------

Section 10. Permit Authorization for Sewage Sludge Disposal (Instructions Page 53)

A. Beneficial use authorization

Does the existing	permit include	e authorizat	tion for la	and applicat	ion of sew	age slud	ge 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
-------	--	----

	s the existing permit include authorization for any of the following sludge processing, age or disposal options?								
Sluc	dge Composting		Yes	\boxtimes	No				
Mar	keting and Distribution of sludge		Yes	\boxtimes	No				
Sluc	lge Surface Disposal or Sludge Monofill		Yes	\boxtimes	No				
Ten	nporary storage in sludge lagoons		Yes	\boxtimes	No				
authori	to any of the above sludge options and the ization, is the completed Domestic Wastev cal Report (TCEQ Form No. 10056) attach	vate	r Permi	t Appli	ication: Sewage Sludge				
	Yes □ No								
Section	11. Sewage Sludge Lagoons (Ins	tru	ctions	Page	: 53)				
Does this f	facility include sewage sludge lagoons?								
□ Ye	s 🗵 No								
If yes, com	uplete the remainder of this section. If no, p	proc	eed to S	ection	12.				
A. Locatio	on information								
	lowing maps are required to be submitted the Attachment Number.	as p	art of tl	ne app	lication. For each map,				
• (Original General Highway (County) Map:								
1	Attachment: Click to enter text.								
• 1	USDA Natural Resources Conservation Serv	лice S	Soil Map):					
1	Attachment: Click to enter text.								
•]	Federal Emergency Management Map:								
1	Attachment: Click to enter text.								
• 5	Site map:								
1	Attachment: Click to enter text.								
Discuss apply.	s in a description if any of the following ex	ist w	vithin th	ie lago	on area. Check all that				
	Overlap a designated 100-year frequency	floo	d plain						
	Soils with flooding classification								
	Overlap an unstable area								
	Wetlands								
	Located less than 60 meters from a fault								
	None of the above								
— Atta	achment: Click to enter text.								

B. Sludge processing authorization

-	Temporary storage information
	Provide the results for the pollutant screening of sludge lagoons. These results are in addition to pollutant results in <i>Section 7 of Technical Report 1.0.</i>
	Nitrate Nitrogen, mg/kg: Click to enter text.
	Total Kjeldahl Nitrogen, mg/kg: Click to enter text.
	Total Nitrogen (=nitrate nitrogen + TKN), mg/kg: Click to enter text.
	Phosphorus, mg/kg: Click to enter text.
	Potassium, mg/kg: Click to enter text.
	pH, standard units: Click to enter text.
	Ammonia Nitrogen mg/kg: Click to enter text.
	Arsenic: Click to enter text.
	Cadmium: Click to enter text.
	Chromium: Click to enter text.
	Copper: Click to enter text.
	Lead: Click to enter text.
	Mercury: <u>Click to enter text.</u>
	Molybdenum: Click to enter text.
	Nickel: <u>Click to enter text.</u>
	Selenium: Click to enter text.
	Zinc: <u>Click to enter text.</u>
	Total PCBs: <u>Click to enter text.</u>
]	Provide the following information:
	Volume and frequency of sludge to the lagoon(s): <u>Click to enter text.</u>
	Total dry tons stored in the lagoons(s) per 365-day period: Click to enter text.

C. Liner information

Does the active/	/proposed	sludge	: lagoon(:	s) havo	e a linei	r with a	ı maximum	hydraulic
conductivity of	1x10 ⁻⁷ cm/	/sec?						

	If yes	, describe the liner below. Please note that a liner is required.
	Click	to enter text.
D.	Site d	evelopment plan
	Provid	le a detailed description of the methods used to deposit sludge in the lagoon(s):
	Click	to enter text.
	Attacl	n the following documents to the application.
	•	Plan view and cross-section of the sludge lagoon(s)
		Attachment: Click to enter text.
	•	Copy of the closure plan
		Attachment: Click to enter text.
	•	Copy of deed recordation for the site
		Attachment: Click to enter text.
	•	Size of the sludge lagoon(s) in surface acres and capacity in cubic feet and gallons
		Attachment: Click to enter text.
	•	Description of the method of controlling infiltration of groundwater and surface water from entering the site
		Attachment: Click to enter text.
	•	Procedures to prevent the occurrence of nuisance conditions
		Attachment: Click to enter text.
E.	Groun	ndwater monitoring
	groun	undwater monitoring currently conducted at this site, or are any wells available for dwater monitoring, or are groundwater monitoring data otherwise available for the e lagoon(s)?
		Yes □ No
	types	undwater monitoring data are available, provide a copy. Provide a profile of soil encountered down to the groundwater table and the depth to the shallowest dwater as a separate attachment.
	0	tachment: Click to enter text.

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

A. Additional authorizations	
Does the permittee have additional authorizations for this facility, such as reuse authorization, sludge permit, etc?	
□ Yes ⊠ No	
If yes, provide the TCEQ authorization number and description of the authorization:	
Click to enter text.	
B. Permittee enforcement status	
Is the permittee currently under enforcement for this facility?	
□ Yes ⊠ No	
Is the permittee required to meet an implementation schedule for compliance or enforcement?	
□ Yes ⊠ No	
If yes to either question, provide a brief summary of the enforcement, the implementation schedule, and the current status:	on
Click to enter text.	
Section 13. RCRA/CERCLA Wastes (Instructions Page 55)	
A. RCRA hazardous wastes	
Has the facility received in the past three years, does it currently receive, or will it receive RCRA hazardous waste?	е
□ Yes ⊠ No	

B. Remediation activity wastewater

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

□ Yes ⊠ No

C. Details about wastes received

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

Attachment: Click to enter text.

Section 14. Laboratory Accreditation (Instructions Page 56)

All laboratory tests performed must meet the requirements of *30 TAC Chapter 25*, *Environmental Testing Laboratory Accreditation and Certification*, which includes the following general exemptions from National Environmental Laboratory Accreditation Program (NELAP) certification requirements:

- The laboratory is an in-house laboratory and is:
 - o periodically inspected by the TCEQ; or
 - o located in another state and is accredited or inspected by that state; or
 - o 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.

Title: <u>President</u>

Signature: ______

Date: _____

Printed Name: Ahmet Ozan

DOMESTIC WASTEWATER PERMIT APPLICATION TECHNICAL REPORT 1.1

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

Section 1. Justification for Permit (Instructions Page 57)

A. Justification of permit need

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

The Keenan Cutoff North subdivision will consist of approximately 220 connections. The construction for the Keenan Cutoff North WWTP is dependent on the developer for the subdivision. The first phase of WWTP construction will be sufficient in capacity for the entire subdivision. The Keenan Cutoff North WWTP will then have an additional 2 phases with a timeline on construction depending on the development pace of the area surrounding the Keenan Cutoff North subdivision

B. Regionalization of facilities

For additional guidance, please review <u>TCEO's Regionalization Policy for Wastewater</u> Treatment¹.

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

1. Municipally incorporated areas

If the	applicant is	a city, ther	ı Item 1 i	s not ap	plicable.	Proceed t	to Item :	2 Utility	CCN
areas.									

Is any portion of the proposed service area located in an incorporated city?							
\square Yes \boxtimes No \square Not Applicable							
If yes, within the city limits of: Click to enter text.							
If yes, attach correspondence from the city.							

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

Attachment: Click to enter text.

Attachment: Click to enter text.

2. Utility CCN areas

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

□ Yes ⊠ No

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

If yes, attach a justification for the proposed facility and a cost analysis of expenditures that includes the cost of connecting to the CCN facilities versus the cost of the proposed facility or expansion.
Attachment: Click to enter text.
3. Nearby WWTPs or collection systems
Are there any domestic permitted wastewater treatment facilities or collection systems located within a three-mile radius of the proposed facility?
⊠ Yes □ No
If yes, attach a list of these facilities and collection systems that includes each permittee's name and permit number, and an area map showing the location of these facilities and collection systems.
Attachment: Exhibit 16
If yes, attach proof of mailing a request for service to each facility and collection system, the letters requesting service, and correspondence from each facility and collection system.
Attachment: Exhibit 16
If the facility or collection system agrees to provide service, attach a justification for the proposed facility and a cost analysis of expenditures that includes the cost of connecting to the facility or collection system versus the cost of the proposed facility or expansion.
Attachment: <u>N/A</u>
Section 2. Proposed Organic Loading (Instructions Page 59)
Is this facility in operation?
□ Yes ⊠ No
If no, proceed to Item B, Proposed Organic Loading.
If yes, provide organic loading information in Item A, Current Organic Loading
A Current organic loading

A. Current organic loading

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

Average Influent Organic Strength or BOD₅ Concentration in mg/l: Click to enter text.

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

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

Click to enter text.			

B. Proposed organic loading

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

Table 1.1(1) - Design Organic Loading

Source	Total Average Flow (MGD)	Influent BOD5 Concentration (mg/l)
Municipality		
Subdivision	0.165/0.330/0.495	300/300/300
Trailer park - transient		
Mobile home park		
School with cafeteria and showers		
School with cafeteria, no showers		
Recreational park, overnight use		
Recreational park, day use		
Office building or factory		
Motel		
Restaurant		
Hospital		
Nursing home		
Other		
TOTAL FLOW from all sources		
AVERAGE BOD₅ from all sources		

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

A. Existing/Interim I Phase Design Effluent Quality

Biochemical Oxygen Demand (5-day), mg/l: 10

Total Suspended Solids, mg/l: 15

Ammonia Nitrogen, mg/l: <u>3.0</u> Total Phosphorus, mg/l: <u>N/A</u> Dissolved Oxygen, mg/l: <u>4.0</u>

Other: N/A

B.	. Interim II Phase Design Effluent Quality			
	Biochemical Oxygen Demand (5-day), mg/l: <u>10</u>			
	Total Suspended Solids, mg/l: <u>15</u>			
	Ammonia Nitrogen, mg/l: <u>3.0</u>			
	Total Phosphorus, mg/l: <u>N/A</u>			
	Dissolved Oxygen, mg/l: <u>4.0</u>			
	Other: <u>N/A</u>			
C.	Final Phase Design Effluent Quality			
	Biochemical Oxygen Demand (5-day), mg/l: <u>10</u>			
	Total Suspended Solids, mg/l: <u>15</u>			
	Ammonia Nitrogen, mg/l: <u>3.0</u>			
	Total Phosphorus, mg/l: <u>N/A</u>			
	Dissolved Oxygen, mg/l: <u>4.0</u>			
	Other: <u>N/A</u>			
D.	Disinfection Method			
	Identify the proposed method of disinfection.			
	$oxed{\boxtimes}$ Chlorine: <u>2.0</u> mg/l after <u>20</u> minutes detention time at peak flow			
	Dechlorination process: Click to enter text.			
	□ Ultraviolet Light: <u>Click to enter text.</u> seconds contact time at peak flow			
	□ Other: <u>Click to enter text.</u>			
Se	ection 4. Design Calculations (Instructions Page 59)			
	tach design calculations and plant features for each proposed phase. Example 4 of the			
	structions includes sample design calculations and plant features.			
	Attachment: Exhibit 17			
Se	ection 5. Facility Site (Instructions Page 60)			
Α.	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.

Click to enter text.			

	Provide the source(s) used to determine 100-year frequency flood plain.
	FEMA GIS data, FEMA flood map 48339Co350G effective 08/18/2014
	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: <u>Click to enter text.</u>
	If no, provide the approximate date you anticipate submitting your application to the Corps: Click to enter text.
B.	Wind rose
	Attach a wind rose: Exhibit 19
Se	ection 6. Permit Authorization for Sewage Sludge Disposal (Instructions Page 60)
A.	Beneficial use authorization
	Are you requesting to include authorization to land apply sewage sludge for beneficial use on property located adjacent to the wastewater treatment facility under the wastewater permit?
	□ Yes ⊠ No
	If yes, attach the completed Application for Permit for Beneficial Land Use of Sewage Sludge (TCEQ Form No. 10451) : <u>Click to enter text.</u>
B.	Sludge processing authorization
	Identify the sludge processing, storage or disposal options that will be conducted at the wastewater treatment facility:
	□ Sludge Composting
	☐ Marketing and Distribution of sludge
	□ Sludge Surface Disposal or Sludge Monofill
	If any of the above, sludge options are selected, attach the completed Domestic Wastewater Permit Application: Sewage Sludge Technical Report (TCEQ Form No. 10056): Click to enter text.
Se	ection 7. Sewage Sludge Solids Management Plan (Instructions Page

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

Attach a solids management plan to the application.

Attachment: Exhibit 18

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

• Treatment units and processes dimensions and capacities

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

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

DOMESTIC WASTEWATER PERMIT APPLICATION WORKSHEET 2.0: RECEIVING WATERS

The following information is required for all TPDES permit applications.

Section 1. Domestic Drinking Water Supply (Instructions Page 64)
Is there a surface water intake for domestic drinking water supply located within 5 miles downstream from the point or proposed point of discharge?
□ Yes ⊠ No
If no , proceed it Section 2. If yes , provide the following:
Owner of the drinking water supply: Click to enter text.
Distance and direction to the intake: <u>Click to enter text.</u>
Attach a USGS map that identifies the location of the intake.
Attachment: Click to enter text.
Section 2. Discharge into Tidally Affected Waters (Instructions Page 64)
Does the facility discharge into tidally affected waters?
□ Yes ⊠ No
If no , proceed to Section 3. If yes , complete the remainder of this section. If no, proceed to Section 3.
A. Receiving water outfall
Width of the receiving water at the outfall, in feet: Click to enter text.
B. Oyster waters
Are there oyster waters in the vicinity of the discharge?
□ Yes □ No
If yes, provide the distance and direction from outfall(s).
Click to enter text.
C. Sea grasses
Are there any sea grasses within the vicinity of the point of discharge?
□ Yes □ No
If yes, provide the distance and direction from the outfall(s).
Click to enter text.

Is the discharge directly into (or within 300 feet of) a classified segment? Yes ⊠ No If yes, this Worksheet is complete. **If no**, complete Sections 4 and 5 of this Worksheet. Section 4. **Description of Immediate Receiving Waters (Instructions Page 65)** Name of the immediate receiving waters: Click to enter text. A. Receiving water type Identify the appropriate description of the receiving waters. \boxtimes Stream Freshwater Swamp or Marsh Lake or Pond Surface area, in acres: Click to enter text. Average depth of the entire water body, in feet: Click to enter text. Average depth of water body within a 500-foot radius of discharge point, in feet: Click to enter text. Man-made Channel or Ditch Open Bay Tidal Stream, Bayou, or Marsh Other, specify: Click to enter text. **B.** Flow characteristics If a stream, man-made channel or ditch was checked above, provide the following. For existing discharges, check one of the following that best characterizes the area *upstream* of the discharge. For new discharges, characterize the area downstream of the discharge (check one). Intermittent - dry for at least one week during most years Intermittent with Perennial Pools - enduring pools with sufficient habitat to maintain significant aquatic life uses Perennial - normally flowing Check the method used to characterize the area upstream (or downstream for new dischargers). USGS flow records Historical observation by adjacent landowners \boxtimes Personal observation Other, specify: Click to enter text.

Classified Segments (Instructions Page 64)

Section 3.

	List the names of all perennial streams that join the receiving water within three miles downstream of the discharge point.				
	Click t	o enter text.			
D.	Downs	stream characteristics			
		rge (e.g., natural or man-ma	_	ithin three miles downstream of the ds, reservoirs, etc.)?	
	TC				
		discuss how.			
	Click t	o enter text.			
E.	Norma	l dry weather characteristi	cs		
	Provide general observations of the water body during normal dry weather conditions.				
	Click	to enter text.			
	Date a	nd time of observation: <u>Clic</u>	k to enter tex	<u>t.</u>	
	Was th	e water body influenced by	stormwater r	runoff during observations?	
		Yes 🖾 No			
Se	ction	5. General Characte	eristics of	the Waterbody (Instructions	
		Page 66)	5225 6265 62	(======================================	
Δ	Unstre	am influences			
2 1.	Is the immediate receiving water upstream of the discharge or proposed discharge site influenced by any of the following? Check all that apply.				
		Oil field activities		Urban runoff	
		Upstream discharges		Agricultural runoff	
		Septic tanks		Other(s), specify: Click to enter text.	

C. Downstream perennial confluences

B. Waterbody uses Observed or evidences of the following uses. Check all that apply. Livestock watering Contact recreation Irrigation withdrawal Non-contact recreation **Fishing Navigation** Domestic water supply Industrial water supply Park activities Other(s), specify: Click to enter text. C. Waterbody aesthetics Check one of the following that best describes the aesthetics of the receiving water and the surrounding area. Wilderness: outstanding natural beauty; usually wooded or unpastured area; water clarity exceptional Natural Area: trees and/or native vegetation; some development evident (from fields, pastures, dwellings); water clarity discolored Common Setting: not offensive; developed but uncluttered; water may be colored or turbid Offensive: stream does not enhance aesthetics; cluttered; highly developed;

dumping areas; water discolored

EXHIBIT 1

USGS MAP



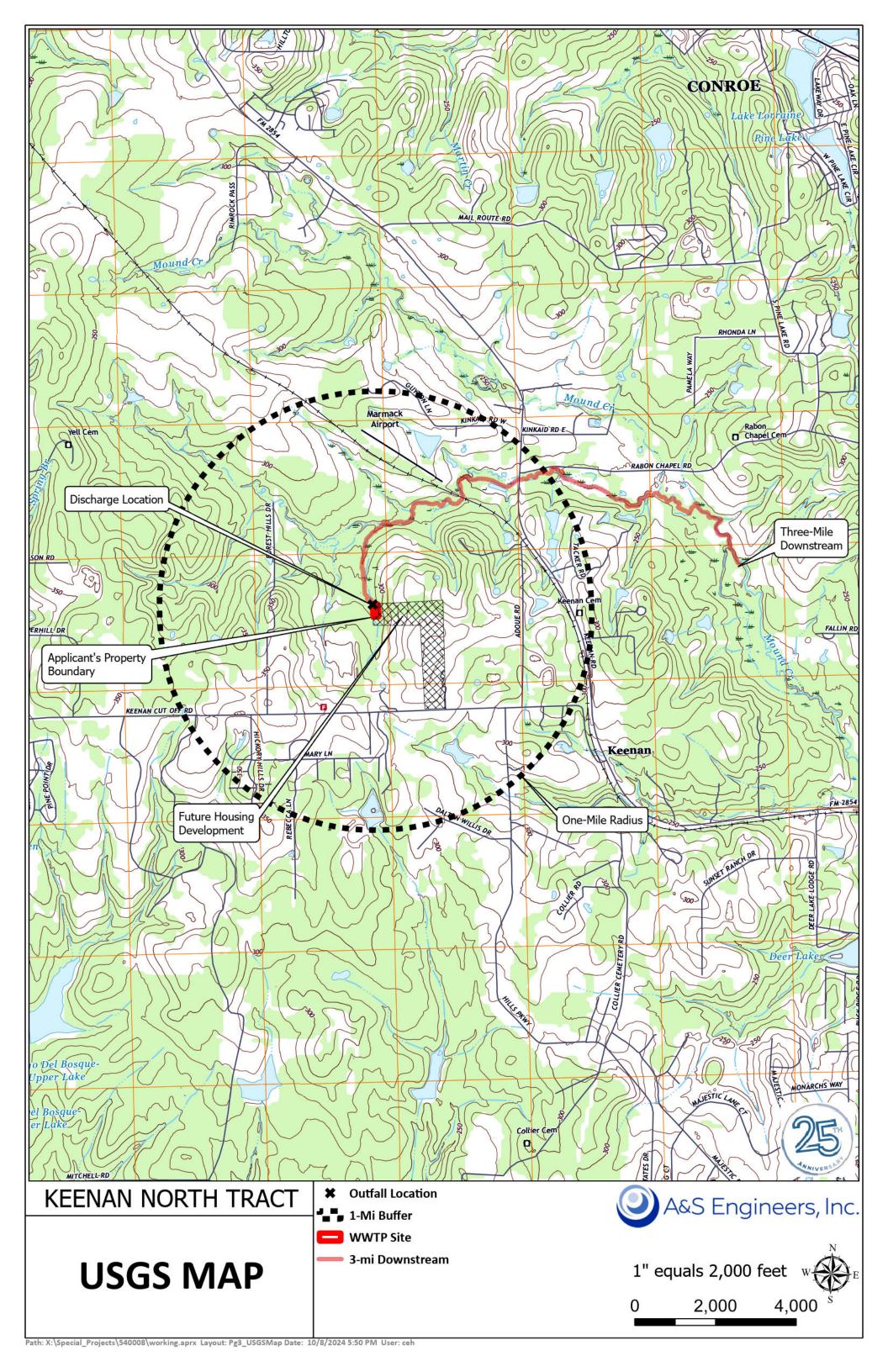


EXHIBIT 2

LOCATION MAP



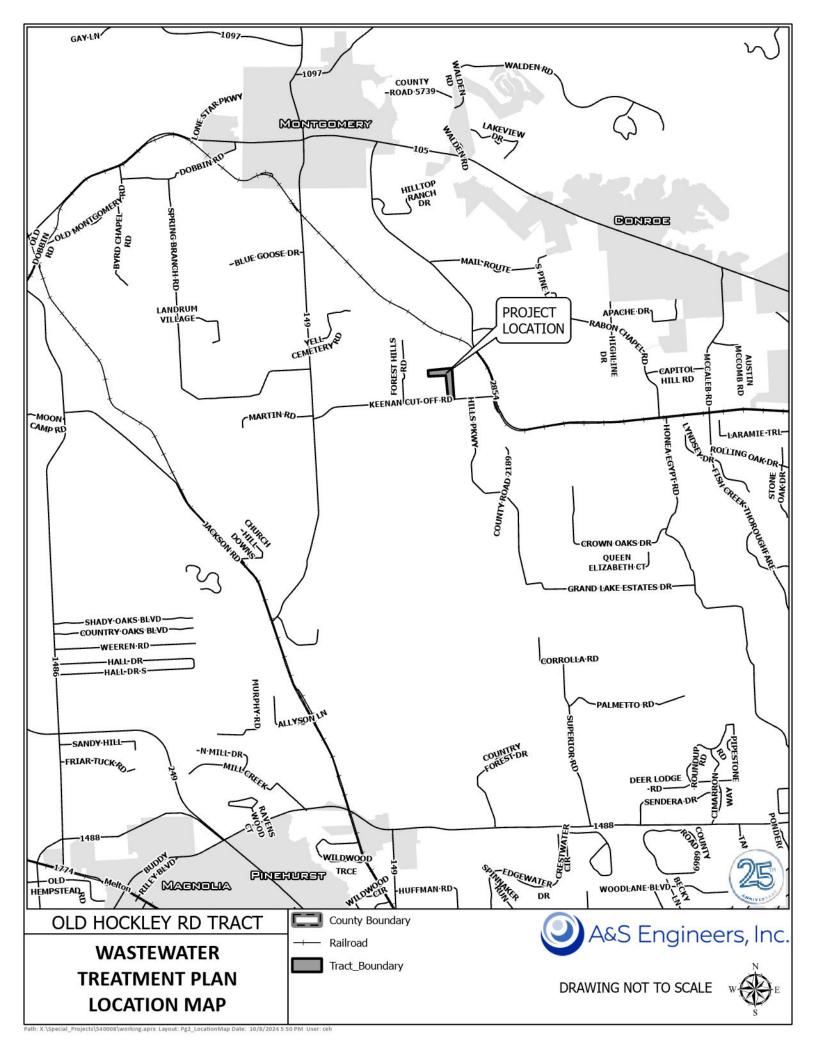


EXHIBIT 3

VICINITY MAP



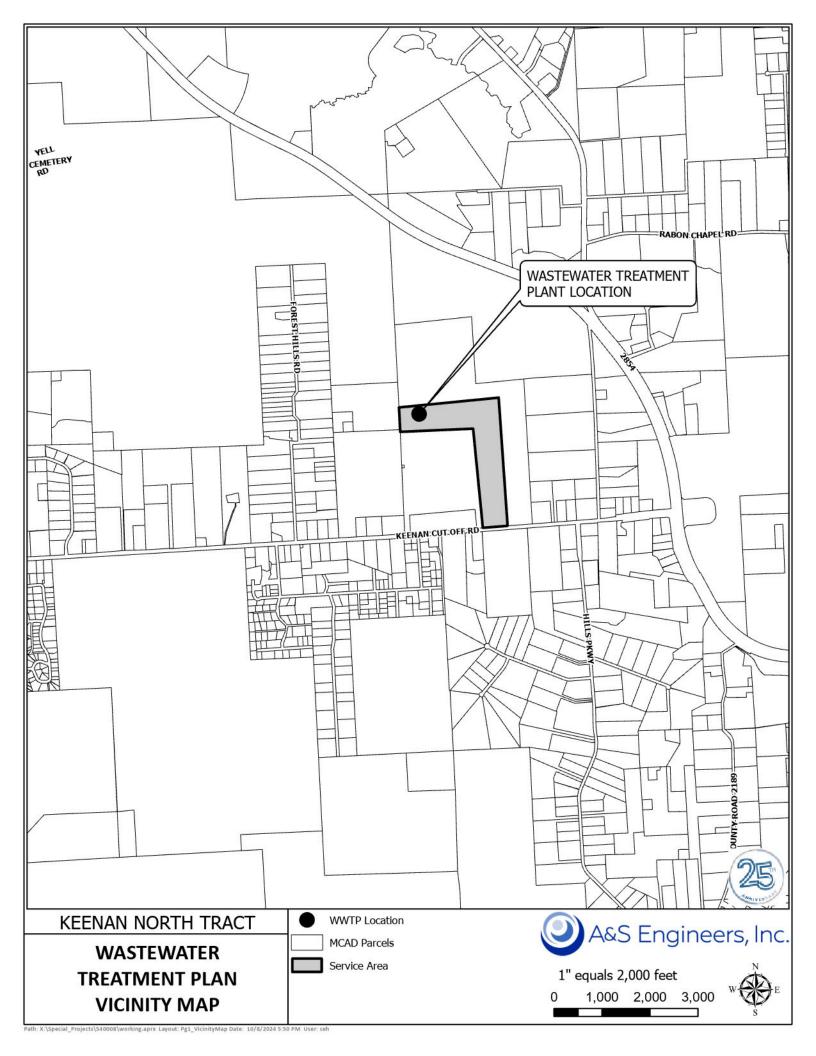
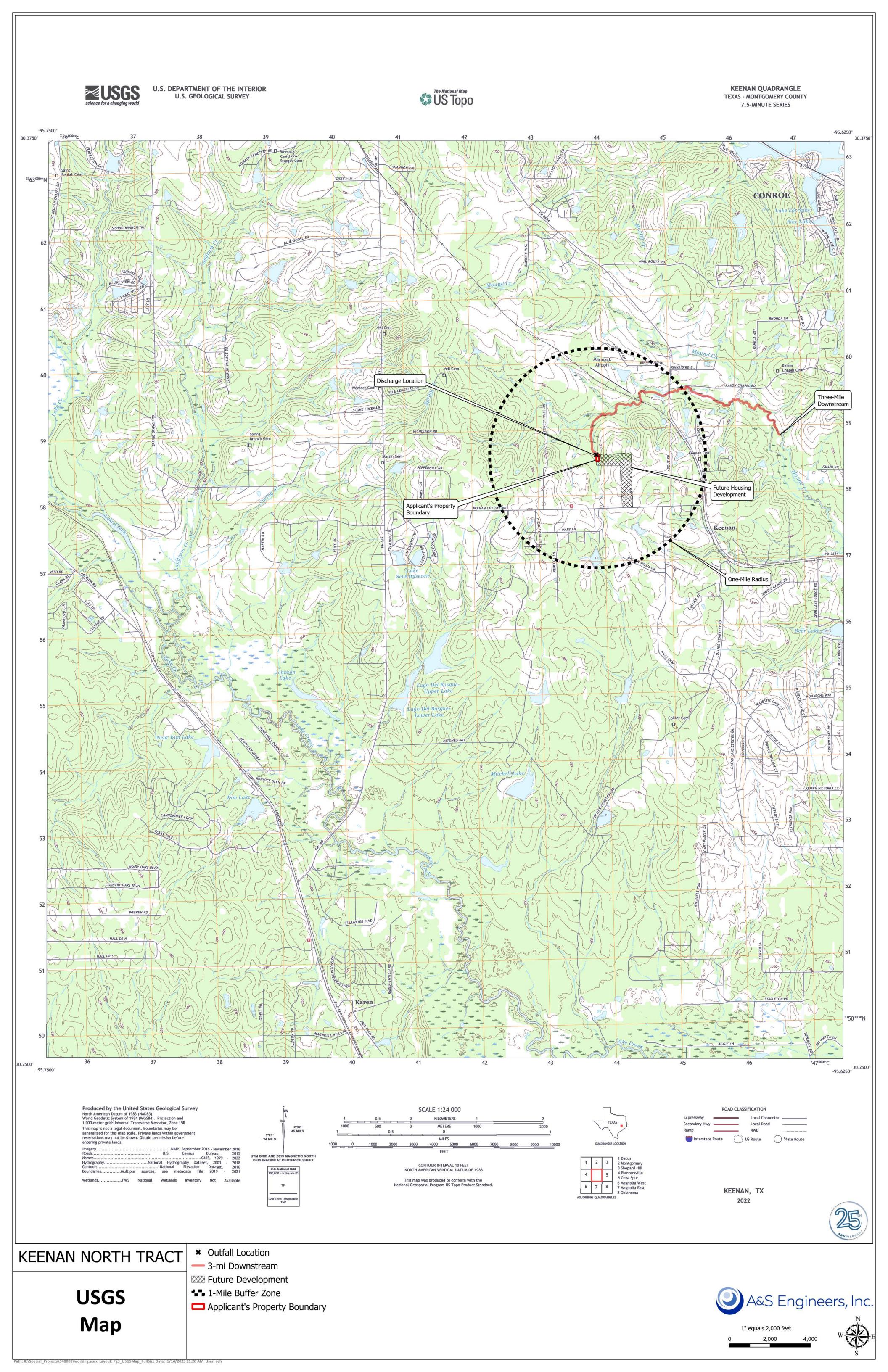


EXHIBIT 4

USGS MAP





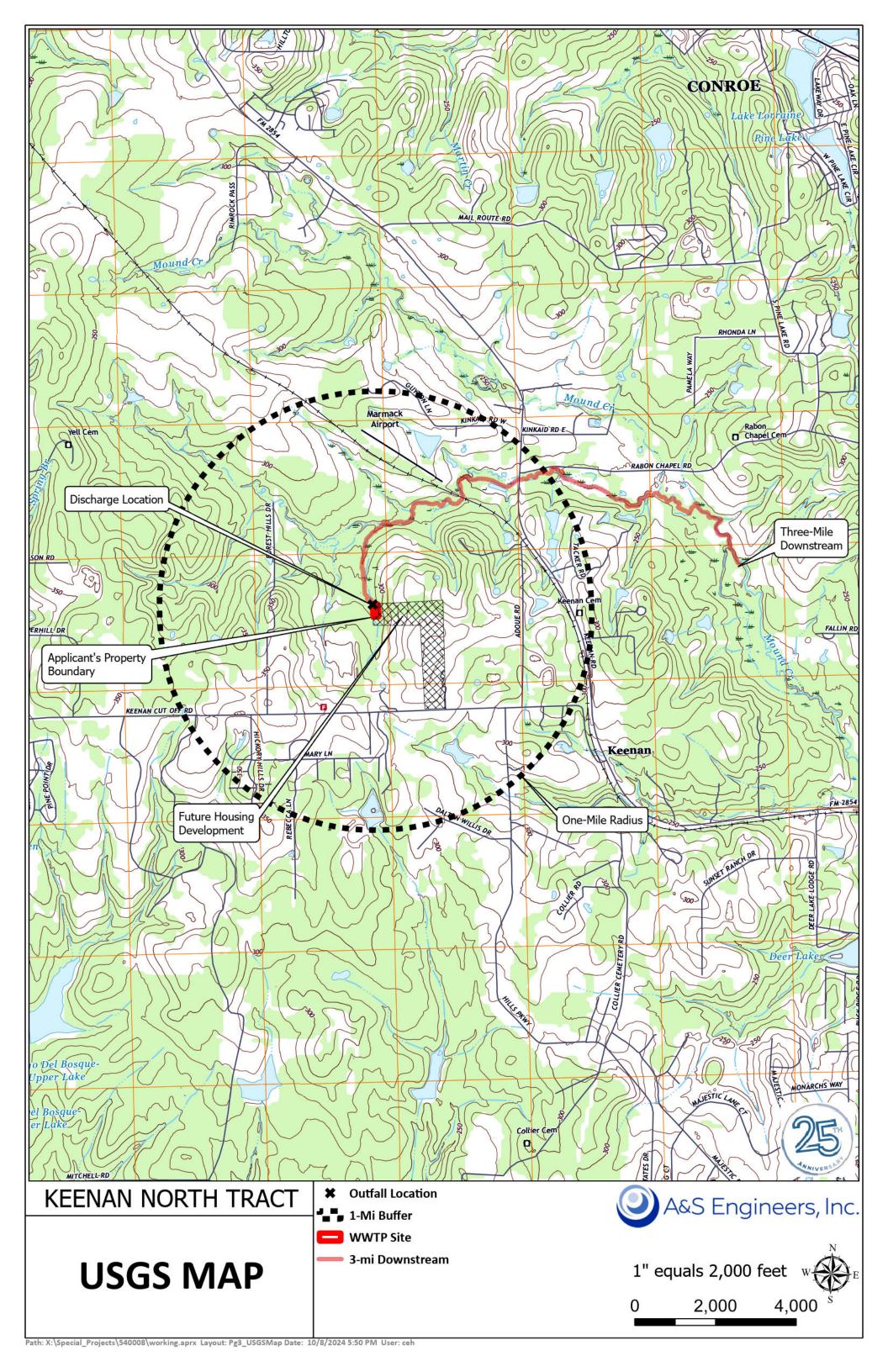


EXHIBIT 5

LOCATION MAP



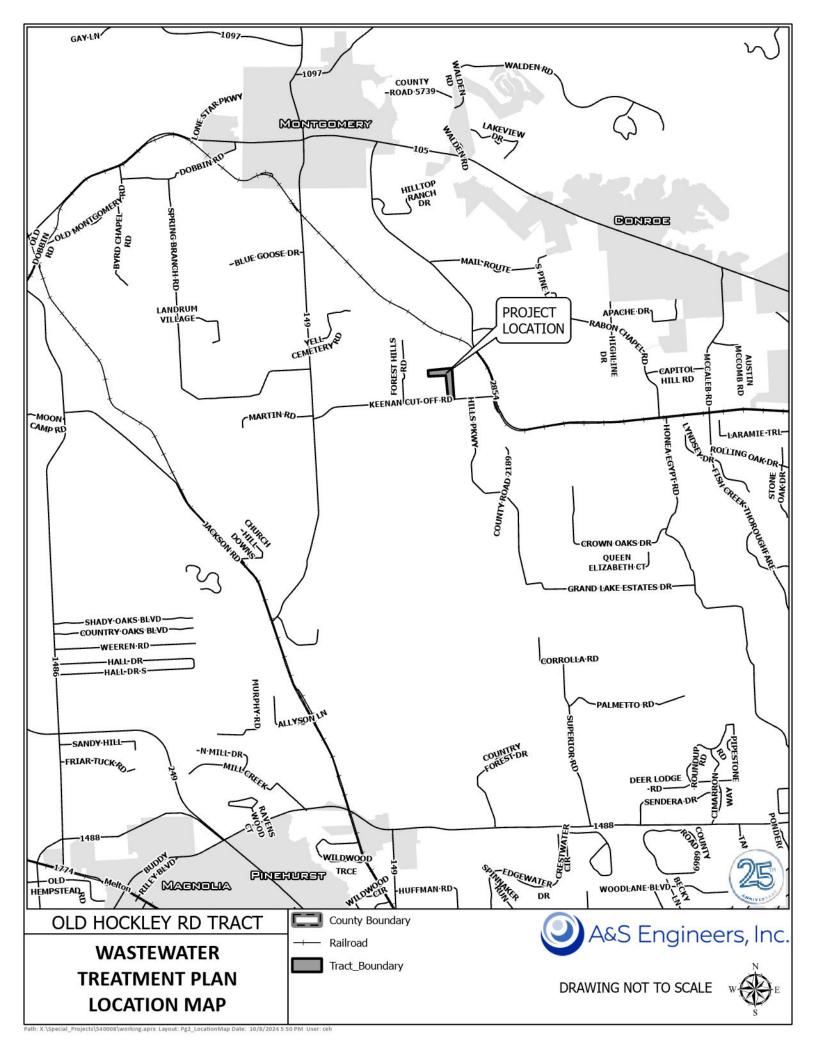


EXHIBIT 6

VICINITY MAP



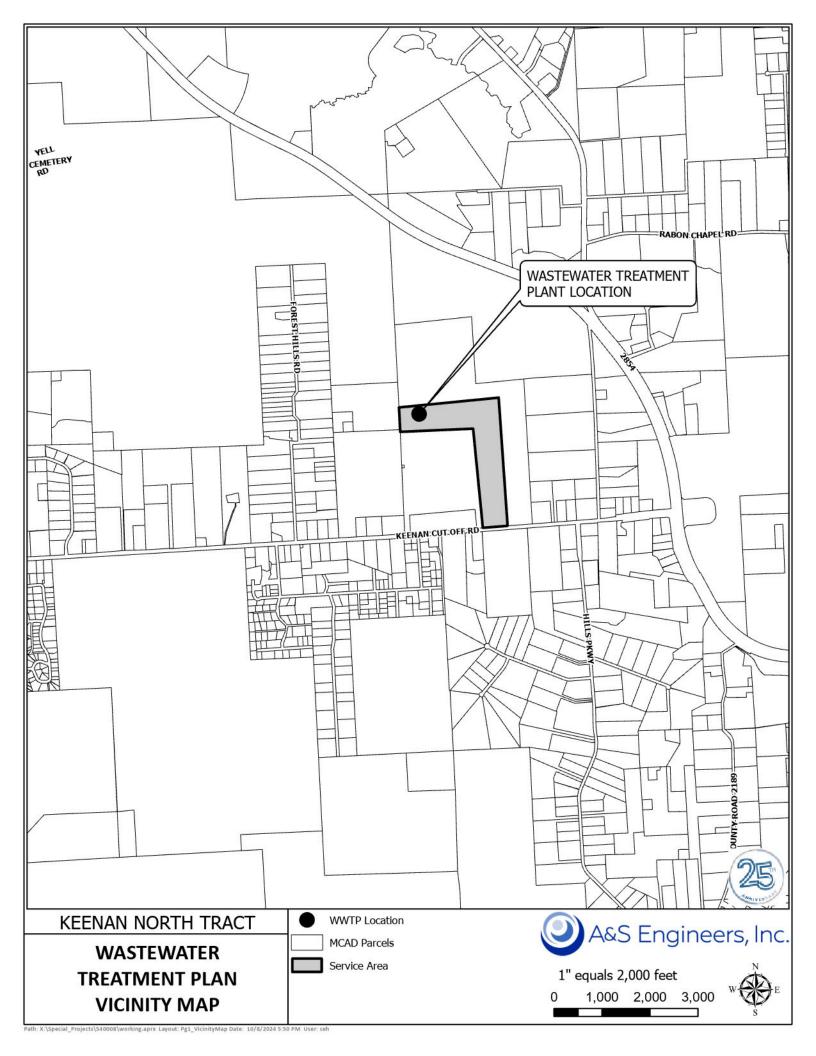


EXHIBIT 7

FLOW DIAGRAMS



EXHIBIT 8

TREATMENT PROCESS DESCRIPTION



<u>Treatment Process Description and Design Features</u>

The proposed Phase I is designed to treat a flow rate 0.165 MGD. The proposed Phase I facility will be a package plant operating as a suspended growth activated sludge process in the single-stage nitrification mode and will be comprised of one (1) onsite grinder pump station, one (1) common headworks with manual bar screen, two (1) aeration basins, one (1) clarifier, one (1) chlorine contact basin, and one (2) aerobic digester. Raw sewage will be pumped from the grinder pump station to the headworks. Then the influent flows to the aeration basin where it will be mixed with return activated sludge to create mixed liquor. The aeration basin will operate in the single –stage nitrification mode to consume organics and break down ammonia. From the aeration basin, the mixed liquor flows to the secondary clarifier for clarification. After clarification, the treated effluent flows to the chorine contact basin for disinfection and the waste activated sludge is pumped to the digester for further treatment before being hauled off. From the chlorine contact basin, the effluent flows over a weir for flow measurement then on to the outfall.

The proposed Phase II is designed to treat a flow rate 0.330 MGD and will expand the existing package plant. The facility will continue to operate as a suspended growth activated sludge process in the single-stage nitrification mode and will be comprised of one (1) onsite lift station, one (1) common headworks with manual bar screens and flow splitting weirs, three (3) aeration basins, two (1) clarifiers, one (1) chlorine contact basin, and four (4) aerobic digesters. Raw sewage will be pumped from the lift station to the existing headworks where flow is split into two (2) separate trains. Then the influent flows to the aeration basins where it is mixed with return activated sludge to create mixed liquor. The aeration basins operate in the single –stage nitrification mode to consume organics and break down ammonia. From the aeration basins, the mixed liquor flows to the secondary clarifiers for clarification. After clarification, the treated effluent flows to the chorine contact basin for disinfection and the waste activated sludge is pumped to the digester for further treatment before being hauled off. From the chlorine contact basin, the effluent flows over a weir for flow measurement then on to the outfall.

The final phase of the facility is the proposed operational phase of 0.495 MGD. The proposed facilities for this phase will replace the existing fabricated steel package plants with a new proposed permanent concrete plant that is designed and constructed to treat 0.495 MGD and will operate as a suspended growth activated sludge process in single-stage nitrification mode. This phase will include the existing onsite lift station, one (1) headworks with mechanical bar screen and flow splitting weirs, two (4) aeration basins, two (2) clarifiers, two (2) chlorine contact basins, and two (3) aerobic digesters. In this phase, raw sewage will be pumped from the existing onsite lift station to the proposed headworks where flow will be split into two (2) separate trains. Then the influent flows to the aeration basins where it is mixed with return activated sludge to create mixed liquor. The aeration basins operate in the single—stage nitrification mode to consume organics and break down ammonia. From the aeration basins, the mixed liquor flows to the secondary clarifiers for clarification. After clarification, the treated effluent flows to the chorine contact basin for disinfection and the waste activated sludge is pumped to the digester for further treatment before being hauled off. From the chlorine contact basin, the effluent flows over a weir for flow measurement then on to the outfall.

- An Autodialer will be installed to detect power outages and equipment failure. The Autodialer
 will incorporate high level sensors on the wastewater treatment plant units. Once a problem is
 detected, the Autodialer will call preprogrammed numbers to notify the operations company.
 Once the notification is answered, the operations company will dispatch an operator to the
 facility.
- The facility will include an onsite generator for emergency power outages. The generator will provide sufficient power for the grinder/lift station, blowers, and chemical feed system. An automatic transfer switch will be included to transfer the electrical loads to the generator during an outage.
- The plant features stand-by blowers. The collection system will be new and minimum infiltration is anticipated. The plant is to be maintained and operated by personnel licensed by the State of Texas.
- The plant is designed to be maintained without bypassing. Replacement or repair of the interior coating system is the only maintenance item that would necessitate bypassing and the epoxy system should last 20-30 years.
- An intruder resistant fence will be placed around the facility.

EXHIBIT 9

TREATMENT UNITS



DIMENSIONS OF TREATMENT UNITS

A. WWTP PLANT: 0.165 MGD WWTP Complete Mix Activated Sludge

Type of Unit	# of Units	Size (depth, width, length & volume)
Aeration Basin	1	10.5' water depth x 12.0' width x 95.0' length each. Total Volume = 11,970 CF BOD_5 capacity = 342.0 lbs./day @ 35 lbs/day/1000 CF.
Clarifier	1	42' diameter has 1,385 sq. feet, sidewater depth of 10', Volume of 13,854 CF
Chlorine Contact	1	Depth = 9', width = 15', Length = 15.0', Volume = 2,025 CF
Digester	2	10.5' water depth x 12.0' width x 95.0' length each. Total Volume = 23,940 cf

B. WWTP PLANT: 0.330 MGD WWTP Complete Mix Activated Sludge

Type of Unit	# of Units	Size (depth, width, length & volume)
Aeration Basin	2	10.5' water depth x 12.0' width x 95.0' length each. Total Volume = 23,940 CF BOD ₅ capacity = 684 lbs./day @ 35 lbs/day/1000 CF.
Clarifier	1	42' diameter has 1,385 sq. feet, sidewater depth of 10', Total Volume of 13,854 CF
Chlorine Contact	2	Depth = 9', width = 15, Length = 15.0', Volume = 4,050 CF
Digester	3	10.5' water depth x 12.0' width x 95.0' length each. Total Volume = 35,910 cf

C. WWTP PLANT: 0.495 MGD WWTP Complete Mix Activated Sludge

Type of Unit	# of Units	Size (depth, width, length & volume)
Aeration Basin	4	10.5' water depth x 12.0' width x 95.0' length each. Volume = 47,880 CF total BOD ₅ capacity =1,368 lbs./day @ 35 lbs/day/1000 CF.
Clarifier	2	42' diameter has 1,385 sq. feet, sidewater depth of 12.0', Volume of 33,250 CF total
Chlorine Contact	2	Depth = 9.0', width = 15.0', Length = 15.0', Volume = 4,050 CF
Digester	3	10.5' water depth x 12.0' width x 95.0' length each. Volume = 35,910 CF total

EXHIBIT 10

SITE PLAN



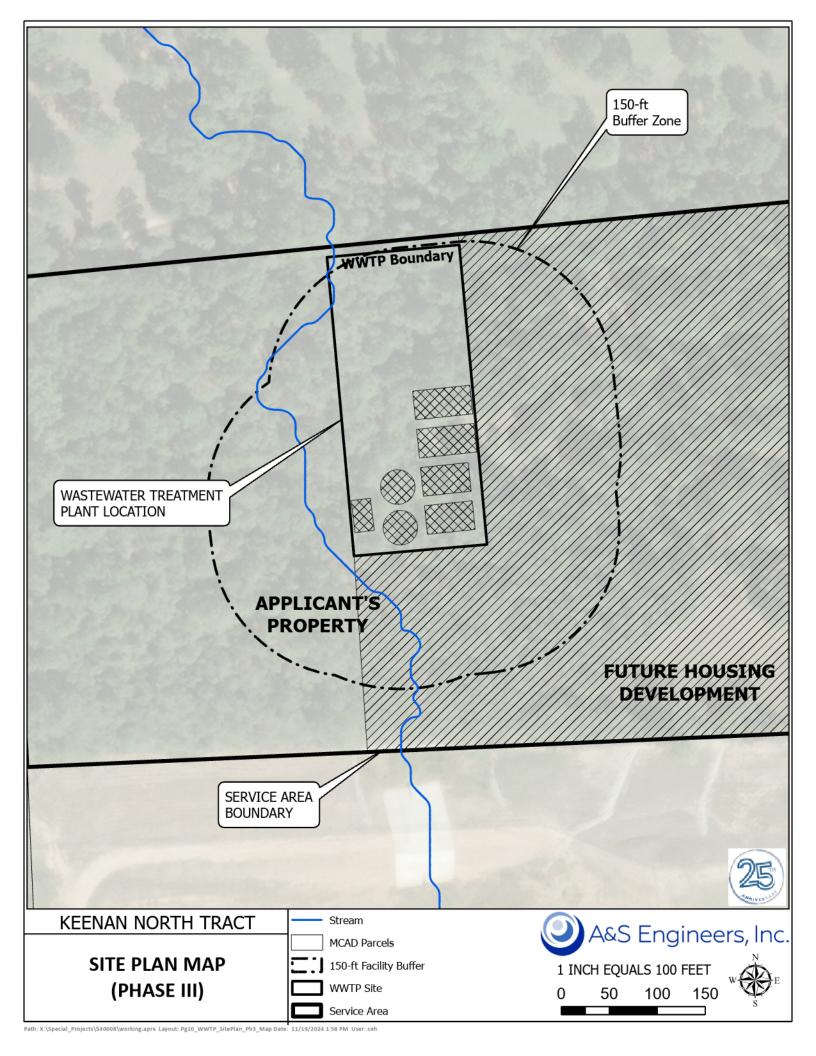


EXHIBIT 11

SERVICE AREA



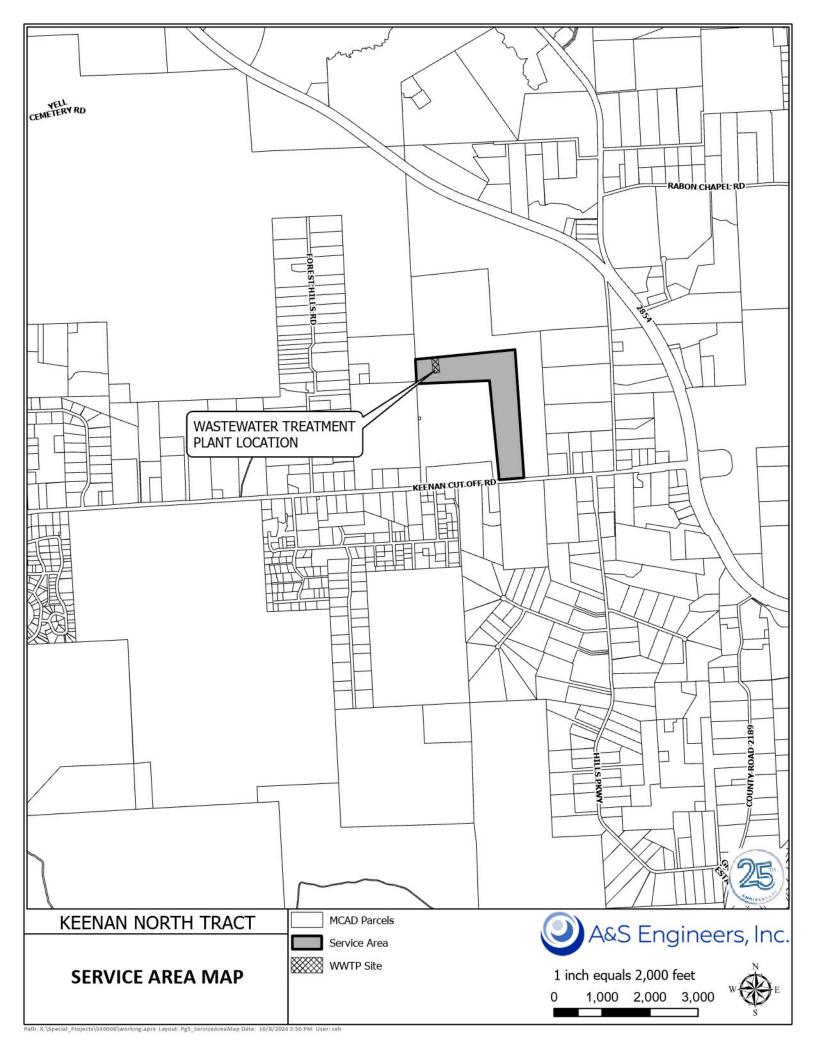
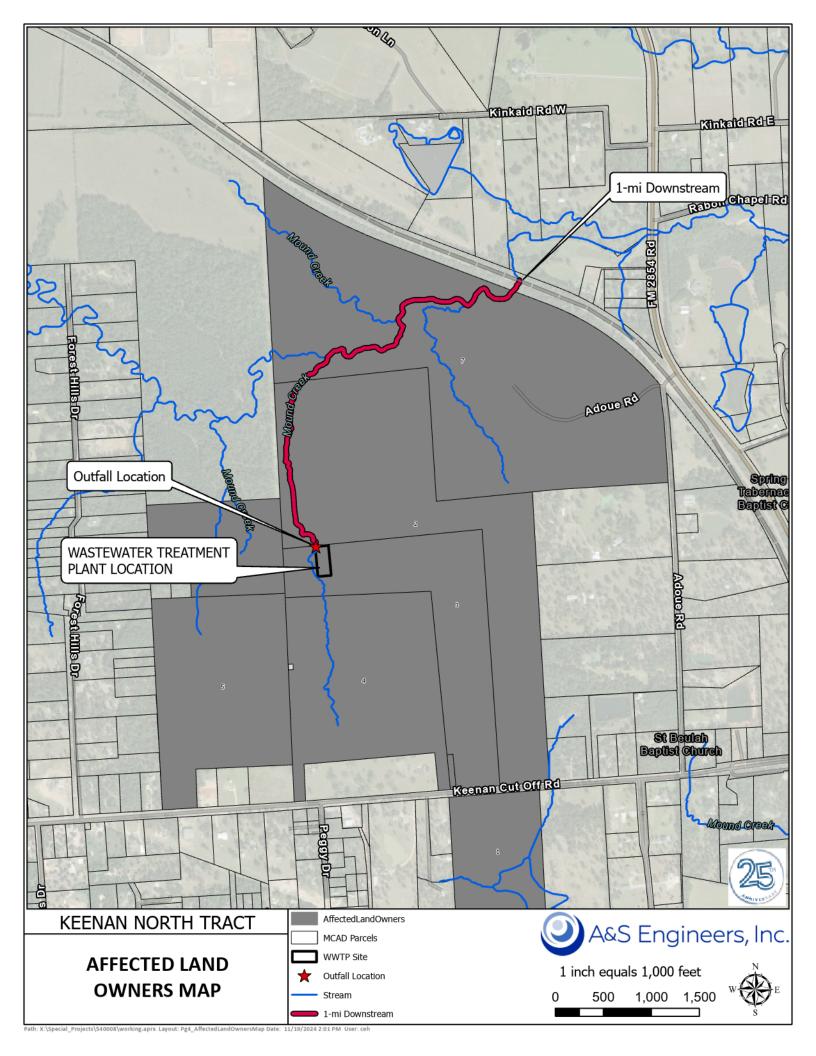


EXHIBIT 12

LANDOWNER MAP & LIST





Affected Landowners List

Tract	Owner Name	Street	City	State	Zip	Property Address	MCAD #
1	KEENAN SOUTH DEVELOPMENT LTD	28408 SWEETGUM RD	MAGNOLIA	TX	77354-7111		56669
2	LABELLA INTERESTS LP	333 SIMONTON ST	CONROE	TX	77301-2667	19012 KEENAN CUT OFF	300461
3	KEENAN NORTH DEVELOPEMENT LTD	28408 SWEETGUM RD UNIT B	MAGNOLIA	TX	77354-3189	19202 KEENAN CUT OFF	243974
4	MONTGOMERY ISD	PO BOX 1475	MONTGOMERY	TX	77356-1475	19190 KEENAN CUT OFF	419419
5	KCOP I LP	9805 KATY FWY	HOUSTON	TX	77024-1271	KEENAN CUT OFF	34716
6	WILLIAMS, JEFFICAL	19943 KEENAN CUT OFF RD	MONTGOMERY	TX	77316-2621	19943 KEENAN CUT OFF	34709
7	ADOUE, NORMAN D	7 SENDERO WOODS	BOERNE	TX	78015-8367	7190 ADOUE	34695

EXHIBIT 13

BUFFER ZONE MAP



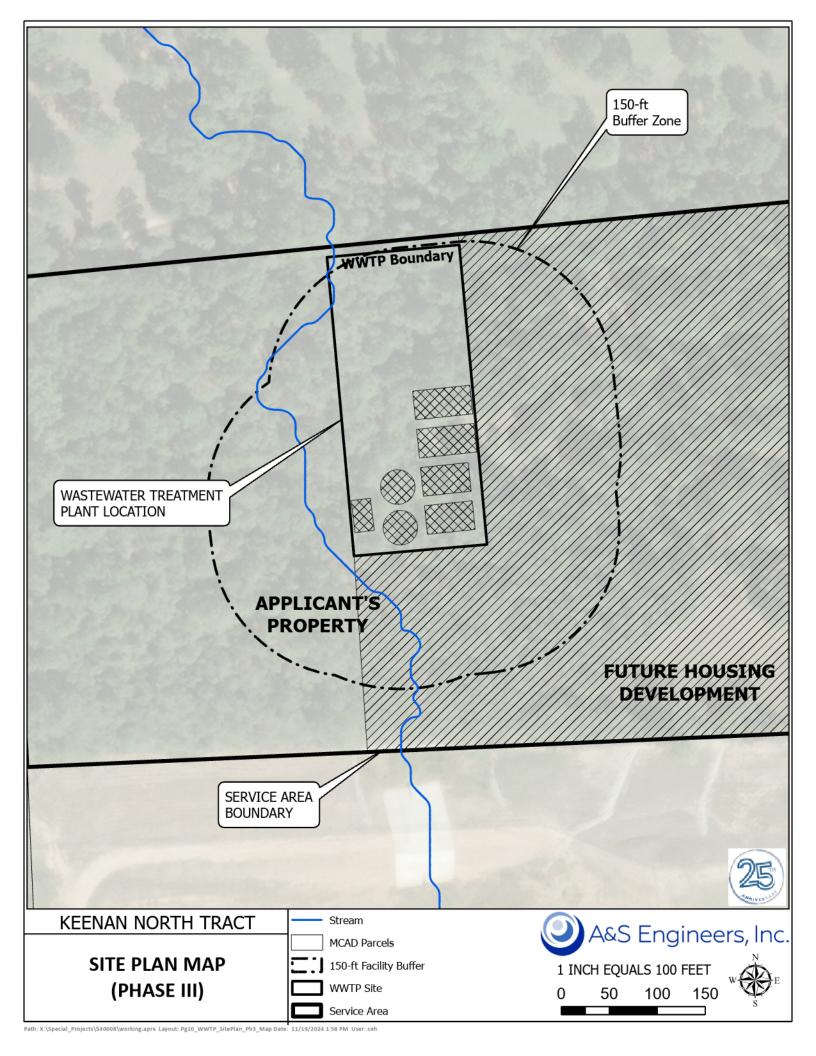
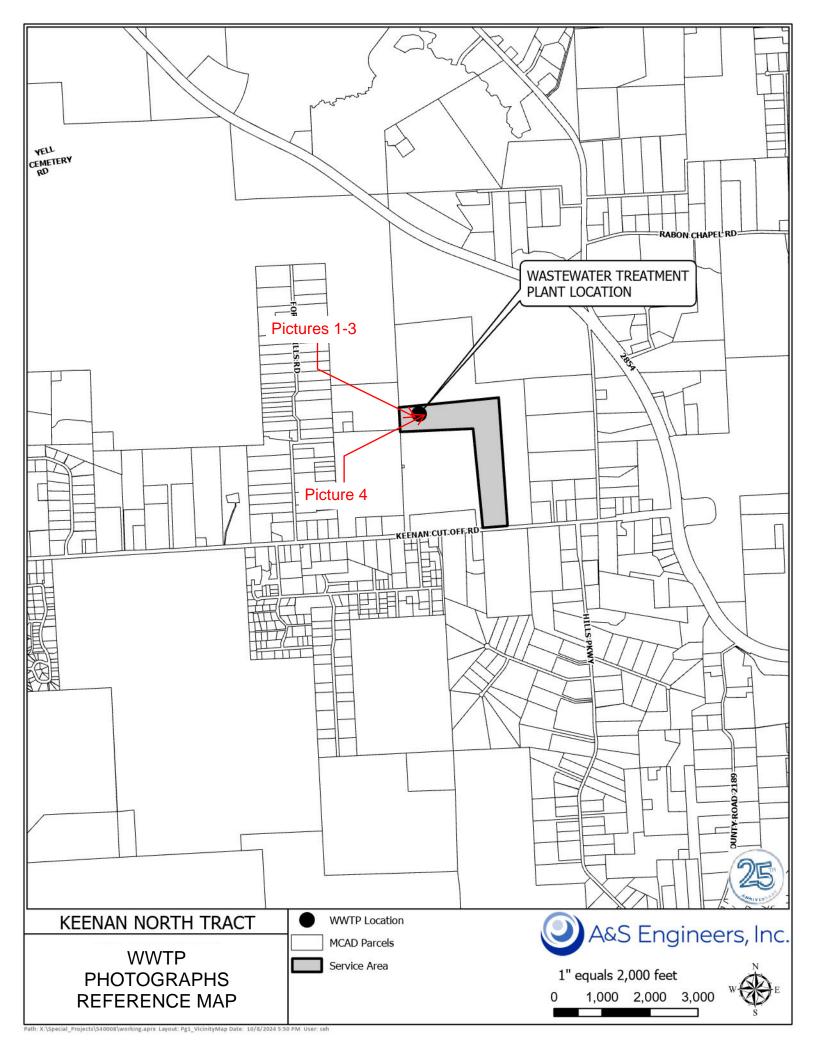


EXHIBIT 14

ORIGINAL PHOTOGRAPHS & MAP











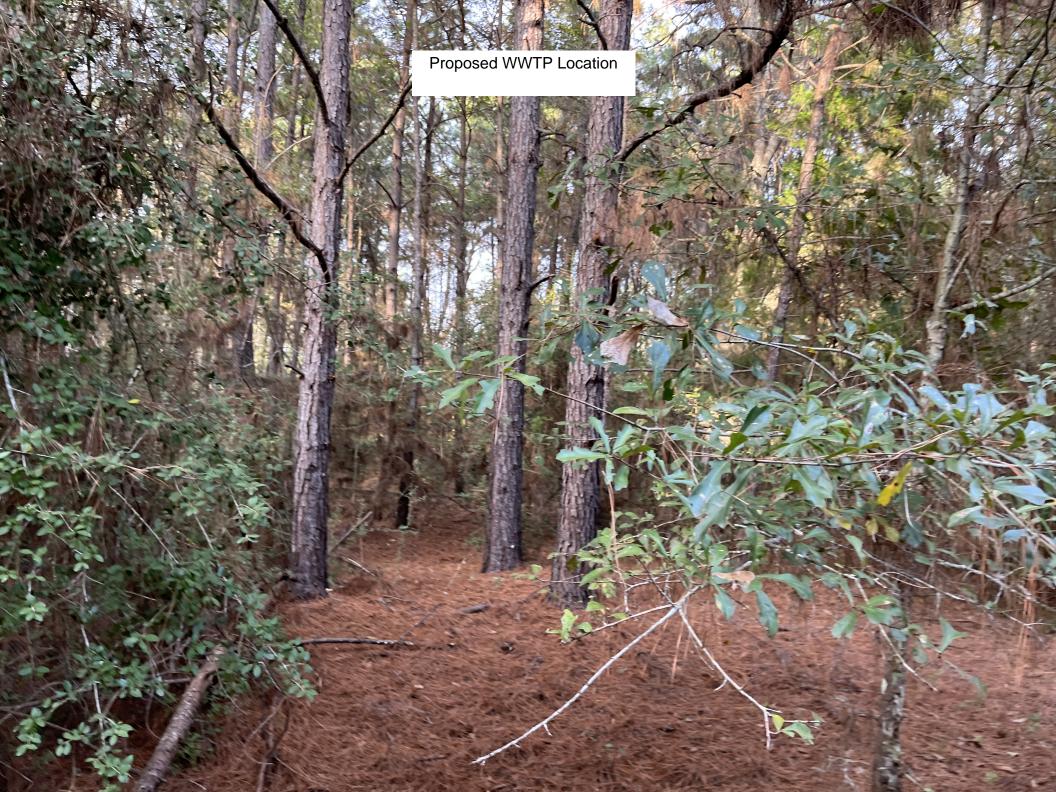


EXHIBIT 15

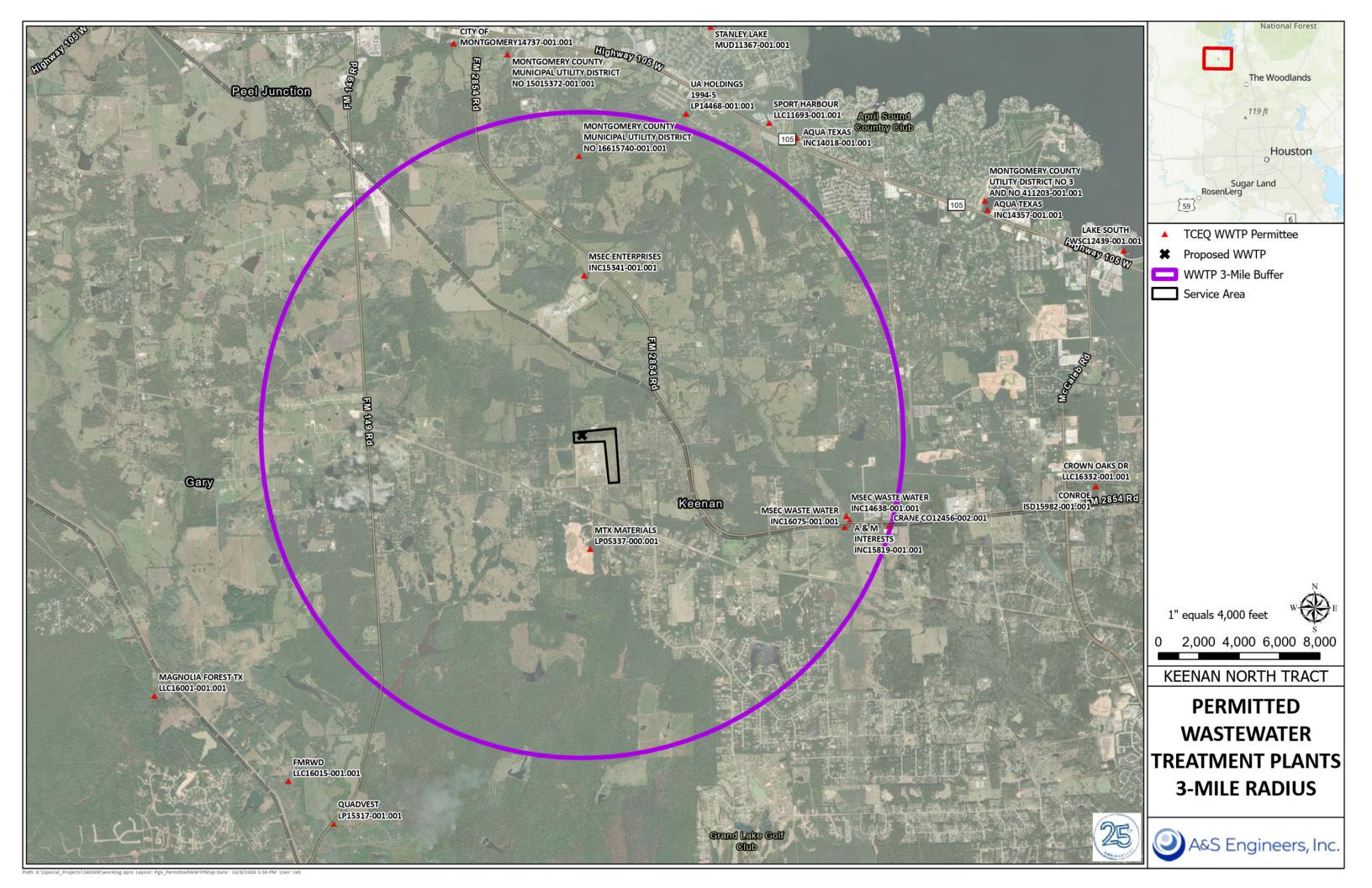
SLUDGE DISPOSAL



EXHIBIT 16

REGIONALIZATION MAP AND LETTERS







Crane Co. 9860 JOHNSON RD MONTGOMERY, TX 77316 -9494

Attn: District Engineer

Re: Keenan North Development, Ltd.

TCEQ Wastewater Discharge Permit Application

Regionalization Inquiry - Crane WWTP

A&S Project 540008.02

To Whom It May Concern:

Keenan North Development, Ltd. has prepared a wastewater discharge permit application for a new domestic wastewater treatment plant in Montgomery County with a ultimate final capacity of 0.495 MGD. One of the items to be addressed by the Texas Commission on Environmental Quality in a wastewater discharge permit application is regionalization. As part of this process, we will investigate the feasibility of obtaining capacity for the 0.495 MGD wastewater flow from a neighboring plant.

Is it possible for your utility to accept flo	ws from the proposed faci	ility?	_YES _	NO
If "YES", what is the maximum flow that	t can be accepted	_MGD.		
Ву:	Date:			
Please date, sign and return your reply by	email to elw@as-engine	ers.com		
If you have any questions, please feel free	e to contact me at 713-942	2-2700.		
Regards,				

Eric Williams, P.E. Project Manager

bether



Preserve HW6, LLC 3200 SOUTHWEST FWY STE 1870 HOUSTON, TX 77027 -7502

Attn: District Engineer

Re: Keenan North Development, Ltd.

TCEQ Wastewater Discharge Permit Application Regionalization Inquiry – Haven at Highway 6 WWTP

A&S Project 540008.02

To Whom It May Concern:

Keenan North Development, Ltd. has prepared a wastewater discharge permit application for a new domestic wastewater treatment plant in Montgomery County with a ultimate final capacity of 0.495 MGD. One of the items to be addressed by the Texas Commission on Environmental Quality in a wastewater discharge permit application is regionalization. As part of this process, we will investigate the feasibility of obtaining capacity for the 0.495 MGD wastewater flow from a neighboring plant.

Is it possible for your utility to accept flo	ws from the proposed faci	lity?	_YES _	NO
If "YES", what is the maximum flow tha	t can be accepted	_MGD.		
Ву:	Date:			
Please date, sign and return your reply by	email to elw@as-engined	ers.com		
If you have any questions, please feel fre	e to contact me at 713-942	2-2700.		
Regards,				

Eric Williams, P.E. Project Manager

buth



MSEC WASTE WATER INC PO BOX 970 NAVASOTA, TX 77868 -0970

Attn: District Engineer

Re: Keenan North Development, Ltd.

TCEQ Wastewater Discharge Permit Application Regionalization Inquiry – Lone Star Landing WWTP

A&S Project 540008.02

To Whom It May Concern:

Keenan North Development, Ltd. has prepared a wastewater discharge permit application for a new domestic wastewater treatment plant in Montgomery County with a ultimate final capacity of 0.495 MGD. One of the items to be addressed by the Texas Commission on Environmental Quality in a wastewater discharge permit application is regionalization. As part of this process, we will investigate the feasibility of obtaining capacity for the 0.495 MGD wastewater flow from a neighboring plant.

Is it possible for your utility to accept flows	from the proposed facil	ity?	YES]	NO
If "YES", what is the maximum flow that c	an be accepted	_MGD.			
By: 1	Date:				
Please date, sign and return your reply by e	mail to elw@as-enginee	rs.com			
If you have any questions, please feel free t	o contact me at 713-942	-2700.			
Regards,					

Eric Williams, P.E. Project Manager

buth



Montgomery County MUD 406 W. Grand Pkwy S, Ste 260 Katy, Texas 77494

Attn: District Engineer

Re: Keenan North Development, Ltd.

TCEQ Wastewater Discharge Permit Application

Regionalization Inquiry – Montgomery County MUD 166 WWTP

A&S Project 540008.02

To Whom It May Concern:

Keenan North Development, Ltd. has prepared a wastewater discharge permit application for a new domestic wastewater treatment plant in Montgomery County with a ultimate final capacity of 0.495 MGD. One of the items to be addressed by the Texas Commission on Environmental Quality in a wastewater discharge permit application is regionalization. As part of this process, we will investigate the feasibility of obtaining capacity for the 0.495 MGD wastewater flow from a neighboring plant.

Is it possible for your utility to accept flo	ws from the proposed faci	ility?	_YES _	NO
If "YES", what is the maximum flow that	t can be accepted	_MGD.		
Ву:	Date:			
Please date, sign and return your reply by	email to elw@as-engine	ers.com		
If you have any questions, please feel free	e to contact me at 713-942	2-2700.		
Regards,				

Eric Williams, P.E. Project Manager

buth



MSEC Waste Water, Inc. PO BOX 970 Navasota, TX 77868 -0970

Attn: District Engineer

Re: Keenan North Development, Ltd.

TCEQ Wastewater Discharge Permit Application Regionalization Inquiry – MSEC WWTP 2

A&S Project 540008.02

To Whom It May Concern:

Keenan North Development, Ltd. has prepared a wastewater discharge permit application for a new domestic wastewater treatment plant in Montgomery County with a ultimate final capacity of 0.495 MGD. One of the items to be addressed by the Texas Commission on Environmental Quality in a wastewater discharge permit application is regionalization. As part of this process, we will investigate the feasibility of obtaining capacity for the 0.495 MGD wastewater flow from a neighboring plant.

Is it possible for your utility to accept flows from the proposed facility?	_YES _	NO
If "YES", what is the maximum flow that can be acceptedMGD.		
By: Date:		
Please date, sign and return your reply by email to elw@as-engineers.com		
If you have any questions, please feel free to contact me at 713-942-2700.		
Regards,		
6 Alm		

Eric Williams, P.E. Project Manager



MSEC WASTE WATER INC PO BOX 970 NAVASOTA, TX 77868 -0970

Attn: District Engineer

Re: Keenan North Development, Ltd.

TCEQ Wastewater Discharge Permit Application

Regionalization Inquiry – MSEC WWTP

A&S Project 540008.02

To Whom It May Concern:

Keenan North Development, Ltd. has prepared a wastewater discharge permit application for a new domestic wastewater treatment plant in Montgomery County with a ultimate final capacity of 0.495 MGD. One of the items to be addressed by the Texas Commission on Environmental Quality in a wastewater discharge permit application is regionalization. As part of this process, we will investigate the feasibility of obtaining capacity for the 0.495 MGD wastewater flow from a neighboring plant.

Is it possible for your utility to accept flows from the proposed facility?	_YES	NO
If "YES", what is the maximum flow that can be acceptedMGD.		
By: Date:		
Please date, sign and return your reply by email to elw@as-engineers.com		
If you have any questions, please feel free to contact me at 713-942-2700.		
Regards,		
but him		

Eric Williams, P.E. Project Manager



MTX Materials, LP 7720 WESTVIEW DR HOUSTON, TX 77055 -5029

Attn: District Engineer

Re: Keenan North Development, Ltd.

TCEQ Wastewater Discharge Permit Application

Regionalization Inquiry – MTX 1 Plant

A&S Project 540008.02

To Whom It May Concern:

Keenan North Development, Ltd. has prepared a wastewater discharge permit application for a new domestic wastewater treatment plant in Montgomery County with a ultimate final capacity of 0.495 MGD. One of the items to be addressed by the Texas Commission on Environmental Quality in a wastewater discharge permit application is regionalization. As part of this process, we will investigate the feasibility of obtaining capacity for the 0.495 MGD wastewater flow from a neighboring plant.

Is it possible for your utility to accept flows from the proposed facility?	_YES _	NO
If "YES", what is the maximum flow that can be acceptedMGD.		
By: Date:		
Please date, sign and return your reply by email to elw@as-engineers.com		
If you have any questions, please feel free to contact me at 713-942-2700.		
Regards,		
6 Ala		

Eric Williams, P.E. Project Manager



MTX Materials, LP 7720 WESTVIEW DR HOUSTON, TX 77055 -5029

Attn:

District Engineer

Re:

Keenan North Development, Ltd.

TCEQ Wastewater Discharge Permit Application

Regionalization Inquiry - MTX 1 Plant

A&S Project 540008.02

To Whom It May Concern:

Keenan North Development, Ltd. has prepared a wastewater discharge permit application for a new domestic wastewater treatment plant in Montgomery County with a ultimate final capacity of 0.495 MGD. One of the items to be addressed by the Texas Commission on Environmental Quality in a wastewater discharge permit application is regionalization. As part of this process, we will investigate the feasibility of obtaining capacity for the 0.495 MGD wastewater flow from a neighboring plant.

Is it possible for your utility to accept flows from the proposed facility?YESNO
If "YES", what is the maximum flow that can be acceptedNAMGD.
If "YES", what is the maximum flow that can be accepted NA MGD. By: Date: 11/25/20 24
Please date, sign and return your reply by email to elw@as-engineers.com
If you have any questions, please feel free to contact me at 713-942-2700.
Regards,

Eric Williams, P.E. Project Manager

het him

	United States Postal Service	Lin Section and the Control of Co
		USPSTRACKING#
A&S Env 10377 S Houston	ease print your name, add	71 911
A&S Engineers, Inc. 10377 Stella Link Road Houston, TX 77025	 Sender: Please print your name, address, and ZIP+4[®] in this box 	First-Class Mall Postage & Fees Paid USPS Permit No. G-10
	×	Mail ees Paid 3-10

SENDER: COMPLETE THIS SECTION	COMPLETE THIS SECTION ON	DELIVERY
Complete items 1, 2, and 3. Print your name and address on the reverse so that we can return the card to you. Attach this card to the back of the mailpiece, or on the front if space permits.	A. Signature X B. Received by (Printed Name)	☐ Agent ☐ Addressee C. Date of Delivery
1. Article Addressed to: CRANE CO. 9860 JOHNSON RD. MONTGOMERY, TX 77316-9494	D. Is delivery address different from If YES, enter delivery address in the second secon	
9590 9402 8452 3156 4949 17 2. Article Number (Transfer from service label) 7014 1200 0001 1922 633	3. Service Type Adult Signature Cydult Signature Restricted Delivery Cydult Signature Restricted Delivery Certified Mail® Certified Mail® Certified Mail® Restricted Delivery Collect on Delivery Collect on Delivery Mail Mail® Sestricted Delivery Mail Restricted Delivery Mail Restricted Delivery	☐ Priority Mail Express® ☐ Registered Mail™ ☐ Registered Mail Restricter Delivery ☐ Signature Confirmation ™ ☐ Signature Confirmation ☐ Restricted Delivery
PS Form 3811, July 2020 PSN 7530-02-000-9053		Domestic Return Receipt

U.S. Postal Service of CERTIFIED MAIL: RECEIPT (Damestic Mail Only, No Insurance Coverage Provided)

For delivery Information visit our website at www.uspc.coms

Postage S

Certified Fee
Return Receipt is

Certified Fee
Return Receipt is

Postage S

Certified Fee
Return Receipt is

Return Receipt is

Certified Fee
Return Receipt is

Receipt is

Certified Fee
Return Receipt is

Receipt is

Receipt is

Return Receipt is

PRESERVE HW6, LLC 3200 SOUTHWEST FWY STE 1870 HOUSTON, TX 77027-7502 3. Service Type Adult Signature Adult Signature Restricted Delivery W Certified Mail Restricted Delivery Oblicat to Betreey Dollector Delivery Dollector Delivery Half Restricted Delivery Mail Restricted Delivery 1 Mail Restricted Delivery 1500) □ Priority Mail Express® □ Registered Mail™ □ Registered Mail Restricted Delivery □ Signature Confirmation™ Restricted Delivery 9590 9402 8452 3156 4949 86 2. Article Number (Transfer from service label) 7014 1200 0001 1922 6374 PS Form 3811, July 2020 PSN 7530-02-000-9053 Domestic Return Receipt U.S. Postal Service ... CERTIFIED MAIL... RECEIPT (Domestic Mail Only; No Insurance Coverage Provide CERTIFIED WAIL. 0001 1922 6374 0001 1922 6374 For delivery information visit our website at www.usps.com Postage Cartified Fee Return Receipt Fee (Endorsement Required) 7014 1200 0 Restricted Delivery Fee (Endorsement Required) Total Pos Sent To PRESERVE HW6,LLC 3200 SOUTHWEST FWY STE 1870 HOUSTON, TX 77027-7502 PS Form 3800, August 2006 See Reverse for Instructions

SENDER: COMPLETE THIS SECTION

or on the front if space permits.

so that we can return the card to you.

Attach this card to the back of the mailpiece,

■ Complete items 1, 2, and 3.■ Print your name and address on the reverse

COMPLETE THIS SECTION ON DELIVERY

D. Is delivery address different from item 1? ☐ Yes If YES, enter delivery address below: ☐ No

C. Date of Delivery

B. Received by (Printed Name)

A. Signature

X

USPS TRACKING#
First-Class Mail Postage & Fees Paid USPS
9590 9402 8452 33.5L 4949 8L

United States
Postal Service

* Sender: Please print your name, address, and ZIP+4* in this box* Houston, TX 77025

A&S Engineers, Inc. Houston, TX 77025

Complete items 1, 2, and 3. Print your name and address on the reverse X Attach this card to the back of the mailpiece, or on the front if space permits. B. Received by (Printed Name) C. Date of Delivery 1. Article Addressed to: D. Is delivery address different from item 1? ☐ Yes
If YES, enter delivery address below: ☐ No MSEC WASTE WATER INC. PO BOX 970 NAVASOTA, TX 77868-0970 Service Type
 Adult Signature
 Adult Signature
 Adult Signature
 Adult Signature
 Adult Signature
 Certified Mail Restricted Delivery
 Collect Delivery
 Collect Delivery
 Collect Delivery Restricted Delivery
 Mail Restricted Delivery
 S500) Priority Mail Express®
☐ Registered Mail™
☐ Registered Mail Restricted
Delivery
☐ Signature Confirmation™
☐ Signature Confirmation
Restricted Delivery 9590 9402 8452 3156 4949 24 Article Number (Transfer from service label) 7014 1200 0001 1922 6381 PS Form 3811, July 2020 PSN 7530-02-000-9053 Domestic Return Receipt U.S. Postal Service ::
CERTIFIED MAIL:: RECEIPT
(Domestic Meil Only, No Insurance Coverage Provided) 0001 1922 6381 0001 1922 6381 For delivery information visit our website at www.usps.com Postage Certified Fee Postmark Here 7014 1200 C MSEC WASTE WATER INC. Street, Apr. N or PO Box Nc City, State, 21 NAVASOTA, TX 77868-0970

SENDER: COMPLETE THIS SECTION

COMPLETE THIS SECTION ON DELIVERY

United States Postal Service 2046 0656 USPS TRACKING# 2548 372P Sender: Please print your name, THE PARTY OF THE **6**464 A&S Engineers, Inc. 10377 Stella Link Road Houston, TX 77025 먑 address, and ZIP+4® in this First-Class Mail Postage & Fees Paid USPS Permit No. G-10

Complete items 1, 2, and 3. Print your name and address on the reverse so that we can return the card to you. Attach this card to the back of the mailpiece, or on the front if space permits. Article Addressed to: MONTGOMERY COUNTY MUD	A. Signature X
406 W. GRAND PKWY S, STE 260 KATY, TX 77494	
9590 9402 8452 3156 4949 62 2. Article Number (Transfer from service label) 7014 1200 0001 1922 6398	3. Service Type Adult Signature Priority Mail Express® Registered Mail*
PS Form 3811, July 2020 PSN 7530-02-000-9053	Domestic Return Receipt
MIL	For delivery information visit our website at www.usps.com⊚
FIED IN	Carillied Fee Return Receipt Fee (Endorsement Required) Restricted Deliver Fee
PACE STOCKEN OF THE STOCKEN OF THE STOCKEN	(Endorsement Required)
	PS Form 3800, August 2006 See Reverse for Instruction

COMPLETE THIS SECTION ON DELIVERY

SENDER: COMPLETE THIS SECTION

United States Postal Service 29 Lh64 95TE 2549 2046 0656 USPS TRACKING# Sender: Please print your name, address, and ZIP+4® in this box First-Class Mail Postage & Fees Paid USPS Permit No. G-10

	United States Postal Service	55 6464 95TE 2548 2046 0656		USPS TRACKING#
A&S 5 10377 Houst	 Sender: Please print your 	372P 4844 95TE	Marie III in Mineral Service III in Mineral III in	ACKING#
A&S Engineers, Inc. 10377 Stella Link Road Houston, TX 77025	 Sender: Please print your name, address, and ZIP+4® in this box 		Postage & Fees Paid USPS Permit No. G-10	
			es Paid	

SENDER: COMPLETE THIS SECTION	ON	COMPLETE THIS SECTION ON DELIVERY				
 Complete items 1, 2, and 3. Print your name and address on the so that we can return the card to y. Attach this card to the back of the or on the front if space permits. 	ou.	A. Signature X B. Received by	oy (Printed Name)	☐ Agent ☐ Addressee C. Date of Delivery		
MSEC WASTE WATER, INC PO BOX 970 NAVASOTA, TX 77868-0970			address different from ite er delivery address belo			
9590 9402 8452 3156 49- 2. Article Number (<i>Transfer from service lai</i> 7014 1200 0001 1.		Mail	Restrictéd Delivery	Priority Mail Express® Registered Mail™ Registered Mail Restricted Delivery Signature Confirmation™ Signature Confirmation Restricted Delivery		
202 0044						
PS Form 3911 Inly 2020 PSN 7530.0	10 10 0	.S. Postal S ERTIFIEI omestic Mail C	NAME OF STREET OF STREET, STRE	Coverage Provided)		

PS Form \$800, August 2006 See Reverse for Instructions

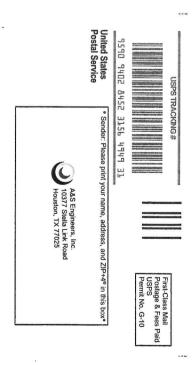
	United States Postal Service	
		USPSTRACKING#
A&S E 10377 Housto	 Sender: Please print your name, address, and ZIP+4® in this box 	94 646h 99
A&S Engineers, Inc. 10377 Stella Link Road Houston, TX 77025	ame, address, and ZIF	
	5+4® in this box®	First-Class Mail Postage & Fees Paid USPS Permit No. G-10

Wilderson Market and Control of the			
SENDER: COMPLETE THIS SECTION		COMPLETE THIS SECTION ON DELIVERY	
Complete items 1, 2, and 3.		A. Signature	
Print your name and address on the rev so that we can return the card to you.	/erse	X Agent	
Attach this card to the back of the mail:	piece.	B. Received by (Printed Name) C. Date of Delivery	
or on the front if space permits.			
Article Addressed to:		D. Is delivery address different from item 1? ☐ Yes If YES, enter delivery address below: ☐ No	
MSEC WASTE WATER, INC.			
PO BOX 970			
NAVASOTA, TX 77868-0970			
SI II MANIENT TAKET IN PER TAKAN KAN MANANAN M		3. Service Type ☐ Priority Mail Express®	
	Ш	☐ Adult Signature ☐ Registered Mail™ ☐ Adult Signature Restricted Delivery ☐ Registered Mail Restricted	
9590 9402 8452 3156 4949 4	18	☐ Certified Mail® Delivery ☐ Certified Mail Restricted Delivery ☐ Signature Confirmation™	
2. Article Number (Transfer from service label)		☐ Collect on Delivery ☐ Signature Confirmation ☐ Collect on Delivery Restricted Delivery Restricted Delivery	
7014 1200 0001 192	2 64	1 1 1 Aaii Restricted Delivery	
PS Form 3811, July 2020 PSN 7530-02-000	0-9053	Domestic Return Receipt	
PS Form 3811, July 2020 PSN 7530-02-000	0-9053	THE RESIDENCE OF THE PARTY OF T	8
PS Form 3811, July 2020 PSN 7530-02-000	0-9053	U.S. Postal Service 100	THE REAL PROPERTY.
PS Form 3811, July 2020 PSN 7530-02-000		U.S. Postal Service CERTIFIED MAIL. RECEIPT	THE REAL PROPERTY.
	4.1.1.1.1.1.1.1.1.1.1.1.1.1.1.1.1.1.1.1	U.S. Postal Service CERTIFIED MAIL RECEIPT (Domestic Mail Only, No Insurance Coverage Provided	THE PERSON NAMED IN
	5411 6411	U.S. Postal Service CERTIFIED MAIL RECEIPT (Domestic Mail Only; No Insurance Coverage Provideo For delivery Information visit our website at www.usps.com.	THE PERSON NAMED IN
	22 6411 22 6411	U.S. Postal Service CERTIFIED MAIL RECEIPT (Domestic Mail Only; No Insurance Coverage Provideo For delivery Information visit our website at www.usps.com.	
	2 6411 2 6411	U.S. Postal Service CERTIFIED MAIL RECEIPT (Domestic Mail Only; No Insurance Coverage Provideo For delivery Information visit our website at www.usps.com.	
	1 1922 6411 1 1922 6411	U.S. Postal Service CERTIFIED MAIL RECEIPT (Domestic Mail Only; No Insurance Coverage Provideo For delivery Information visit our website at www.usps.com. Postage \$ Certified Fee	
	001 1922 6411 001 1922 6411	U.S. Postal Service m CERTIFIED MAIL RECEIPT (Domestic Mail Only; No Insurance Coverage Provided For delivery Information visit our website at www.usps.com.) Postage S Carilled Fee Return Receist Fee	
TOP OF STATE TO THE REST. WENT OF STATE OF STAT	0001 1922 6411 0001 1922 6411	U.S. Postal Service m CERTIFIED MAIL RECEIPT (Domestic Mail Only; No Insurance Coverage Provided For delivery Information visit our website at www.usps.com.) Postage S Carilled Fee Return Receist Fee	
TOP OF STATE TO THE REST. WENT OF STATE OF STAT	00 0001 1922 6411 00 0001 1922 6411	U.S. Postal Service m CERTIFIED MAIL RECEIPT (Domesile Mail Only, No Insurance Coverage Provided For delivery Information visit our website at www.usps.com Postage \$ Certified Fee Return Receipt Fee (Endorsament Required) Rastricted Delivery Fee (Endorsament Required)	
TOP OF STATE TO THE REST. WENT OF STATE OF STAT	0 0001 1922 6411 0 0001 1922 6411	U.S. Postal Service m CERTIFIED MAIL RECEIPT (Domesilo Mail Only, No Insurance Coverage Provideo For delivery Information visit our website at www.usps.com Postage \$ Certified Fee Return Receipt Fee (Endorsament Required) Restricted Delivery Fee (Endorsament Required) Total Pos	
CERTIFIED MAIL.	1200 0001 1922 6411 1200 0001 1922 6411	U.S. Postal Service m CERTIFIED MAIL RECEIPT (Domestic Mail Only; No Insurance Coverage Provided For delivery Information visit our website et www.usps.com.s Postage S Certified Fee Return Receipt Fee (Endorsement Required) Restricted Delivery Fee (Endorsement Required) Total Pos Sant To MSEC WASTE WATER INC.	
CERTIFIED MAIL.	1200 0001 1922 6411 1200 0001 1922 6411	U.S. Postal Service m CERTIFIED MAIL RECEIPT (Domestic Mail Only; No Insurance Coverage Provided For delivery Information visit our website at www.usps.com.s Postage S Cartifled Fee Return Receipt Fee (Endorsement Required) Restricted Delivery Fee (Endorsement Required) Total Pos Sant To MSEC WASTE WATER INC. Street Apr. PO BOX 970	
CERTIFIED MAIL.	4 1200 0001 1922 6411 4 1200 0001 1922 6411	U.S. Postal Service m CERTIFIED MAIL RECEIPT (Damestic Mail Only; No Insurance Coverage Provided For delivery Information visit our website at www.usps.com. Postags S Carilled Fee Return Receipt Fee (Endorsement Required) Restricted Delivery Fee (Endorsement Required) Total Pos Service MASTE WATER INC. Sirest Api: PO BOX 970	

Complete items 1, 2, and 3.		
	A. Signature	☐ Agent
Print your name and address on the reverse so that we can return the card to you.	X	☐ Addressee
Attach this card to the back of the mailpiece, or on the front if space permits.	B. Received by (Printed Name)	C. Date of Delivery
1. Article Addressed to:	D. Is delivery address different from item If YES, enter delivery address below	
MTX MATERIALS, LP		
7720 WESTVIEW DR		
HOUSTON, TX 77055-5029		
9590 9402 8452 3156 4949 31 2. Article Number (Transfer from service label) 7014 1200 0001 1922 6428	☐ Adult Signature ☐ Re ☐ Adult Signature Restricted Delivery ☐ Re ☐ Certified Mail Restricted Delivery ☐ Sig ☐ Collect on Delivery ☐ Sig	iority Mail Express® gistered Mail TM gistered Mail Restricte livery anature Confirmation nature Confirmation stricted Delivery
PS Form 3811, July 2020 PSN 7530-02-000-9053		stic Return Receipt
# # # # # # # # # # # # # # # # # # #	I.S. Postal Service ERTIFIED MAIL RECOMMENT MAIL MAIL MAIL MAIL MAIL MAIL MAIL MAIL	loverage Provid

COMPLETE THIS SECTION ON DELIVERY

SENDER: COMPLETE THIS SECTION



COMPLETE THIS SECTION ON DELIVERY	A. Signature	1 2	B. Heceived by (Printed Name) C. Date of Delivery	D. Is delivery address different from item 1? Yes If YES, enter delivery address below: No			3. Service Type Cault Signature Caldid, Signature Restricted Delivery Certified Mail® Certified Mail® Restricted Delivery Certified Mail® Restricted Delivery Certified Mail® Restricted Delivery Certified Mail	☐ Collect on Delivery ☐ Collect on Delivery ☐ Mail Mail Restricted Delivery from Sign	Domestic Return Receipt		COMPLETE THIS SECTION ON DELIVERY	A. Signature	4	Date	D. Is delivery address different from item 1? ☐ Yes If YES, enter delivery address below: ☐ No				Service Type Adult Signature Adult Signature Restricted Delivery Adult Signature Restricted Delivery Delivery Delivery Delivery Delivery Delivery Delivery Delivery Delivery		_	Domestic Return Receipt
SENDER: COMPLETE THIS SECTION	Complete items 1, 2, and 3.	Frint your name and address on the reverse so that we can return the card to you.	Attach this card to the back of the mailpiece, or on the front if space permits.	1. Article Addressed to:	MSEC WASTE WATER, INC.	PO BOX 970 NAVASOTA, TX 77868-0970		1049	PS Form 3811, July 2020 PSN 7530-02-000-9053		SENDER: COMPLETE THIS SECTION	■ Complete items 1, 2, and 3.	 Print your name and address on the reverse so that we can return the card to you. 	Attach this card to the back of the mailpiece, or on the front if space permits.	1. Article Addressed to:	MSEC WASTE WATER INC.	PO BOX 970 NAVASOTA, TX 77868-0970		And the second s	9590 9402 8452 3156 4949 24	2. Article Number (Transfer from service label) 7014 1200 0001 1922 6381	PS Form 3811, July 2020 PSN 7530-02-000-9053
1. A	Comp Print y so that Attach or on Article	lete your at we had a thick the to the total and the total	items name can s carc front i ressed	and return to the f space to:	and 3. address the case backs be perm	s on the ard to you of the rinits.	reverse u. nailpiece,	A. S X B. F	deceiv deceiv deceiv deceiv deceiv deceiv	eed by	y (Prinddresser deli	Santed I	Name erent e	from ite	C. Dem 1?	☐ Ag ☐ Ad ate of ☐ Yes ☐ No	dressee Delivery s					
	96 Article 71	590 Num	940: ber (1)	2 84 ransfe	52 31 from se	56 494 ervice lab	el)	☐ Certi ☐ Colle	fied Ma fied Ma ct on I ct on I	ail® ail Res Delive Delive	stricte ry ry Res	d Deliv	ery I Delive	ery F	Delivery Signatur Signatur Restricte	e Confir e Confir ed Delive	mation™ mation	•				

SENDER: COMPLETE THIS SECTION	COMPLETE THIS SECTION ON DELIVERY
 Complete items 1, 2, and 3. Print your name and address on the reverse so that we can return the card to you. Attach this card to the back of the mailpiece, or on the front if space permits. Article Addressed to: PRESERVE HWS, LLC 3200 SOUTHWEST FWY STE 1870 HOUSTON, TX 77027-7502 	A. Signature X
9590 9402 8452 3156 4949 86 2. Article Number (Transfer from service label) 7014 1200 0001 1922 6374	3. Service Type

PS Form 3811, July 2020 PSN 7530-02-000-9053

Domestic Return Recei

SENDER: COMPLETE THIS SECTION COMPLETE THIS SECTION ON DELIVERY A. Signature ■ Complete items 1, 2, and 3. ☐ Agent Print your name and address on the reverse ☐ Address so that we can return the card to you. B. Received by (Printed Name) C. Date of Delive Attach this card to the back of the mailpiece, or on the front if space permits. 1. Article Addressed to: If YES, enter delivery address below: MTX MATERIALS, LP 7720 WESTVIEW DR HOUSTON, TX 77055-5029 Service Type ☐ Priority Mail Express® | 3. Service Type | Adult Signature | Adult Signature Restricted Delivery | Certified Mail® | Certified Mail Restricted Delivery | Collect on Delivery | Collect on Delivery | I Mail ☐ Registered Mail™ ☐ Registered Mail Restri ☐ Delivery ☐ Signature Confirmation☐ Signature Confirmation☐ Restricted Delivery 9590 9402 8452 3156 4949 31 2. Article Number (Transfer from service label) 1 Mail 1 Mail Restricted Delivery 500)

PS Form 3811, July 2020 PSN 7530-02-000-9053

7014 1200 0001 1922 6428

Domestic Return Recei



Preserve HW6, LLC 3200 SOUTHWEST FWY STE 1870 HOUSTON, TX 77027 -7502

Attn: District Engineer

Re: Keenan North Development, Ltd.

TCEQ Wastewater Discharge Permit Application Regionalization Inquiry – Haven at Highway 6 WWTP

A&S Project 540008.02

To Whom It May Concern:

Keenan North Development, Ltd. has prepared a wastewater discharge permit application for a new domestic wastewater treatment plant in Montgomery County with a ultimate final capacity of 0.495 MGD. One of the items to be addressed by the Texas Commission on Environmental Quality in a wastewater discharge permit application is regionalization. As part of this process, we will investigate the feasibility of obtaining capacity for the 0.495 MGD wastewater flow from a neighboring plant.

Is it possible for your utility to accept flows from the proposed facility?	_YES	X	_NO
If "YES", what is the maximum flow that can be acceptedMGD.			
By: Date: 11/26/2024			
Please date, sign and return your reply by email to elw@as-engineers.com			
If you have any questions, please feel free to contact me at 713-942-2700.			
Regards,			
het he			

Eric Williams, P.E. Project Manager Domestic Wastewater Permit Application Keenan North Development, Ltd. TPDES Permit No. TBD NPDES Permit No. TBD A&S Project No. 540008.02

EXHIBIT 17

DESIGN CALCULATIONS



KEENAN NORTH

WASTEWATER TREATMENT PLANT

WWTP PROCESS SIZING CALCULATIONS

PHASE I: 0.165 MGD 10/31/24

I. DESIGN PARAMETERS

A.	Influe	ent Composition		_
	1.	Influent BOD =	300	mg/l
	2.	Influent TSS =	300	mg/l
	3.	Influent NH3-N =	75	mg/l
В.	Hydra	aulic Considerations		_
	1.	Design Flow =	0.165	MGD
	2.	No. 1 Unit Change	115	gpm
	3.	Hydraulic Peaking Factor for Design =	4.00	Q
	4.	Peak Hydraulic Flow =	0.660	MGD
	5.	No. 4 Unit Change	458	gpm
c.	Influe	ent Composition Mass Loading (based on Raw & Post Primary Split		_
	1.	Mass BOD Loading =	413	lb/day
	2.	Mass TSS Loading =	413	lb/day
	3.	Mass NH3-N Loading =	103	lb/day
D.	Efflue	ent Composition		
	1.	Effluent BOD =	0	mg/l
	2.	Effluent TSS =	0	mg/l
	3.	Effluent NH3-N =	0	mg/l
	4.	Effluent TKN =	0	mg/l
	5.	Phosphorous =	0	mg/l

KEENAN NORTH

WASTEWATER TREATMENT PLANT

ACTIVATED SLUDGE

Α.		tion Influent Composition	1		0.17	7
	1.	Total Design Flow		=	0.17	MGD
	2.	Total Influent BOD		=	413	lb/day
	3.	Total Influent TSS		=	413	lb/day
	4.	Total Influent NH3-N		=	103	lb/day
В.	TCEQ	Organic Loading Criteria	1			
	1.	Organic Loading (TCEQ	217.154)	=	35	lb BOD/1000 cu ft
	2.	Organic Loading to Aera	ation	=	413	lb/day
	3.	Aeration Basin Volume	Required	=	11,795	cu. ft
C.	Minir 1.	mum Aeration Volume	Based on controlling criteria	=	11,795	cu. ft
	2.	Equivalent Loading base		=	35.0	lb BOD/1000 cu ft
	۷.	Equivalent Loading basi	ed on will volume	-	35.0	II BOD/1000 cu it
	Solid	s Balance Method				
	1.	(delta X/delta t)	= Excess Sludge Produced per Day			
			= Xi1 + Xi2 + aSo + a*N - bXv - Xe			
			=			
			82.566 lbs/day + 132.1056 lbs/day + (0.6 lb VSS produced / lb BOD applied)(412.83 lbs/day) + (0.12 lb/VSS produced / lb NH3-N			
			applied)(103.2075 lbs/day) - (0.06 lb VSS destroyed / lb MLSS-			
			day)(2195.2 lbs) + 0 lbs/day			
				=	343	lb/day
		Where:				
		where.	% of Fixed Influent TSS to Aeration Basin	=	20%	of TSS
			(Total Influent TSS to Aeration Basin)	=	413	lbs/day
		Xi1 =	Fixed Influent TSS to Aeration Basin	=	83	lbs/day
		XII -	% of Non-biodegradable Influent VSS	=	40%	of VSS
			(Volatile Influent TSS to Aeration Basin)	=	330	lbs/day
		Xi2 =	Non-biodegradable Influent VSS	=	132	lbs/day
		a =	Synthesis Coefficient	=	0.60	lb VSS produced / lb BOD applied
		So =	Influent BOD5	=	413	lbs/day
		a* =	Nitrifier Synthesis Coefficient	=	0.12	lb/ VSS produced / lb NH3-N app
		N =	Influent NH3-N	=	103	lbs/day
		b =	Endogenous Coefficient	=	0.06	lb VSS destroyed / lb MLSS-day
		Xv =	MLVSS in Aeration Basin	=	2,195	lbs
		Xe =	Effluent TSS (based on effluent 5 mg/L)	=	0.0	lbs/day
					,	_
		Find MLSS in Aeration E				٦
		Ratio of Volatile to Tota		=	0.8	MLVSS / MLSS
		Design MLSS Concentra		=	3,000.0	mg/L
		Estimated MLVSS Conc		=	2,400.0	mg/L
		Design Solid Retention		=	8.0	days
		MLSS in Aeration Basin		=	2,744	lbs
		MLVSS in Aeraton Basir		=	2,195	lbs
		Verify MLSS Assumptio	n (SRT x delta X/delta T)	=	2,744	lbs
		Fixed Influent TSS to Ae	eration Basin	=	83	lbs/day
		Nonbiodegradable Influ		=	132	lbs/day
		Growth Due to Synthes		=	247.698	lbs/day
		Growth Due to Nitrifier		=	12	lbs/day
		Endogenous Destructio	on	=	132	lbs/day
					•	-

KEENAN NORTH

WASTEWATER TREATMENT PLANT lbs/day Effluent TSS 0 Excess Sludge Produced per Day 343 lbs/day Design F:M Ratio 0.15 lb BOD / lb SS lbs BOD5 / 1000 cu. Ft. Maximum BOD5 Loading Rate 28.16 Required Aeration Basin Volume 14,662.1 cu. Ft. Hydraulic Retention Time 16.0 hours Required Aeration Basin Volume per Solids Balance Method 2744 lbs / (8.34 x 3000 mg/L)*10^6/7.48 14,662.1 cu. Ft. **Number of Aeration Basin Trains Number of Basins** 1.0 # trains Design per Flow Basin 0.165 MGD 2. **Aeration Basin Sizing Calculations** Minimum Total Volume Required 14,662 cu. ft 1. 10.50 ft. 2. Assumed Side Water Depth of Aeration Basin Minimum Total Surface Area Required 1,396 sq. ft 3. Minimum Total Surface Area Required per Train 1,396 sq. ft 4. **Proposed Aeration Basin Configuration Proposed Basin Dimensions** Width 12.0 a. 95.0 ft. b. Length Proposed Length to Width Ratio 7.92 2. Number of Aeration Basin Trains (from above) 1 # trains 3. **Total Volume of Proposed Basins** 11,970 cu. ft **Actual Aeration Basin Loading** 34 lb BOD5 / 1000 cu. Ft. 4. Actual Hydraulic Retention Time 13 hours 5. Actual F:M Ratio lb BOD / lb SS 0.18 6. Check of Proposed Total Basin Volume ОК 7.

KEENAN NORTH

WASTEWATER TREATMENT PLANT

III.	SECO	ONDARY/FINAL CLARIFICATION			
	A.	Number of Secondary/Final Clarifiers	=	1	
		1. Total Flow to Clarifiers	=	0.17	MGD
	В.	Surface Area Design (TCEQ 217.154(c)(1))			
		Maximum Surface Loading @ Peak Flow	=	1,200	gpd/sq. ft
		2. Surface Area Required @ Peak Flow per Clarifier	=	550	sq. ft
	c.	Hydraulic Detention Time Design (TCEQ 217.154(c))			
		1. Minimum Effective Detention Time @ Peak Flow	=	1.80	Hours
		2. Volume Required @ Peak Flow per Clarifier	=	6,618	cu. Ft.
		3. Surface Area Required @ Peak Flow (From Above) per Clarifier		550	sq. ft.
	D.	Effluent Weir Design (TCEQ 217.152(c)(4-5))			
		1. Weir loading for plants 1.0 MGD or less	=	20,000	gpd/ft
		2. Weir loading for plants over 1.0 MGD	=	30,000	gpd/ft
		3. Controlling Criteria	=	20,000	gpd/ft
		4. Total Length of Weir Required @ Peak Flow per Clarifier	=	33.0	ft
	E.	Clarifer Basin Check			
		1. Number of Clarifiers	=	1	# clarifiers
		2. Minimum Surface Area (From Above) per Clarifier	=	550	sq. ft.
		3. Minimums Volume Time (From Above) per Clarifier	=	6,618	cu. Ft.
		4. Minimum Weir Total Length (From Above) per Clarifier	=	33.0	ft
		5. Clarifier Size (Circular)	=	42	ft
		6. Surface Area Per Clarifier (Circular)	=	1,385	sq. ft.
		7. Total Surface Area	=	1,385	sq. ft.
		8. Surface Area Check	=	ОК	
		9. Effective Side Water Depth	=	10.00	ft.
		10. Total Clarifer Volume	=	13,854	cu. Ft.
		11. Total Clarifer Hydraulic Detention Time (Using Prop. Surface Area)	=	3.8	Hours
		12. Hydraulic Detention Time Check	=	ОК	
		13. Design Weir Width - Width of Launder Trough	=	1.0	ft
		14. Distance From Outer Concrete Wall	=	1.0	ft
		15. Thickness of Each Launder Trough Walls	=	0.00	ft
		16. Subsequent Outer Diameter of Effluent Weir	=	40.0	ft
		17. Weir Length per Clarifier	=	125.7	ft
		18. Weir Loading @ Peak Flow per Clarifier	=	5,252	gpd/ft
		19. Weir Length (Loading Rate) per Clarifier Check	=	ОК	
	F.	Return Activated Sludge Flow Rates			
		1. Lower Limit Underflow Rate (TCEQ 217.152)	=	200	gpd/sq ft
		2. Minimum Total RAS Flow Rate	=	192	gpm
		3. Upper Limit Underflow Rate (TCEQ 217.152)	=	400	gpd/sq ft
		4. Maximum Total RAS Flow Rate	=	385	gpm

KEENAN NORTH

WASTEWATER TREATMENT PLANT

IV.	DISIN	IFECTIO	ON/ CHLORINE CONTACT BASIN			_
	A.	1.	Minimum Effective Detention Time @ Peak Flow Ch. 217.281(b)(1)	=	20	minutes
		2.	Required Volume @ Peak Flow	=	9,167	Gallons
		3.	Unit Change	=	1,225	cu. Ft.
		4.	Proposed Basin Dimensions			
			Number of Proposed Basins	=	1	
			Length of Each Basin	=	15	
			Width of Each Basin	=	15	
			Side Water Depth of Each Basin	=	9	
		4.	Total Volume of Proposed Basin	=	2,025	cu. Ft
		5.	Check of Proposed Total Basin Volume	=	ОК	mins
		6.	Hydraulic Detetion Time at Design Flow	=	132.2	mins
		7.	Hydraulic Detetion Time at Peak Flow	=	33.0	mins
		8.	CHECK	=	ОК	
	В.	Chlo	rine Contact Basin Air			_
		1.	Air Required (CCB Volume * 20 SCFM/1000 CF)	=	40.5	scfm
v.	SOLIE	OS HAN	DLING			
	A.	Dige	ster Sizing			_
		1.	Percent Biodegradeable Volitile Solids in WAS, %	=	70%	
		2.	Percent Destruction, %	=	30%	
		3.	Digested Solids Production, lbs/day	=	326	lbs/day
		4.	Solids from Clarifier	=	413	lbs/day
		5.	Average Solids	=	369	lbs/day
		6.	Assumed Dig. Conc., mg/l	=	15,000	mg/L
		7.	Req'd. Retention Time, days (TCEQ 217.249 (t)(4)(b))	=	40	days
		8.	Req'd. Volume, cf	=	15,794	cu. ft
		9.	Volume to Loading Ratio. cf/lb BOD/day	=	38.3	cf/lb BOD/day
	В.	Dige	ster Design			
		1.	Proposed Digester Dimensions			_
			Width of Each Digester	=	12	
			Length of Each Digester	=	95	
			Side Water Depth of Each Digester	=	10.5	
		2.	Number of Digesters	=	2	
		3.	Total Digester Volume	=	23,940	cu. ft
		3.	Actual Digester Storage Capacity	=	61	days
		3.	Digester Volume check	=	ОК	
	C.	Dige	ster Air			_
		1.	Air Required (Digester Volume x 20scfm/1000cf)	=	479	scfm

KEENAN NORTH

WASTEWATER TREATMENT PLANT

VI. AIRFLOW CALCULATIONS

VII.

A.	Aerati	on Air Requirements TCEQ 217.155 (b) (2) (c)		_
	1.	Total Influent BOD ₅ =	413	lb/day
	2.	Total Influent NH3-N =	103	lb/day
	3.	BOD5 Removal =	413	lb/day
	4.	Nh3-N Removal =	103	lb/day
	5.	Oxygen Required for Carbonaceous Demand TCEQ 217.155 (a) (3) =	1.2	lbs O ₂ /lb BOD ₅
	6.	Oxygen Required for Carbonaceous Demand TCEQ 217.155 (a) (3) =	4.3	lbs O₂/lb NH3-N
	7.	Oxygen Required per Pound of BOD =	2.3	
	8.	Depth of Submergence of Diffusers =	9.00	ft
	9.	Diffuser Type (Coarse or Fine) =	Fine	
	10.	Clean Water Transfer Efficiency of Fine Bubble Diffuser =	1.50%	per ft of submergence
	11.	Clean Water Transfer Efficiency @ Stated Depth =	18.0%	
	12.	Wastewater Transfer Efficiency Coeficient for Fine Bubble Diffusers =	0.45	
	13.	Wastewater Transfer Efficiency =	8.1%	
	14.	Manufacturer Proposed SOTE =	30.0%	
	15.	Maximum Clean Water Transfer Efficiency TCEQ 217.155 (b) (2) (A) (iii) =	26.0%	
	16.	Check if Over Regulated Maximum =	ОК	
	17.	Density of Air @ 20 Deg C =	0.075	
	18.	Ratio of Oxygen to Air =	0.230	
	19.	Diffuser Submergence Correction Factor =	1.690	
	20.	Minimum Air Required for Mixing =	136.800	scfm
	21.	Air Required for Treatment =	789	
	22.	Manufacturer Proposed Air Required for Treatment =	280	scfm
В.	1.	****(Flowrates Must Be Verified Depending on Size, Submergence, etc.)**** Return Scum Scum Pump (1) = RAS (1) =	20	scfm scfm
		WAS (1) =	20	scfm
		Transfer (1) =	20	scfm
	2.	Total Airlifts Air Requirement =	80	scfm
				•
C.	Total A	Air Required =	1,388	scfm
D.	150%	of Design Flow TCEQ 217.155 (b)(5)(c)(iii) for Air Piping =	2,082	scfm
E.	Propo	sed Number of Blowers =	2	# of blowers
F	Invdiv	dual Blower Capacity @ Design Pressure/Largest Out of Service =	1,388	scfm
G.	Propo	sed Maximum Air Loss in Air Piping (Calculated Separately)	1	psig
Н	Design	Pressure of Blower =	5.4	psig
CHLO	RINE DO	SAGE CALCULATIONS		
Α.	Chlori	ne Dosage Rate TCEQ 217.272 (b)	8.0	mg/l
	1.	Calculated Chlorine Dosage Rate @ Design Flow Eq. K.1 TCEQ 217.272 (a)	11	lbs/day
	2.	Calculated Chlorine Dosage Rate @ Peak Flow Eq. K.1 TCEQ 217.272 (a)	44	lbs/day
	3.	System Set-up (Vacuum or Manifold) =	Vacuum	
	4.	Minimum Ambient TemperatureTCEQ 217.275 (a) (1) =	55	Degrees F
	5.	Max Withdrawal Rate for One 150-lb Cylinder TCEQ 217.274 (a) (1)	55	lbs/day
	6.	Max Withdrawal Rate for One Ton Cylinder TCEQ 217.274 (a) (1)	440	lbs/day
	7.	Required Number of 150-lb Cylinders Eq. K.3 TCEQ 217.273 (b)	1	# of cylinders
	8.	Required Number of One Ton Cylinders Eq. K.3 TCEQ 217.273 (b)	1	# of cylinders
	9.	Method of Chlorine Storage ("ton" or "150's") =	150-lb	
	10.	Peak Withdrawal Rate =	55	lbs/day

KEENAN NORTH

WASTEWATER TREATMENT PLANT

WWTP PROCESS SIZING CALCULATIONS

PHASE II: 0.330 MGD 10/31/24

I. DESIGN PARAMETERS

A.	Influe	ent Composition		_
	1.	Influent BOD =	300	mg/l
	2.	Influent TSS =	300	mg/l
	3.	Influent NH3-N =	75	mg/l
В.	Hydra	aulic Considerations		_
	1.	Design Flow after Expansion =	0.330	MGD
	2.	No. 1 Unit Change	229	gpm
	3.	Hydraulic Peaking Factor for Design =	4.00	Q
	4.	Peak Hydraulic Flow =	1.32	MGD
	5.	No. 4 Unit Change	917	gpm
c.	Influe	ent Composition Mass Loading (based on Raw & Post Primary Split		_
	1.	Mass BOD Loading =	826	lb/day
	1. 2.	Mass BOD Loading = Mass TSS Loading =	826 826	lb/day lb/day
	2.	Mass TSS Loading =	826	lb/day
D.	2. 3.	Mass TSS Loading =	826	lb/day
D.	2. 3.	Mass TSS Loading = Mass NH3-N Loading =	826	lb/day
D.	2. 3. Efflue	Mass TSS Loading = Mass NH3-N Loading = ent Composition	826 206	lb/day lb/day
D.	 2. 3. Efflue 1. 	Mass TSS Loading = Mass NH3-N Loading = ent Composition Effluent BOD =	826 206	lb/day lb/day mg/l
D.	 2. 3. Efflue 1. 2. 	Mass TSS Loading = Mass NH3-N Loading = ent Composition = Effluent BOD = Effluent TSS =	826 206	lb/day lb/day mg/l mg/l

KEENAN NORTH

WASTEWATER TREATMENT PLANT

II. ACTIVATED SLUDGE

Α.	Aeration Influent Composi	tion			
	Total Design Flow		=	0.33	MGD
	 Total Influent BOD 		=	826	lb/day
	Total Influent TSS		=	826	lb/day
	4. Total Influent NH3-I	N	=	206	lb/day
	4. Fotal illident Wils I	•		200	
В.	TCEQ Organic Loading Crit	eria			
	Organic Loading (TC	EQ 217.154)	=	35	lb BOD/1000 cu ft
	2. Organic Loading to	Aeration	=	826	lb/day
	3. Aeration Basin Volu	me Required	=	23,590	cu. ft
C.	Minimum Aeration Volume				7
	Min Aeration Volum	ne Based on controlling criteria	=	23,590	cu. ft
	2. Equivalent Loading	based on Min Volume	=	35.0	lb BOD/1000 cu ft
	C. II I. D. I Market				
	Solids Balance Method	= Excess Sludge Produced per Day			
	1. (delta X/delta t)				
		= Xi1 + Xi2 + aSo + a*N - bXv - Xe =			
		165.132 lbs/day + 264.2112 lbs/day + (0.6 lb VSS produced / lb BOD			٦
		applied)(825.66 lbs/day) + (0.12 lb/VSS produced / lb NH3-N applied)(206.415 lbs/day) - (0.06 lb VSS destroyed / lb MLSS-			
		day)(4390.4 lbs) + 0 lbs/day			
			=	686	lb/day
	Where:				7
		% of Fixed Influent TSS to Aeration Basin	=	20%	of TSS
		(Total Influent TSS to Aeration Basin)	=	826	lbs/day
	Xi1 =	Fixed Influent TSS to Aeration Basin	=	165	lbs/day
		% of Non-biodegradable Influent VSS	=	40%	of VSS
	V/2	(Volatile Influent TSS to Aeration Basin)	=	661	lbs/day
	Xi2 =	Non-biodegradable Influent VSS	=	264	lbs/day
	a =	Synthesis Coefficient	=	0.60	lb VSS produced / lb BOD applied
	So =	Influent BOD5 Nitrifier Synthesis Coefficient	=	826 0.12	lbs/day
	a* = N =	Influent NH3-N	=	206	lb/ VSS produced / lb NH3-N appl lbs/day
	b =	Endogenous Coefficient	=	0.06	lb VSS destroyed / lb MLSS-day
	Xv =	MLVSS in Aeration Basin	=	4,390	lbs
	Xe =	Effluent TSS (based on effluent 5 mg/L)	=	0.0	lbs/day
	Find MLSS in Aerati	on Basin for WWTP			_
	Ratio of Volatile to	Fotal Suspended Solids	=	0.8	MLVSS / MLSS
	Design MLSS Conce	ntration	=	3,000.0	mg/L
	Estimated MLVSS Co	oncentration	=	2,400.0	mg/L
	Design Solid Retent	ion Time (SRT)	=	8.0	days
	MLSS in Aeration Ba	nsin	=	5,488	lbs
	MLVSS in Aeraton B	asin	=	4,390	lbs
	Verify MLSS Assump	otion (SRT x delta X/delta T)	=	5,489	lbs
					7
	Fixed Influent TSS to		=	165	lbs/day
	Nonbiodegradable I		=	264	lbs/day
	Growth Due to Synt		=	495.396	lbs/day
	Growth Due to Nitri Endogenous Destru		=	25 263	lbs/day lbs/day
	Liidogeilous Destru	Cuon	=	l 203	is 37 day

KEENAN NORTH

WASTEWATER TREATMENT PLANT lbs/day Effluent TSS 0 Excess Sludge Produced per Day 686 lbs/day Design F:M Ratio 0.15 lb BOD / lb SS lbs BOD5 / 1000 cu. Ft. Maximum BOD5 Loading Rate 28.16 Required Aeration Basin Volume 29,324.1 cu. Ft. Hydraulic Retention Time 16.0 hours Required Aeration Basin Volume per Solids Balance Method 5488 lbs / (8.34 x 3000 mg/L)*10^6/7.48 29,324.1 cu. Ft. **Number of Aeration Basin Trains Number of Basins** # trains Design per Flow Basin 0.165 MGD 2. **Aeration Basin Sizing Calculations** 29,324 Minimum Total Volume Required cu. ft 1. 10.50 ft. 2. Assumed Side Water Depth of Aeration Basin Minimum Total Surface Area Required 2,793 sq. ft 3. Minimum Total Surface Area Required per Train 1,396 sq. ft 4. **Proposed Aeration Basin Configuration Proposed Basin Dimensions** Width 12.0 a. 95.0 ft. b. Length Proposed Length to Width Ratio 7.92 2. Number of Aeration Basin Trains (from above) 2 # trains 3. **Total Volume of Proposed Basins** 23,940 cu. ft **Actual Aeration Basin Loading** 34 lb BOD5 / 1000 cu. Ft. 4. Actual Hydraulic Retention Time 13 hours 5. Actual F:M Ratio lb BOD / lb SS 0.18 6. Check of Proposed Total Basin Volume ОК 7.

KEENAN NORTH

WASTEWATER TREATMENT PLANT

III. SE	ECONDARY	//FINAL CLARIFICATION			
A.	. Num	nber of Secondary/Final Clarifiers	=	1	
	1.	Total Flow to Clarifiers	=	0.33	MGD
В.	. Surf	ace Area Design (TCEQ 217.154(c)(1))			_
	1.	Maximum Surface Loading @ Peak Flow	=	1,200	gpd/sq. ft
	2.	Surface Area Required @ Peak Flow per Clarifier	=	1,100	sq. ft
c.	. Hydi	raulic Detention Time Design (TCEQ 217.154(c))			
	1.	Minimum Effective Detention Time @ Peak Flow	=	1.80	Hours
	2.	Volume Required @ Peak Flow per Clarifier	=	13,235	cu. Ft.
	3.	Surface Area Required @ Peak Flow (From Above) per Clarifier		1,100	sq. ft.
_					
D.		nent Weir Design (TCEQ 217.152(c)(4-5))			
	1.	Weir loading for plants 1.0 MGD or less	=	20,000	gpd/ft
	2.	Weir loading for plants over 1.0 MGD	=	30,000	gpd/ft
	3.	Controlling Criteria	=	20,000	gpd/ft
	4.	Total Length of Weir Required @ Peak Flow per Clarifier	=	66.0	ft
E.	. Clari	ifer Basin Check			
	1.	Number of Clarifiers	=	1	# clarifiers
	2.	Minimum Surface Area (From Above) per Clarifier	=	1,100	sq. ft.
	3.	Minimums Volume Time (From Above) per Clarifier	=	13,235	cu. Ft.
	4.	Minimum Weir Total Length (From Above) per Clarifier	=	66.0	ft
	5.	Clarifier Size (Circular)	=	42	ft
	6.	Surface Area Per Clarifier (Circular)	=	1,385	sq. ft.
	7.	Total Surface Area	=	1,385	sq. ft.
	8.	Surface Area Check	=	ОК	
	9.	Effective Side Water Depth	=	10.00	ft.
	10.	Total Clarifer Volume	=	13,854	cu. Ft.
	11.	Total Clarifer Hydraulic Detention Time (Using Prop. Surface Area)	=	1.9	Hours
	12.	Hydraulic Detention Time Check	=	ОК	
	13.	Design Weir Width - Width of Launder Trough	=	1.0	ft
	14.	Distance From Outer Concrete Wall	=	1.0	ft
	15.	Thickness of Each Launder Trough Walls	=	0.00	ft
	16.	Subsequent Outer Diameter of Effluent Weir	=	40.0	ft
	17.	Weir Length per Clarifier	=	125.7	ft
	18.	Weir Loading @ Peak Flow per Clarifier	=	10,504	gpd/ft
	19.	Weir Length (Loading Rate) per Clarifier Check	=	ОК	
_	F - 4	Ashirehad Cludes Flour Dates			
F.		Irn Activated Sludge Flow Rates		200	
	1.	Lower Limit Underflow Rate (TCEQ 217.152)	=	200	gpd/sq ft
	2.	Minimum Total RAS Flow Rate	=	192	gpm
	3.	Upper Limit Underflow Rate (TCEQ 217.152)	=	400	gpd/sq ft
	4.	Maximum Total RAS Flow Rate	=	385	gpm

KEENAN NORTH

WASTEWATER TREATMENT PLANT

IV.	DISIN	IFECTIO	ON/ CHLORINE CONTACT BASIN			_
	A.	1.	Minimum Effective Detention Time @ Peak Flow Ch. 217.281(b)(1)	=	20	minutes
		2.	Required Volume @ Peak Flow	=	18,333	Gallons
		3.	Unit Change	=	2,451	cu. Ft.
		4.	Proposed Basin Dimensions			
			Number of Proposed Basins	=	2	
			Length of Each Basin	=	15	
			Width of Each Basin	=	15	
			Side Water Depth of Each Basin	=	9	
		4.	Total Volume of Proposed Basin	=	4,050	cu. Ft
		5.	Check of Proposed Total Basin Volume	=	ОК	mins
		6.	Hydraulic Detetion Time at Design Flow	=	132.2	mins
		7.	Hydraulic Detetion Time at Peak Flow	=	33.0	mins
		8.	CHECK	=	ОК	
	В.	Chlo	rine Contact Basin Air			_
		1.	Air Required (CCB Volume * 20 SCFM/1000 CF)	=	81.0	scfm
v.	SOLIE	OS HAN	DLING			
	A.	Dige	ster Sizing			
		1.	Percent Biodegradeable Volitile Solids in WAS, %	=	70%	
		2.	Percent Destruction, %	=	30%	
		3.	Digested Solids Production, lbs/day	=	652	lbs/day
		4.	Solids from Clarifier	=	826	lbs/day
		5.	Average Solids	=	739	lbs/day
		6.	Assumed Dig. Conc., mg/l	=	15,000	mg/L
		7.	Req'd. Retention Time, days (TCEQ 217.249 (t)(4)(b))	=	40	days
		8.	Req'd. Volume, cf	=	31,588	cu. ft
		9.	Volume to Loading Ratio. cf/lb BOD/day	=	38.3	cf/lb BOD/day
	В.	Dige	ster Design			
		1.	Proposed Digester Dimensions			_
			Width of Each Digester	=	12	
			Length of Each Digester	=	95	
			Side Water Depth of Each Digester	=	10.5	
		2.	Number of Digesters	=	3	
		3.	Total Digester Volume	=	35,910	cu. ft
		3.	Actual Digester Storage Capacity	=	45	days
		3.	Digester Volume check	=	OK	
	C.	Dige	ster Air			
		1.	Air Required (Digester Volume x 20scfm/1000cf)	=	718	scfm

KEENAN NORTH

WASTEWATER TREATMENT PLANT

VI. AIRFLOW CALCULATIONS

VII.

A.	Δerat	on Air Requirements TCEQ 217.155 (b) (2) (c)			
۸.	1.	Total Influent BOD ₅	=	826	lb/day
	2.	Total Influent NH3-N	=	206	lb/day
	3.	BOD5 Removal	=	826	lb/day
	4.	Nh3-N Removal	=	206	lb/day
	5.	Oxygen Required for Carbonaceous Demand TCEQ 217.155 (a) (3)	=	1.2	lbs O ₂ /lb BOD ₅
	6.	Oxygen Required for Carbonaceous Demand TCEQ 217.155 (a) (3)	=	4.3	lbs O ₂ /lb NH3-N
	7.	Oxygen Required per Pound of BOD	=	2.3	
	8.	Depth of Submergence of Diffusers	=	9.00	ft
	9.	Diffuser Type (Coarse or Fine)	=	Fine	
	10.	Clean Water Transfer Efficiency of Fine Bubble Diffuser	=	1.50%	per ft of submergence
	11.	Clean Water Transfer Efficiency @ Stated Depth	=	18.0%	
	12.	Wastewater Transfer Efficiency Coeficient for Fine Bubble Diffusers	=	0.45	
	13.	Wastewater Transfer Efficiency	=	8.1%	
	14.	Manufacturer Proposed SOTE	=	30.0%	
	15.	Maximum Clean Water Transfer Efficiency TCEQ 217.155 (b) (2) (A) (iii)	=	26.0%	
	16.	Check if Over Regulated Maximum	=	ОК	
	17.	Density of Air @ 20 Deg C	=	0.075	
	18.	Ratio of Oxygen to Air	=	0.230	
	19.	Diffuser Submergence Correction Factor	=	1.690	
	20.	Minimum Air Required for Mixing	=	273.600	scfm
	21.	Air Required for Treatment	=	1,578	
	22.	Manufacturer Proposed Air Required for Treatment	=	560	scfm
		Scum Pump (1) RAS (1) WAS (1) Transfer (1)	= = =	20 20 20 20	scfm scfm scfm
	2	Transfer (1)		20	scfm
	2.	Total Airlifts Air Requirement	=	80	scfm
c.	Total	Air Required	=	2,457	scfm
D.		of Design Flow TCEQ 217.155 (b)(5)(c)(iii) for Air Piping	=	3,685	scfm
E.		sed Number of Blowers	=	3	# of blowers
F	-	idual Blower Capacity @ Design Pressure/Largest Out of Service	=	1,228	scfm
G.	Propo	sed Maximum Air Loss in Air Piping (Calculated Separately)	=	1	psig
н	Desig	n Pressure of Blower	=	4.9	psig
					-
CHLO	RINE DO	SAGE CALCULATIONS			_
A.	Chlori	ne Dosage Rate TCEQ 217.272 (b)	=	8.0	mg/l
	1.	Calculated Chlorine Dosage Rate @ Design Flow Eq. K.1 TCEQ 217.272 (a)	=	22	lbs/day
	2.	Calculated Chlorine Dosage Rate @ Peak Flow Eq. K.1 TCEQ 217.272 (a)	=	88	lbs/day
	3.	System Set-up (Vacuum or Manifold)	=	Vacuum	
	4.	Minimum Ambient TemperatureTCEQ 217.275 (a) (1)	=	55	Degrees F
	5.	Max Withdrawal Rate for One 150-lb Cylinder TCEQ 217.274 (a) (1)	=	55	lbs/day
	6.	Max Withdrawal Rate for One Ton Cylinder TCEQ 217.274 (a) (1)	=	440	lbs/day
	7.	Required Number of 150-lb Cylinders Eq. K.3 TCEQ 217.273 (b)	=	2	# of cylinders
	8.	Required Number of One Ton Cylinders Eq. K.3 TCEQ 217.273 (b)	=	1	# of cylinders
	9.	Method of Chlorine Storage ("ton" or "150's")	=	150-lb	
	10.	Peak Withdrawal Rate	=	110	lbs/day

KEENAN NORTH

WASTEWATER TREATMENT PLANT

WWTP PROCESS SIZING CALCULATIONS

PHASE III: 0.495 MGD 10/31/24

I. DESIGN PARAMETERS

A.	Influe		_	
	1.	Influent BOD =	300	mg/l
	2.	Influent TSS =	300	mg/l
	3.	Influent NH3-N =	75	mg/l
В.	Hydra	aulic Considerations		_
	1.	Design Flow after Expansion =	0.495	MGD
	2.	No. 1 Unit Change	344	gpm
	3.	Hydraulic Peaking Factor for Design =	4.00	Q
	4.	Peak Hydraulic Flow =	1.98	MGD
	5.	No. 4 Unit Change	1,375	gpm
c.	Influe	ent Composition Mass Loading (based on Raw & Post Primary Split		_
	1.	Mass BOD Loading =	1,238	lb/day
	2.	Mass TSS Loading =	1,238	lb/day
	3.	Mass NH3-N Loading =	310	lb/day
D.	Efflue	ent Composition		_
	1.	Effluent BOD =	0	mg/l
	2.	Effluent TSS =	0	mg/l
	3.	Effluent NH3-N =	0	mg/l
	4.	Effluent TKN =	0	mg/l
	5.	Phosphorous =	0	mg/l

KEENAN NORTH

WASTEWATER TREATMENT PLANT

ACTIVATED SLUDGE

Α.	Aerat	tion Influent Composition				
Α.	1.	Total Design Flow		=	0.50	MGD
	2.	Total Influent BOD		=	1,238	lb/day
	3.	Total Influent TSS		=	1,238	lb/day
	4.	Total Influent NH3-N		=	310	lb/day
	٦.	rotal illident Wils-W			310	
В.	TCEQ	Organic Loading Criteria				_
	1.	Organic Loading (TCEQ	217.154)	=	35	lb BOD/1000 cu ft
	2.	Organic Loading to Aera	ation	=	1,238	lb/day
	3.	Aeration Basin Volume	Required	=	35,385	cu. ft
C.	Minir	mum Aeration Volume				
C.	1.		ased on controlling criteria	=	35,385	cu. ft
	2.	Equivalent Loading base	ed on Min Volume	=	35.0	lb BOD/1000 cu ft
		s Balance Method				
	1.	(delta X/delta t)	= Excess Sludge Produced per Day			
			= Xi1 + Xi2 + aSo + a*N - bXv - Xe			
			= 247.698 lbs/day + 396.3168 lbs/day + (0.6 lb VSS produced / lb BOD)		٦
			applied)(1238.49 lbs/day) + (0.12 lb/VSS produced / lb NH3-N applied)(309.6225 lbs/day) - (0.06 lb VSS destroyed / lb MLSS-			
			day)(6586.4 lbs) + 0 lbs/day			
				=	1029	lb/day
		Where:				_
			% of Fixed Influent TSS to Aeration Basin	=	20%	of TSS
			(Total Influent TSS to Aeration Basin)	=	1,238	lbs/day
		Xi1 =	Fixed Influent TSS to Aeration Basin	=	248	lbs/day
			% of Non-biodegradable Influent VSS	=	40%	of VSS
			(Volatile Influent TSS to Aeration Basin)	=	991	lbs/day
		Xi2 =	Non-biodegradable Influent VSS	=	396	lbs/day
		a =	Synthesis Coefficient	=	0.60	lb VSS produced / lb BOD applied
		So =	Influent BOD5	=	1,238	lbs/day
		a* =	Nitrifier Synthesis Coefficient	=	0.12	lb/ VSS produced / lb NH3-N app
		N =	Influent NH3-N	=	310	lbs/day
		b =	Endogenous Coefficient	=	0.06	lb VSS destroyed / lb MLSS-day
		Xv =	MLVSS in Aeration Basin	=	6,586	lbs
		Xe =	Effluent TSS (based on effluent 5 mg/L)	=	0.0	lbs/day
		Find MLSS in Aeration E	Basin for WWTP			
		Ratio of Volatile to Tota	al Suspended Solids	=	0.8	MLVSS / MLSS
		Design MLSS Concentra	ation	=	3,000.0	mg/L
		Estimated MLVSS Conce	entration	=	2,400.0	mg/L
		Design Solid Retention	Time (SRT)	=	8.0	days
		MLSS in Aeration Basin		=	8,233	lbs
		MLVSS in Aeraton Basin	1	=	6,586	lbs
		Verify MLSS Assumption	n (SRT x delta X/delta T)	=	8,233	lbs
		Final Influent Tools	senting Design		246	
		Fixed Influent TSS to Ae		=	248	lbs/day
		Nonbiodegradable Influ		=	396	lbs/day
		Growth Due to Synthes		=	743.094	lbs/day
		Growth Due to Nitrifier		=	37	lbs/day
		Endogenous Destructio	11	=	395	lbs/day

KEENAN NORTH

WASTEWATER TREATMENT PLANT lbs/day Effluent TSS 0 Excess Sludge Produced per Day 1,029 lbs/day Design F:M Ratio 0.15 lb BOD / lb SS Maximum BOD5 Loading Rate lbs BOD5 / 1000 cu. Ft. 28.15 Required Aeration Basin Volume 43,991.5 cu. Ft. Hydraulic Retention Time 16.0 hours Required Aeration Basin Volume per Solids Balance Method 8233 lbs / (8.34 x 3000 mg/L)*10^6/7.48 43,991.5 cu. Ft. **Number of Aeration Basin Trains Number of Basins** # trains Design per Flow Basin 0.124 MGD 2. **Aeration Basin Sizing Calculations** Minimum Total Volume Required 43,992 cu. ft 1. ft. 2. Assumed Side Water Depth of Aeration Basin 10.50 Minimum Total Surface Area Required 4,190 sq. ft 3. Minimum Total Surface Area Required per Train 1,047 sq. ft 4. **Proposed Aeration Basin Configuration Proposed Basin Dimensions** Width 12.0 a. 95.0 ft. b. Length Proposed Length to Width Ratio 7.92 2. Number of Aeration Basin Trains (from above) 4 # trains 3. **Total Volume of Proposed Basins** 47,880 cu. ft **Actual Aeration Basin Loading** 26 lb BOD5 / 1000 cu. Ft. 4. Actual Hydraulic Retention Time 17 hours 5. Actual F:M Ratio lb BOD / lb SS 0.14 6. Check of Proposed Total Basin Volume ОК 7.

KEENAN NORTH

WASTEWATER TREATMENT PLANT

III.	SECC	NDARY	/FINAL CLARIFICATION			
	A.	Numi	ber of Secondary/Final Clarifiers	=	2	
		1.	Total Flow to Clarifiers	=	0.50	MGD
	В.	Surfa	ce Area Design (TCEQ 217.154(c)(1))			
		1.	Maximum Surface Loading @ Peak Flow	=	1,200	gpd/sq. ft
		2.	Surface Area Required @ Peak Flow per Clarifier	=	825	sq. ft
	c.	Hydra	aulic Detention Time Design (TCEQ 217.154(c))			_
		1.	Minimum Effective Detention Time @ Peak Flow	=	1.80	Hours
		2.	Volume Required @ Peak Flow per Clarifier	=	9,926	cu. Ft.
		3.	Surface Area Required @ Peak Flow (From Above) per Clarifier		825	sq. ft.
	D.		ent Weir Design (TCEQ 217.152(c)(4-5))			\neg
		1.	Weir loading for plants 1.0 MGD or less	=	20,000	gpd/ft
		2.	Weir loading for plants over 1.0 MGD	=	30,000	gpd/ft
		3.	Controlling Criteria	=	20,000	gpd/ft
		4.	Total Length of Weir Required @ Peak Flow per Clarifier	=	49.5	ft
	E.	Clarif	er Basin Check			
	Е.	1.	Number of Clarifiers	=	2	# clarifiers
		2.	Minimum Surface Area (From Above) per Clarifier	=	825	sq. ft.
		3.	Minimums Volume Time (From Above) per Clarifier	=	9,926	cu. Ft.
		4.	Minimum Weir Total Length (From Above) per Clarifier	=	49.5	ft
		5.	Clarifier Size (Circular)	=	42	ft
		6.	Surface Area Per Clarifier (Circular)	=	1,385	sq. ft.
		7.	Total Surface Area	=	2,771	sq. ft.
		8.	Surface Area Check	=	OK	34. 10.
		9.	Effective Side Water Depth	=	12.00	ft.
		10.	Total Clarifer Volume	=	33,250	cu. Ft.
		11.	Total Clarifer Hydraulic Detention Time (Using Prop. Surface Area)	=	3.0	Hours
		12.	Hydraulic Detention Time Check	=	ОК	
		13.	Design Weir Width - Width of Launder Trough	=	1.0	ft
		14.	Distance From Outer Concrete Wall	=	1.0	ft
		15.	Thickness of Each Launder Trough Walls	=	0.00	ft
		16.	Subsequent Outer Diameter of Effluent Weir	=	40.0	ft
		17.	Weir Length per Clarifier	=	125.7	ft
		18.	Weir Loading @ Peak Flow per Clarifier	=	7,878	gpd/ft
		19.	Weir Length (Loading Rate) per Clarifier Check	=	ОК	
	F.	Retu	rn Activated Sludge Flow Rates			
		1.	Lower Limit Underflow Rate (TCEQ 217.152)	=	200	gpd/sq ft
		2.	Minimum Total RAS Flow Rate	=	385	gpm
		3.	Upper Limit Underflow Rate (TCEQ 217.152)	=	400	gpd/sq ft
		4.	Maximum Total RAS Flow Rate	=	770	gpm

KEENAN NORTH

WASTEWATER TREATMENT PLANT

IV.	DISIN	IFECTIO	N/ CHLORINE CONTACT BASIN			
	A.	1.	Minimum Effective Detention Time @ Peak Flow Ch. 217.281(b)(1)	=	20	minutes
		2.	Required Volume @ Peak Flow	=	27,500	Gallons
		3.	Unit Change	=	3,676	cu. Ft.
		4.	Proposed Basin Dimensions			
			Number of Proposed Basins	=	2	
			Length of Each Basin	=	15	
			Width of Each Basin	=	15.0	
			Side Water Depth of Each Basin	=	9	
		4.	Total Volume of Proposed Basin	=	4,050	cu. Ft
		5.	Check of Proposed Total Basin Volume	=	ОК	mins
		6.	Hydraulic Detetion Time at Design Flow	=	88.1	mins
		7.	Hydraulic Detetion Time at Peak Flow	=	22.0	mins
		8.	CHECK	=	ОК	
	В.	Chlo	rine Contact Basin Air			
		1.	Air Required (CCB Volume * 20 SCFM/1000 CF)	=	81.0	scfm
v.	SOLI	DS HAN	DLING			
	A.	Dige	ster Sizing			_
		1.	Percent Biodegradeable Volitile Solids in WAS, %	=	70%	
		2.	Percent Destruction, %	=	30%	
		3.	Digested Solids Production, Ibs/day	=	978	lbs/day
		4.	Solids from Clarifier	=	1,238	lbs/day
		5.	Average Solids	=	1,108	lbs/day
		6.	Assumed Dig. Conc., mg/l	=	15,000	mg/L
		7.	Req'd. Retention Time, days (TCEQ 217.249 (t)(4)(b))	=	28	days
		8.	Req'd. Volume, cf	=	33,168	cu. ft
		9.	Volume to Loading Ratio. cf/lb BOD/day	=	26.8	cf/lb BOD/day
	В.	Dige	ster Design			
		1.	Proposed Digester Dimensions			
			Width of Each Digester	=	12	
			Length of Each Digester	=	95	
			Side Water Depth of Each Digester	=	10.5	
		2.	Number of Digesters	=	3	
		3.	Total Digester Volume	=	35,910	cu. ft
		3.	Actual Digester Storage Capacity	=	30	days
		3.	Digester Volume check	=	OK	
	c.	Dige	ster Air			_
		1.	Air Required (Digester Volume x 20scfm/1000cf)	=	718	scfm

KEENAN NORTH

WASTEWATER TREATMENT PLANT

VI. AIRFLOW CALCULATIONS

VII.

A.	Aerati	on Air Requirements TCEQ 217.155 (b) (2) (c)			_
	1.	Total Influent BOD ₅	=	1,238	lb/day
	2.	Total Influent NH3-N	=	310	lb/day
	3.	BOD5 Removal	=	1,238	lb/day
	4.	Nh3-N Removal	=	310	lb/day
	5.	Oxygen Required for Carbonaceous Demand TCEQ 217.155 (a) (3)	=	1.2	lbs O ₂ /lb BOD ₅
	6.	Oxygen Required for Carbonaceous Demand TCEQ 217.155 (a) (3)	=	4.3	lbs O₂/lb NH3-N
	7.	Oxygen Required per Pound of BOD	=	2.3	
	8.	Depth of Submergence of Diffusers	=	9.00	ft
	9.	Diffuser Type (Coarse or Fine)	=	Fine	
	10.	Clean Water Transfer Efficiency of Fine Bubble Diffuser	=	1.50%	per ft of submergence
	11.	Clean Water Transfer Efficiency @ Stated Depth	=	18.0%	
	12.	Wastewater Transfer Efficiency Coeficient for Fine Bubble Diffusers	=	0.45	
	13.	Wastewater Transfer Efficiency	=	8.1%	
	14.	Manufacturer Proposed SOTE	=	30.0%	
	15.	Maximum Clean Water Transfer Efficiency TCEQ 217.155 (b) (2) (A) (iii)	=	26.0%	
	16.	Check if Over Regulated Maximum	=	ОК	
	17.	Density of Air @ 20 Deg C	=	0.075	
	18.	Ratio of Oxygen to Air	=	0.230	
	19.	Diffuser Submergence Correction Factor	=	1.690	
	20.	Minimum Air Required for Mixing	=	547.200	scfm
	21.	Air Required for Treatment	=	2,367	
	22.	Manufacturer Proposed Air Required for Treatment	=	840	scfm
В.	Airlifts 1.		=	20	scfm
		10.00 (2)	=	20	scfm scfm
		- A 444	=	20	scfm
	2.		=	80	scfm
		Total / III III o / III Tequile II e II		- 55	J
C.	Total A	Air Required	=	3,246	scfm
D.	150%	of Design Flow TCEQ 217.155 (b)(5)(c)(iii) for Air Piping	=	4,869	scfm
E.	Propo	sed Number of Blowers	=	3	# of blowers
F	Invdiv	idual Blower Capacity @ Design Pressure/Largest Out of Service	=	1,623	scfm
G.	Propo	sed Maximum Air Loss in Air Piping (Calculated Separately)	=	1	psig
н	Design	Pressure of Blower	=	4.9	psig
СНГО	RINE DO	SAGE CALCULATIONS			
A.	Chlori	ne Dosage Rate TCEQ 217.272 (b)	=	8.0	mg/l
	1.	Calculated Chlorine Dosage Rate @ Design Flow Eq. K.1 TCEQ 217.272 (a)	=	33	lbs/day
	2.	Calculated Chlorine Dosage Rate @ Peak Flow Eq. K.1 TCEQ 217.272 (a)	=	132	lbs/day
	3.	System Set-up (Vacuum or Manifold)	=	Vacuum	
	4.	Minimum Ambient TemperatureTCEQ 217.275 (a) (1)	=	55	Degrees F
	5.	Max Withdrawal Rate for One 150-lb Cylinder TCEQ 217.274 (a) (1)	=	55	lbs/day
	6.	Max Withdrawal Rate for One Ton Cylinder TCEQ 217.274 (a) (1)	=	440	lbs/day
	7.	Required Number of 150-lb Cylinders Eq. K.3 TCEQ 217.273 (b)	=	3	# of cylinders
	8.	Required Number of One Ton Cylinders Eq. K.3 TCEQ 217.273 (b)	=	1	# of cylinders
	9.	Method of Chlorine Storage ("ton" or "150's")	=	150-lb	
	10.	Peak Withdrawal Rate	=	165	lbs/day

Domestic Wastewater Permit Application Keenan North Development, Ltd. TPDES Permit No. TBD NPDES Permit No. TBD A&S Project No. 540008.02

EXHIBIT 18

SOLIDS MANAGEMENT PLAN



SLUDGE MANAGEMENT PLAN OLD HOCKLEY

Proposed Phase I – 0.500 MGD

1. Type of Treatment Process

AERATION BASINS

The proposed facility is a 0.495 million gallons per day (MGD) conventional activated sludge process utilizing an aeration basin. The following table shows the process design and sludge generation calculations for the design flow of this facility.

BOD = 300 mg/l x 8.34 lbs/gal x 0.495 MGD = 1,240 lbs BOD per Day

2. Dimensions and Capacities

AEROBIC DIGESTER

The treatment facility has two solids holding tank with maximum total volume of 35,910 cubic feet. The tanks are 12-feet W by 95-feet L with 10.5-foot side water depth.

The total Digester capacity of 35,910 cubic feet is greater than the required digester capacity based on 20 cubic feet per lb. of BOD times 1,240 lbs of BOD loading for the 0.495 MGD WWTP.

3. Sludge Generation Calculations

Sludge generation calculations showing the amount of solids generated at 100%, 75%, 50% and 25% of design flow are included in the following tables. These represent the solids that must be wasted from the activated sludge process and that must be stabilized in the aerobic digester.

Solids @ 100%	Solids @ 75%	Solids @ 50%	Solids @ 25%
Qavg lb/day	Qavg lb/day	Qavg lb/day	Qavg lb/day
1,240	930	620	310

4. Operating Range of Mixed Liquor Suspended Solids

It is anticipated that the MLSS for all phases will be approximately 2,400 mg/l on the average. The range for MLSS is anticipated to be between 2,000 and 4,000 mg/l during various stages of loading.

5. Solids Removal Procedures

Conventional Aerated Mixed Liquor WWTP

The removal of waste activated sludge from the proposed conventional aerated mixed liquor activated sludge WWTP is achieved by wasting sludge from the clarifier and transferred by airlift pump to the aerobic digester. Additional thickening of sludge prior to transfer to the digester by periodically, (two or three times per week) having the air supply and mixing in the aerobic digester shut off allowing solids to settle to the bottom of the digester. The supernatant liquor is decanted by an adjustable decant airlift pump located in each digester and is returned to influent grinder pump station via the plant drain system. After sufficient digestion, sludge is hauled in liquid form by a licensed transporter. The liquid sludge is transported to registered site.

6. Quantity of Solids to be Removed and Solids Removal Schedule

The quantity of solids to be removed at various plant loadings are presented in the following table. The quantities shown in the tabulation are monthly quantities based upon the influent BOD of 300 mg/l and TSS of 300 mg/l. If the strength of the influent wastewater varies significantly, solids removal quantities will be different.

PHASE	@100% Flow		@75%	Flow	@50% Flow		@25% Flow	
III Capacity		Capaci	ty	Capacity Capacity		ty		
0.495	%	Gal/Day	%	Gal/Day	%	Gal/Day	%	Gal/Day
MGD	Solids	•	Solids	-	Solids	•	Solids	_
	2.5	12,375	2.5	9,281	2.5	6,187	2.5	3,093

Sludge Age

The sludge age based on having 35,910 cubic feet (268,625 gallons) of total digester capacity, 2.5% solids and the above generated sludge volume is 21 days for 100% flow capacity, 29 days for 75% capacity, 42 days for 50% capacity and 86 days for 25% capacity.

7. Identification of Disposal Site

The disposal of sludge from the WWTP will be contracted to a sludge management and disposal contractor for either further treatment or disposal. The sludge will be hauled to either to treatment facility permitted to handle sludge or a registered land fill or a land application site. Solids documentation will be assured by measuring the volume of each sludge withdrawal and measuring the sludge solids concentrations. All required data will be included in the annual sludge report to the TCEQ.

SLUDGE MANAGEMENT PLAN OLD HOCKLEY

Proposed Phase I – 0.165 MGD

1. Type of Treatment Process

AERATION BASINS

The proposed facility is a 0.165 million gallons per day (MGD) conventional activated sludge process utilizing an aeration basin. The following table shows the process design and sludge generation calculations for the design flow of this facility.

BOD = 300 mg/l x 8.34 lbs/gal x 0.165 MGD = 413 lbs BOD per Day

2. Dimensions and Capacities

AEROBIC DIGESTER

The treatment facility has a solids holding tank with maximum total volume of 23,940 cubic feet. The tanks are 12-feet W by 95-feet L with 10.5 foot side water depth.

The total Digester capacity of 11,970 cubic feet is greater than the required digester capacity based on 20 cubic feet per lb. of BOD times 413 lbs of BOD loading for the 0.165 MGD WWTP.

3. Sludge Generation Calculations

Sludge generation calculations showing the amount of solids generated at 100%, 75%, 50% and 25% of design flow are included in the following tables. These represent the solids that must be wasted from the activated sludge process and that must be stabilized in the aerobic digester.

Solids @ 100%	Solids @ 75%	Solids @ 50%	Solids @ 25%
Qavg lb/day	Qavg lb/day	Qavg lb/day	Qavg lb/day
413	310	207	103

4. Operating Range of Mixed Liquor Suspended Solids

It is anticipated that the MLSS for all phases will be approximately 2,400 mg/l on the average. The range for MLSS is anticipated to be between 2,000 and 4,000 mg/l during various stages of loading.

5. Solids Removal Procedures

Conventional Aerated Mixed Liquor WWTP

The removal of waste activated sludge from the proposed conventional aerated mixed liquor activated sludge WWTP is achieved by wasting sludge from the clarifier and transferred by airlift pump to the aerobic digester. Additional thickening of sludge prior to transfer to the digester by periodically, (two or three times per week) having the air supply and mixing in the aerobic digester shut off allowing solids to settle to the bottom of the digester. The supernatant liquor is decanted by an adjustable decant airlift pump located in each digester and is returned to influent grinder pump station via the plant drain system. After sufficient digestion, sludge is hauled in liquid form by a licensed transporter. The liquid sludge is transported to registered site.

6. Quantity of Solids to be Removed and Solids Removal Schedule

The quantity of solids to be removed at various plant loadings are presented in the following table. The quantities shown in the tabulation are monthly quantities based upon the influent BOD of 300 mg/l and TSS of 300 mg/l. If the strength of the influent wastewater varies significantly, solids removal quantities will be different.

PHASE I	@100% Flow		@75% Flow		@50%	20% Flow		@25% Flow	
	Capaci	ty	Capaci	ty	Capacity		Capacity		
0.165	%	Gal/Day	%	Gal/Day	%	Gal/Day	%	Gal/Day	
MGD	Solids		Solids	-	Solids	-	Solids		
	2.5	4,125	2.5	3,094	2.5	2,063	2.5	1,031	

Sludge Age

The sludge age based on having 23,940 cubic feet (179,083 gallons) of total digester capacity, 2.5% solids and the above generated sludge volume is 43 days for 100% flow capacity, 57 days for 75% capacity, 86 days for 50% capacity and 173 days for 25% capacity.

7. Identification of Disposal Site

The disposal of sludge from the WWTP will be contracted to a sludge management and disposal contractor for either further treatment or disposal. The sludge will be hauled to either to treatment facility permitted to handle sludge or a registered land fill or a land application site. Solids documentation will be assured by measuring the volume of each sludge withdrawal and measuring the sludge solids concentrations. All required data will be included in the annual sludge report to the TCEQ.

SLUDGE MANAGEMENT PLAN OLD HOCKLEY

Proposed Phase I – 0.330 MGD

1. Type of Treatment Process

AERATION BASINS

The proposed facility is a 0.330 million gallons per day (MGD) conventional activated sludge process utilizing an aeration basin. The following table shows the process design and sludge generation calculations for the design flow of this facility.

BOD = 300 mg/l x 8.34 lbs/gal x 0.330 MGD = 826 lbs BOD per Day

2. Dimensions and Capacities

AEROBIC DIGESTER

The treatment facility has two solids holding tank with maximum total volume of 35,910 cubic feet. The tanks are 12-feet W by 95-feet L with 10.5 foot side water depth.

The total Digester capacity of 26,208 cubic feet is greater than the required digester capacity based on 20 cubic feet per lb. of BOD times 826 lbs of BOD loading for the 0.330 MGD WWTP.

3. Sludge Generation Calculations

Sludge generation calculations showing the amount of solids generated at 100%, 75%, 50% and 25% of design flow are included in the following tables. These represent the solids that must be wasted from the activated sludge process and that must be stabilized in the aerobic digester.

Solids @ 100%	Solids @ 75%	Solids @ 50%	Solids @ 25%
Qavg lb/day	Qavg lb/day	Qavg lb/day	Qavg lb/day
826	620	414	206

4. Operating Range of Mixed Liquor Suspended Solids

It is anticipated that the MLSS for all phases will be approximately 2,400 mg/l on the average. The range for MLSS is anticipated to be between 2,000 and 4,000 mg/l during various stages of loading.

5. Solids Removal Procedures

Conventional Aerated Mixed Liquor WWTP

The removal of waste activated sludge from the proposed conventional aerated mixed liquor activated sludge WWTP is achieved by wasting sludge from the clarifier and transferred by airlift pump to the aerobic digester. Additional thickening of sludge prior to transfer to the digester by periodically, (two or three times per week) having the air supply and mixing in the aerobic digester shut off allowing solids to settle to the bottom of the digester. The supernatant liquor is decanted by an adjustable decant airlift pump located in each digester and is returned to influent grinder pump station via the plant drain system. After sufficient digestion, sludge is hauled in liquid form by a licensed transporter. The liquid sludge is transported to registered site.

6. Quantity of Solids to be Removed and Solids Removal Schedule

The quantity of solids to be removed at various plant loadings are presented in the following table. The quantities shown in the tabulation are monthly quantities based upon the influent BOD of 300 mg/l and TSS of 300 mg/l. If the strength of the influent wastewater varies significantly, solids removal quantities will be different.

	PHASE	@100% Flow		@75% Flow		@50% Flow		@25% Flow	
	II	Capaci	ty	Capaci	ty	Capacity		Capacity	
Ī	0.330	%	Gal/Day	%	Gal/Day	%	Gal/Day	%	Gal/Day
	MGD	Solids		Solids		Solids	•	Solids	_
		2.5	8,250	2.5	6,187	2.5	4,125	2.5	2,062

Sludge Age

The sludge age based on having 35,910 cubic feet (268,625 gallons) of total digester capacity, 2.5% solids and the above generated sludge volume is 32 days for 100% flow capacity, 43 days for 75% capacity, 64 days for 50% capacity and 130 days for 25% capacity.

7. Identification of Disposal Site

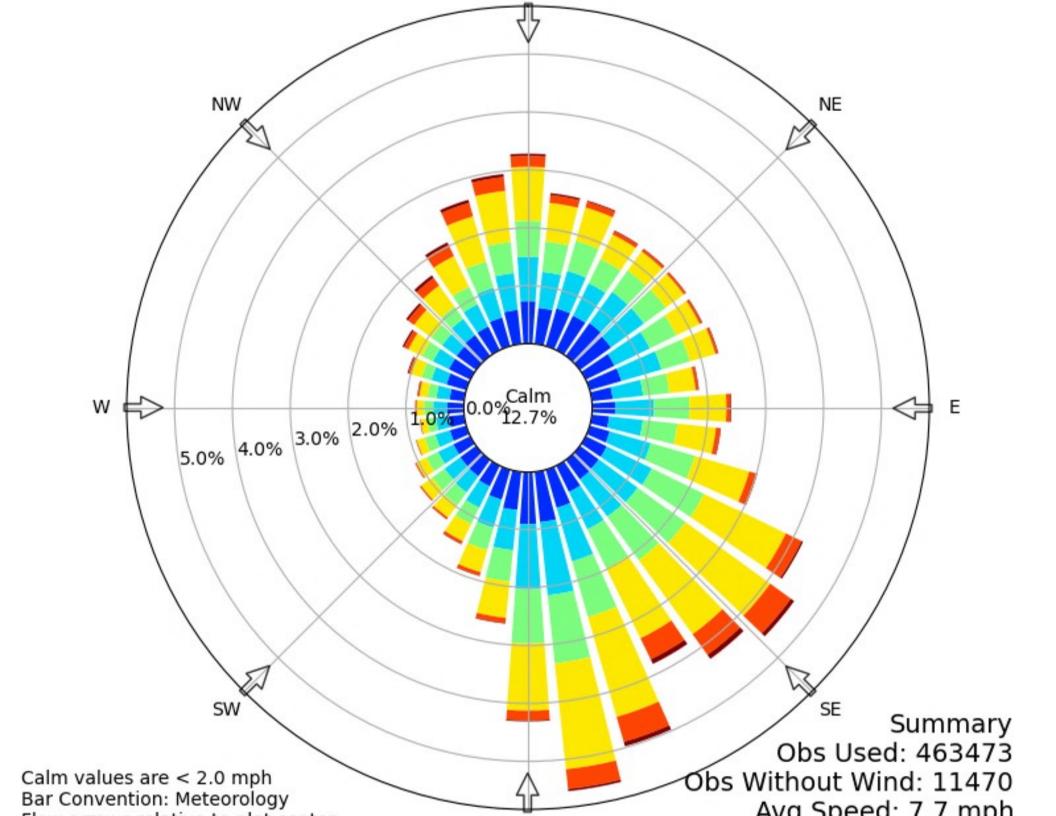
The disposal of sludge from the WWTP will be contracted to a sludge management and disposal contractor for either further treatment or disposal. The sludge will be hauled to either to treatment facility permitted to handle sludge or a registered land fill or a land application site. Solids documentation will be assured by measuring the volume of each sludge withdrawal and measuring the sludge solids concentrations. All required data will be included in the annual sludge report to the TCEQ.

Domestic Wastewater Permit Application Keenan North Development, Ltd. TPDES Permit No. TBD NPDES Permit No. TBD A&S Project No. 540008.02

EXHIBIT 19

WIND ROSE





Domestic Wastewater Permit Application Keenan North Development, Ltd. TPDES Permit No. TBD NPDES Permit No. TBD A&S Project No. 540008.02

EXHIBIT 20

CORE DATA FORM





TCEQ Core Data Form

For detailed instructions on completing this form, please read the Core Data Form Instructions or call 512-239-5175.

SECTION I: General Information

1. Reason for	Submissi	i on (If other is checked	l please describe	e in space pr	rovided.)						
New Perr	nit, Registra	ation or Authorization	(Core Data Forn	n should be s	submitted	with the pro	gram application.)				
Renewal	Renewal (Core Data Form should be submitted with the renewal form)						Other				
2. Customer	2. Customer Reference Number (if issued) Follow this link to search				rch 3. Ro	egulated Entity F	Reference	Number (if i	issued)		
CN				for CN or RN Central R	N numbers Registry**	s in RN					
SECTIO	N II:	<u>Customer</u>	Inform	<u>nation</u>	<u>1</u>						
			1								
4. General Cu	ıstomer Ir	nformation	5. Effective	Date for Cu	ustomer	Information	updates (mm/d	d/yyyy)			
New Custon	mer		pdate to Custor	mer Informa	ition	Cha	ange in Regulated E	ntity Own	ership		
☐Change in L	egal Name	(Verifiable with the Te	xas Secretary of	State or Tex	kas Compt	roller of Publ	ic Accounts)				
The Custome	r Name sı	ubmitted here may	be updated au	utomaticali	lly based	on what is	current and activ	ve with th	he Texas Seci	retary of State	
(SOS) or Texa	s Comptro	oller of Public Accou	ınts (CPA).								
6. Customer	Legal Nam	ne (If an individual, pri	nt last name firs	st: eg: Doe, J	John)		If new Custome	r, enter pr	evious Custom	ner below:	
Keenan North	Developme	ent. Ltd.									
7. TX SOS/CP	A Filing N	umber	8. TX State 1	Гах ID (11 d	ligits)		9. Federal Tax	9. Federal Tax ID		10. DUNS Number (if applicable)	
							(9 digits)		иррпсиые)		
							99-2592231				
		<u></u>				,	33 2332231				
11. Type of C	ustomer:	☐ Corpora	tion			☐ Indiv	idual	Partne	ership: 🗌 Ger	neral 🛛 Limited	
Government: [City 🔲	County 🗌 Federal 📗	Local State	Other		Sole	Proprietorship	□ Ot	her:		
12. Number	of Employ	ees				•	13. Independ	ently Ow	ned and Ope	erated?	
⊠ 0-20	21-100 [101-250 251-	500 🗌 501 a	and higher			⊠ Yes	☐ No			
14. Customer	r Role (Pro	posed or Actual) – as i	t relates to the	Regulated Er	ntity listed	on this form	. Please check one	of the follo	owing		
Owner		Operator	⊠ Ow	ner & Opera	ator						
Occupation	al Licensee	Responsible Pa	rty 🔲 V	/CP/BSA App	plicant		☐ Othe	er:			
45 84 '"	28408 Sv	veetgum Road, Suite B	3								
15. Mailing											
Address:	City	Magnolia		State	TX	ZIP	77354		ZIP + 4		
	J,						1.331				
16. Country I	Mailing In	formation (if outside	USA)			17. E-Mail <i>I</i>	Address (if applica	ble)			
						OZAN_TWIST	@HOTMAIL.COM				
18. Telephon	e Number	•	1	9. Extensio	on or Cod	de	20. Fax	Number	(if applicable)		

TCEQ-10400 (11/22) Page 1 of 3

() - 832-375-989	7
-------------------	---

		١.	
		1	-

SECTION III: Regulated Entity Information

21. General Regulated En	tity Informa	ត on (If 'New Regula	ted Entity" is selec	ted, a new p	ermit applicat	on is als	o required.)		
New Regulated Entity	Update to	Regulated Entity Nar	me 🔲 Update t	o Regulated	Entity Informa	ation			
The Regulated Entity Nan as Inc, LP, or LLC).	ne submitte	d may be updated	, in order to med	et TCEQ Cor	e Data Stan	dards (r	emoval of o	rganization	al endings such
22. Regulated Entity Nam	e (Enter nam	e of the site where th	ne regulated action	is taking pla	ice.)				
Keenan North WWTP									
23. Street Address of the Regulated Entity:	TBD Keenan	TBD Keenan Cutoff Rd							
(No PO Boxes)	City	Montgomery	State	ТХ	ZIP	77316		ZIP + 4	
24. County	Montgomer	у				•			
		If no Street A	Address is provid	led, fields 2	25-28 are red	quired.			
25. Description to Physical Location:	Approximate	ely 1 mile northwest	of the intersection	of Keenan C	utoff Rd and	FM 2854	in Montgomer	ry County.	
26. Nearest City						State		Nea	rest ZIP Code
Montgomery						TX		7731	.6
Latitude/Longitude are required and may be added/updated to meet TCEQ Core Data Standards. (Geocoding of the Physical Address may be used to supply coordinates where none have been provided or to gain accuracy).									
_	-				Pata Standa	rds. (Ge	ocoding of th	ne Physical	Address may be
_	es where no			accuracy).	Oata Standa Ongitude (W			ne Physical	Address may be
used to supply coordinate	es where no	ne have been prov		accuracy).	ongitude (W	/) In Dec		ne Physical	Address may be Seconds
27. Latitude (N) In Decimal Degrees	es where not al: Minutes	Sec. 19	conds	28. L	ongitude (W	/) In Dec	imal: Minutes		Seconds 45.7
27. Latitude (N) In Decima	Minutes 30.	ne have been prov	conds	28. L Degre	ongitude (Wees 95 ry NAICS Co	/) In Dec	imal: Minutes	ndary NAIC	Seconds 45.7
27. Latitude (N) In Decimal Degrees 30 29. Primary SIC Code	Minutes 30.	Secondary SIC Coc	conds	28. L Degre	ees 95 ry NAICS Cod	/) In Dec	Minutes 39 32. Seco	ndary NAIC	Seconds 45.7
used to supply coordinate 27. Latitude (N) In Decima Degrees 30 29. Primary SIC Code (4 digits)	Minutes 30. (4 di	Secondary SIC Coo	conds 56.4	28. L Degree 31. Primal (5 or 6 digi	95 ry NAICS Codts)	/) In Dec	Minutes 39 32. Seco	ndary NAIC	Seconds 45.7
used to supply coordinate 27. Latitude (N) In Decima Degrees 30 29. Primary SIC Code (4 digits) 4952	Minutes 30. (4 di	Secondary SIC Coo	conds 56.4	28. L Degree 31. Primal (5 or 6 digi	95 ry NAICS Codts)	/) In Dec	Minutes 39 32. Seco	ndary NAIC	Seconds 45.7
used to supply coordinate 27. Latitude (N) In Decima Degrees 30 29. Primary SIC Code (4 digits) 4952 33. What is the Primary B	Minutes 30. (4 di	Secondary SIC Coo	conds 56.4 See at repeat the SIC or	28. L Degree 31. Primal (5 or 6 digi	95 ry NAICS Codts)	/) In Dec	Minutes 39 32. Seco	ndary NAIC	Seconds 45.7
used to supply coordinate 27. Latitude (N) In Decima Degrees 30 29. Primary SIC Code (4 digits) 4952 33. What is the Primary B Wastewater treatment plant	Minutes 30. (4 di	Secondary SIC Coo	conds 56.4 de ot repeat the SIC or	28. L Degree 31. Primal (5 or 6 digi	ees 95 TY NAICS Codts) 20	de	Minutes 39 32. Seco	ndary NAIC	Seconds 45.7
27. Latitude (N) In Decimal Degrees 30 29. Primary SIC Code (4 digits) 4952 33. What is the Primary B Wastewater treatment plant 34. Mailing Address:	Minutes 30. (4 di Business of t	Secondary SIC Coopers whis entity? (Do not be etgum Road, Suite E	conds 56.4 de ot repeat the SIC or	28. L Degree 31. Primal (5 or 6 digi	95 ry NAICS Codts)	/) In Dec	Minutes 39 32. Seco	ndary NAIC	Seconds 45.7
used to supply coordinate 27. Latitude (N) In Decima Degrees 30 29. Primary SIC Code (4 digits) 4952 33. What is the Primary B Wastewater treatment plant 34. Mailing Address: 35. E-Mail Address:	Minutes 30. (4 di Business of t	Secondary SIC Coordinates Secondary SIC Coordinates Magnolia N_TWIST@HOTMAI	conds 56.4 the State L.COM	28. L Degree 31. Primar (5 or 6 digital services of the control of	ongitude (Wees 95 ry NAICS Codets) 20 ription.)	/) In Dec	Minutes 39 32. Seco (5 or 6 dig	ndary NAIC gits)	Seconds 45.7
27. Latitude (N) In Decimal Degrees 30 29. Primary SIC Code (4 digits) 4952 33. What is the Primary B Wastewater treatment plant 34. Mailing Address:	Minutes 30. (4 di Business of t	Secondary SIC Coordinates Secondary SIC Coordinates Magnolia N_TWIST@HOTMAI	conds 56.4 de ot repeat the SIC or	28. L Degree 31. Primar (5 or 6 digital services of the control of	ongitude (Wees 95 ry NAICS Codets) 20 ription.)	de 77354	Minutes 39 32. Seco	ndary NAIC gits)	Seconds 45.7

39. TCEQ Programs and ID Numbers Check all Programs and write in the permits/registration numbers that will be affected by the updates submitted on this form. See the Core Data Form instructions for additional guidance.

TCEQ-10400 (11/22) Page 2 of 3

Dam Safety		Districts	Edwards Aquifer		Emissions In	ventory Air	☐ Industrial Hazardous Waste
Municipal Solid \	Naste	New Source Review Air	OSSF		Petroleum St	orage Tank	☐ PWS
Sludge	<u></u>	Storm Water	☐ Title V Air		Tires		Used Oil
☐ Voluntary Cleanu	h		☐ Wastewater Agricul	lture	☐ Water Rights		Other:
SECTION I	V: Pre	eparer Inf	<u>ormation</u>				
40. Name: Eric	Williams, PE			41. Title:	Project Ma	nager	
42. Telephone Num	nber	43. Ext./Code	44. Fax Number	45. E-Ma	il Address		
(713)942-2700			() -	elw@as-e	ngineers.com		
SECTION V	/: Aut	horized S	<u>ignature</u>				
46. By my signature be	low, I certify,	to the best of my kno					e, and that I have signature authority ntified in field 39.
Company:	Keenan No	orth Development, Ltd.	0	Job Title:	President		
Name (In Print):	Ahmet Oza	an /		•		Phone:	(832) 375- 9897
Signature:	>	Ju				Date:	11/04/2024

Domestic Wastewater Permit Application Keenan North Development, Ltd. TPDES Permit No. TBD NPDES Permit No. TBD A&S Project No. 540008.02

EXHIBIT 21

PLAIN LANGUAGE SUMMARY



TCEQ

TEXAS COMMISSION ON ENVIRONMENTAL QUALITY

PLAIN LANGUAGE SUMMARY FOR TPDES OR TLAP PERMIT APPLICATIONS

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

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

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

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

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

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

Keenan North Development, Ltd. (CN TBD) proposes to operate Keenan North WWTP (RN TBD), a domestic wastewater treatment plant. The facility will be located at approximately 1 mile northwest of the intersection of Keenan Cutoff Rd and FM 2854, in Montgomery, Montgomery County, Texas 77355. Requesting to permit a WWTP to treat up to 0.495 MGD.

Discharges from the facility are expected to contain five-day carbonaceous biochemical oxygen demand (CBOD5), total suspended solids (TSS), ammonia nitrogen (NH3-N). Domestic wastewater will be treated by a complete mix mode of activated sludge process, including screening, aeration, final clarification, and disinfection..

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

AGUAS RESIDUALES DOMESTICAS /AGUAS PLUVIALES

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

Keenan North Development, Ltd. (CN TPD) propone operar Keenan North WWTP RN TBD, una planta de tratamiento de aguas residuales. La instalación estará ubicada en aproximadamente 1 milla al noroeste de la intersección de Keenan Cutoff Rd y FM 2854, en Montgomery, Condado de Montgomery, Texas 77355. La solicitud es para la instalación de WWTP por 0.495 MGD.

Se espera que las descargas de la instalación contengan bioquímica de oxígeno carbonoso (CBOD5), solidos suspendidos totales (TSS), nitrógeno amoniacal (NH3-N). Las aguas residuales domésticas. estará tratado por un modo de mezcla completa del proceso de lodos activados, que incluye cribado, balsas de aireación, clarificadores, digestores aerobios y desinfección.

INSTRUCTIONS

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

Questions or comments concerning this form may be directed to the Water Quality Division's Application Review and Processing Team by email at <a href="https://www.wevenue.com/worden/worden/concerning-to-state-new-concerning-to-state-new-concerning-to-state-new-concerning-to-state-new-concerning-to-state-new-concerning-this form may be directed to the Water Quality Division's Application Review and Processing Team by email at <a href="https://www.wevenue.com/worden/wo

Example

Individual Industrial Wastewater Application

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

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

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

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

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

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

Domestic Wastewater Permit Application Keenan North Development, Ltd. TPDES Permit No. TBD NPDES Permit No. TBD A&S Project No. 540008.02

EXHIBIT 22

PUBLIC INVOLVEMENT PLAN





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, <u>and</u>
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.

TCEQ-20960 (02-09-2023)

Section 3. Application Information
Type of Application (check all that apply): Air Initial Federal Amendment Standard Permit Title V Waste Municipal Solid Waste Industrial and Hazardous Waste Scrap Tire Radioactive Material Licensing Underground Injection Control
Water Quality
Texas Pollutant Discharge Elimination System (TPDES)
Texas Land Application Permit (TLAP)
State Only Concentrated Animal Feeding Operation (CAFO)
Water Treatment Plant Residuals Disposal Permit
Class B Biosolids Land Application Permit
Domestic Septage Land Application Registration
Water Rights New Permit New Appropriation of Water New or existing reservoir
Amendment to an Existing Water Right
Add a New Appropriation of Water
Add a New or Existing Reservoir
Major Amendment that could affect other water rights or the environment
Section 4. Plain Language Summary
Provide a brief description of planned activities.
Keenan North Development, Ltd. (CN TBD) proposes to operate Keenan North WWTP (RN TBD), a domestic wastewater treatment plant. The facility will be located at approximately 1 mile northwest of the intersection of Keenan Cutoff Rd and FM 2854, in Montgomery, Montgomery County, Texas 77355. Requesting to permit a WWTP to treat up to 0.495 MGD. Discharges from the facility are expected to contain five-day carbonaceous biochemical oxygen demand (CBOD5), total suspended solids (TSS), ammonia nitrogen (NH3-N). Domestic wastewater will be treated by a complete mix mode of activated sludge process, including screening, aeration, final clarification, and disinfection

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.
Montgomery
(City)
Montgomery
(County)
(Census Tract)
Please indicate which of these three is the level used for gathering the following information. City Census Tract
City County Celisus 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
(e) Languages commonly spoken in area by percentage
(f) Community and/or Stakeholder Groups
(g) Historic public interest or involvement

TCEQ-20960 (02-09-2023) Page 4 of 4

Domestic Wastewater Permit Application Keenan North Development, Ltd. TPDES Permit No. TBD NPDES Permit No. TBD A&S Project No. 540008.02

EXHIBIT 23

SPIF



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:RenewalMaj	or AmendmentNinor AmendmentNew
County:	Segment Number:
Admin Complete Date:	
Agency Receiving SPIF:	
Texas Historical Commission	U.S. Fish and Wildlife
Texas Parks and Wildlife Departm	nent U.S. Army Corps of Engineers
This form applies to TPDES permit appli	<u>cations only.</u> (Instructions, Page 53)
our agreement with EPA. If any of the item	nt. TCEQ will mail a copy to each agency as required by as are not completely addressed or further information the information before issuing the permit. Address
attachment for this form separately from application will not be declared administration of the completed in its entirety including all atta	m in the permit application form. Provide each the Administrative Report of the application. The atively complete without this SPIF form being achments. Questions or comments concerning this form sion's Application Review and Processing Team by by phone at (512) 239-4671.
The following applies to all applications:	
1. Permittee: <u>Keenan North Development</u>	<u>, Ltd.</u>
Permit No. WQ00 <u>N/A</u>	EPA ID No. TX <u>N/A</u>
and county):	escription that includes street/highway, city/vicinity,
Approximately 1 mile northwest of t in Montgomery County.	the intersection of Keenan Cutoff Rd and FM 2854

	the name, address, phone and fax number of an individual that can be contacted to specific questions about the property.
Prefix (I	Mr., Ms., Miss): <u>Mr.</u>
First an	d Last Name: <u>Louis Toumajian</u>
Credent	tial (P.E, P.G., Ph.D., etc.): <u>E.I.T.</u>
Title: <u>Pr</u>	oject Coordinator II
Mailing	Address: 10377 Stella Link Road
City, Sta	ate, Zip Code: <u>Houston, TX 77025-5445</u>
Phone N	No.: <u>713-942-2700</u> Ext.: Fax No.:
E-mail A	Address: <u>lat@as-engineers.com</u>
List the	county in which the facility is located: <u>Montgomery</u>
please l	roperty is publicly owned and the owner is different than the permittee/applicant, ist the owner of the property.
N/A	
Provide	a description of the effluent discharge route. The discharge route must follow the flow
	ent from the point of discharge to the nearest major watercourse (from the point of
	ge to a classified segment as defined in 30 TAC Chapter 307). If known, please identify sified segment number.
in Mo	oximately 1 mile northwest of the intersection of Keenan Cutoff Rd and FM 2854 entgomery County. Discharge into Mound Creek Tributary No. 54 then to Mound , Lake Creek, then into the West Fork San Jacinto River, then to San Jacinto
plotted route fr	provide a separate 7.5-minute USGS quadrangle map with the project boundaries and a general location map showing the project area. Please highlight the discharge com the point of discharge for a distance of one mile downstream. (This map is d in addition to the map in the administrative report).
Provide	original photographs of any structures 50 years or older on the property.
Does yo	our project involve any of the following? Check all that apply.
\boxtimes	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

2.3.

4.

5.

	□ 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):
	Normal grading and drainage work as well as clearing and grubbing.
2.	Describe existing disturbances, vegetation, and land use:
	Existing land is wooded and vegetated.
	E FOLLOWING ITEMS APPLY ONLY TO APPLICATIONS FOR NEW TPDES PERMITS AND MAJOR IENDMENTS TO TPDES PERMITS
3.	List construction dates of all buildings and structures on the property:
	Projected construction dates of Summer 2026
4.	Provide a brief history of the property, and name of the architect/builder, if known.
	The property is currently vacant, to be developed into single family residence development

Erwin Madrid

From: Eric Williams <elw@as-engineers.com>
Sent: Wednesday, January 22, 2025 8:52 AM

To: Rachel Ellis
Cc: Jonathan D. Liu

Subject: FW: Response: Application for New Permit No. WQ0016686001-Keenan North

Development, Ltd.- Notice of Deficiency Letter

Attachments: Avery5160EasyPeelAddressLabels.doc; dom-tpdes-new-nori-munechno (2).docx

Good Morning Rachel,

Please see below. Are we not supposed to use the TCEQ FTPS for permits?

I have a OneDrive link as well: Keenan North TPDES Application Package 15 Jan.pdf

Thanks,

Eric Williams, P.E. Project Manager



A&S Engineers, Inc.

10377 Stella Link Road Houston, TX 77025-5445 D: (713) 942-2775 elw@as-engineers.com www.as-engineers.com

THE INFORMATION CONTAINED IN THIS MESSAGE IS PRIVILEGED AND CONFIDENTIAL AND INTENDED ONLY FOR THE USE OF THE ABOVE NAMED RECIPIENT. ANY DISSEMINATION, DISTRIBUTION OR COPYING OF THIS COMMUNICATION OR WORK PRODUCT IS STRICTLY PROHIBITED. IF YOU HAVE RECEIVED THIS COMMUNICATION IN ERROR, PLEASE IMMEDIATELY NOTIFY THE SENDER BY TELEPHONE.

From: Eric Williams

Sent: Thursday, January 16, 2025 1:31 PM

To: Rachel.Ellis@tceq.texas.gov

Cc: Jonathan D. Liu < idl@as-engineers.com>; Louis Toumajian < lat@as-engineers.com>

Subject: Response: Application for New Permit No. WQ0016686001-Keenan North Development, Ltd.- Notice of

Deficiency Letter

Good Afternoon Rachel,

The NOI looks good (once updated with location), the alternative language copy is attached as well as the labels.

The updated permit package has been sent over via the TCEQ FTPS.

Please let me know if you have any questions.

Thanks,

Eric Williams, P.E. Project Manager



A&S Engineers, Inc.

10377 Stella Link Road Houston, TX 77025-5445 D: (713) 942-2775 elw@as-engineers.com www.as-engineers.com

THE INFORMATION CONTAINED IN THIS MESSAGE IS PRIVILEGED AND CONFIDENTIAL AND INTENDED ONLY FOR THE USE OF THE ABOVE NAMED RECIPIENT. ANY DISSEMINATION, DISTRIBUTION OR COPYING OF THIS COMMUNICATION OR WORK PRODUCT IS STRICTLY PROHIBITED. IF YOU HAVE RECEIVED THIS COMMUNICATION IN ERROR, PLEASE IMMEDIATELY NOTIFY THE SENDER BY TELEPHONE.



November 23, 2024

Texas Commission on Environmental Quality Applications Review and Processing Team (MC 148) 12100 Park 35 Circle Austin, Texas 78753

Re: Domestic Wastewater Discharge Permit - New

Permit No. WQ TBD

NPDES Permit No. TX TBD Keenan North Development, Ltd. A & S Project No. 540008.02

Ladies and Gentlemen:

Keenan North Development, Ltd. seeks a TCEQ permit for a wastewater treatment plant to serve a proposed single family residence development. Attached is a Permit Application for the wastewater treatment plant.

Enclosed are one (1) original and three (3) copies of the Application. The fee is being sent under separate cover to the Revenues Section (MC 214).

If you have any questions or comments, please feel free to call me at (713) 942-2700.

Sincerely,

Eric Williams, P.E. Project Manager

bether

Enclosures: TPDES Permit Application Package for Keenan North Development, Ltd.

cc w/enclosures: Mr. Ahmet Ozan, Keenan North Development, Ltd.

TCEQ-Houston

THE TONMENTAL OUR LEVEL OF THE TONE OF THE

TEXAS COMMISSION ON ENVIRONMENTAL QUALITY

DOMESTIC WASTEWATER PERMIT APPLICATION CHECKLIST

Complete and submit this checklist with the application.

|--|

PERMIT NUMBER (If new, leave blank): WQ00 Click to enter text.

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

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

For TCEQ Use Only	
Segment NumberExpiration DatePermit Number	County Region

THE TONMENTAL OURS

TEXAS COMMISSION ON ENVIRONMENTAL QUALITY

DOMESTIC WASTEWATER PERMIT APPLICATION ADMINISTRATIVE REPORT 1.0

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

Section 1. Application Fees (Instructions Page 26)

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

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

Minor Amendment (for any flow) \$150.00 □

Mailed	Check/Money Order Number: Click to enter text.
	Check/Money Order Amount: Click to enter text.
	Name Printed on Check: Click to enter text.
EPAY	Voucher Number: Click to enter text.
Copy of Payr	nent Voucher enclosed? Yes □

Section 2. Type of Application (Instructions Page 26)

a.	Che	ck the box next to the appropriate authorization type.
		Publicly-Owned Domestic Wastewater
	\boxtimes	Privately-Owned Domestic Wastewater
		Conventional Wastewater Treatment
b.	Che	ck the box next to the appropriate facility status.
		Active Inactive

c.	c. Check the box next to the appropriate permit type.					
	□ TPDES Permit					
	□ TLAP					
	☐ TPDES Permit with TLAP component					
	☐ Subsurface Area Drip Dispersal System (SADDS)					
d.	Check the box next to the appropriate application type					
	⊠ New					
	□ Major Amendment <u>with</u> Renewal □ Minor Amendment <u>with</u> Renewal					
	☐ Major Amendment <u>without</u> Renewal ☐ Minor Amendment <u>without</u> Renewal					
	☐ Renewal without changes ☐ Minor Modification of permit					
e.	For amendments or modifications, describe the proposed changes: Click to enter text.					
f.	For existing permits:					
	Permit Number: WQ00 Click to enter text.					
	EPA I.D. (TPDES only): TX Click to enter text.					
	Expiration Date: Click to enter text.					
Se	ection 3. Facility Owner (Applicant) and Co-Applicant Information (Instructions Page 26)					
	<u> </u>					
Α.	The owner of the facility must apply for the permit.					
	What is the Legal Name of the entity (applicant) applying for this permit?					
	<u>Keenan North Development, Ltd.</u>					
	(The legal name must be spelled exactly as filed with the Texas Secretary of State, County, or the legal documents forming the entity.)					
	If the applicant is currently a customer with the TCEQ, what is the Customer Number (CN)? You may search for your CN on the TCEQ website at http://www15 tceq texas gov/crpub/					

CN: 606265080

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

Last Name, First Name: Ozan, Ahmet Prefix: Mr.

Credential: Click to enter text. Title: President

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

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

Click to enter text.

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

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

CN: Click to enter text.

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

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

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

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

C. Core Data Form

Complete the Core Data Form for each customer and include as an attachment. If the customer type selected on the Core Data Form is **Individual**, complete **Attachment 1** of Administrative Report 1.0. <u>Exhibit 20</u>

Section 4. Application Contact Information (Instructions Page 27)

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

A. Prefix: Mr. Last Name, First Name: Liu, Jonathan D.

Title: Project Manager Credential: P.E.

Organization Name: A&S Engineers, Inc.

Mailing Address: 10377 Stella Link Road City, State, Zip Code: Houston, TX 77025-5445

Phone No.: 713-942-2700 E-mail Address: jdl@as-engineers.com

Check one or both: \square Administrative Contact \boxtimes Technical Contact

B. Prefix: Mr. Last Name, First Name: Toumajian, Louis

Title: Project Coordinator II Credential: E.I.T.

Organization Name: A&S Engineers, Inc.

Mailing Address: 10377 Stella Link Road City, State, Zip Code: Houston, TX 77025-5445

Phone No.: 713-942-2700 E-mail Address: lat@as-engineers.com

Check one or both: \square Administrative Contact \square Technical Contact

Section 5. Permit Contact Information (Instructions Page 27)

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

A. Prefix: Mr. Last Name, First Name: Ozan, Ahmet

Title: President Credential: Click to enter text.

Organization Name: Keenan North Development, Ltd.

Mailing Address: <u>28408 Sweetgum Road</u> City, State, Zip Code: <u>Magnolia, TX, 77354</u>

Phone No.: 832-375-9897 E-mail Address: OZAN TWIST@HOTMAIL.COM

B. Prefix: Mr. Last Name, First Name: Liu, Jonathan D.

Title: <u>Project Manager</u> Credential: <u>P.E.</u>

Organization Name: A&S Engineers, Inc.

Mailing Address: 10377 Stella Link Road City, State, Zip Code: Houston, TX 77025-5445

Phone No.: <u>713-942-2700</u> E-mail Address: <u>jdl@as-engineers.com</u>

Section 6. Billing Contact Information (Instructions Page 27)

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

Prefix: Mr. Last Name, First Name: OZAN, AHMET

Title: President Credential: Click to enter text.

Organization Name: Keenan North Development, Ltd.

Mailing Address: <u>28408 Sweetgum Road</u> City, State, Zip Code: <u>Magnolia, TX, 77354</u> Phone No.: 832-375-9897 E-mail Address: OZAN_TWIST@HOTMAIL.COM

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

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

Prefix: Mr. Last Name, First Name: OZAN, AHMET

Title: President Credential: Click to enter text.

Organization Name: Keenan North Development, Ltd.

Mailing Address: <u>28408 Sweetgum Road</u> City, State, Zip Code: <u>Magnolia, TX, 77354</u> Phone No.: <u>832-375-9897</u> E-mail Address: <u>OZAN_TWIST@HOTMAIL.COM</u>

Section 8. Public Notice Information (Instructions Page 27)

A. Individual Publishing the Notices

Prefix: Mr. Last Name, First Name: Liu, Jonathan D.

Title: Project Manager Credential: P.E.

Organization Name: A&S Engineers, Inc.

Mailing Address: 10377 Stella Link Road City, State, Zip Code: Houston, TX 77025-5445

Phone No.: Click to enter text. E-mail Address: jdl@as-engineers.com

B. Method for Receiving Notice of Receipt and Intent to Obtain a Water Quality Package								
	Indicate by a check mark the preferred method for receiving the first notice and instructions							
	\boxtimes	E-mail Address						
		Fax						
		Regular Mail						
C.	C. Contact permit to be listed in the Notices							
	Pre	fix: <u>Mr.</u> Last Name, First Name: <u>Liu, Jonathan D.</u>						
	Titl	le: Click to enter text. Credential: <u>P.E.</u>						
	Org	Organization Name: <u>A&S Engineers, Inc.</u>						
	Mai	iling Address: <u>10377 Stella Link Road</u> City, State, Zip Code: <u>Houston, TX 77025-5445</u>						
	Pho	one No.: Click to enter text. E-mail Address: jdl@as-engineers.com						
D.	Pul	olic Viewing Information						
	-	If the facility or outfall is located in more than one county, a public viewing place for each county must be provided.						
	Puk	olic building name: Charles B. Stewart-West Branch Library						
	Loc	cation within the building: Public Records Viewing Area						
	Physical Address of Building: 202 Bessie Price Owen Dr.							
	City	y: <u>Montgomery</u> County: <u>Montgomery</u>						
	Coı	ntact (Last Name, First Name): <u>Wilson, Mat</u>						
Phone No.: <u>936-522-2799</u> Ext.: Click to enter text.								
E.	Bili	Bilingual Notice Requirements						
	This information is required for new, major amendment, minor amendment or minor modification, and renewal applications.							
	This section of the application is only used to determine if alternative language notices will be needed. Complete instructions on publishing the alternative language notices will be in your public notice package.							
	Please call the bilingual/ESL coordinator at the nearest elementary and middle schools and obtain the following information to determine whether an alternative language notices are required.							
	1. Is a bilingual education program required by the Texas Education Code at the elementary or middle school nearest to the facility or proposed facility?							
		⊠ Yes □ No						
		If no , publication of an alternative language notice is not required; skip to Section 9 below.						
	2. Are the students who attend either the elementary school or the middle school enrolled in a bilingual education program at that school?							
		lacksquare Voc. $lacksquare$ No.						

	3.	Do the location	students n?	at these	schools a	attend a	a bilingua	l educa	tion pro	gram a	t another
			Yes	\boxtimes	No						
	4.		the schoo out of th							ogram l	out the school has
			Yes	\boxtimes	No						
	5.		•	_							tive language are enter text.
F.	Pla	in Lang	guage Sun	ımary 1	Template						
	Co	mplete	the Plain l	Languag	e Summa	ry (TCE	Q Form 2	0972) a	and inclu	de as a	ın attachment.
	At	tachme	nt: <u>Exhibit</u>	21							
G.	Pu	blic Inv	olvement	: Plan Fo	orm						
											plication for a
	ne	w perm	it or majo	or amen	dment to	a pern	nit and in	clude a	s an atta	chmen	t.
	At	tachme	nt: <u>Exhibit</u>	22							
C		0	D	-41 T		. J D.		Cita	r - C		(It
5 e	CU	on 9.	Regui Page 2		entity a	na Pe	rmittea	i Site .	intorm	latton	(Instructions
A.				ly regula		CEQ, pr	ovide the	Regula	ited Enti	ty Num	ber (RN) issued to
			TCEQ's C				<u>/www15.t</u>	tceq.tex	as.gov/c	rpub/	to determine if
B.	Na	me of p	roject or s	site (the	name kn	own by	the comr	nunity	where lo	cated):	
	Ke	enan No	rth WWTP								
C.	Ov	vner of	treatment	facility:	Keenan N	orth De	velopment	t, Ltd.			
	Ov	vnership	of Facilit	y: □	Public	\boxtimes	Private		Both		Federal
D.	Ov	vner of l	land wher	e treatn	nent facili	ty is or	will be:				
	Pre	efix:			Las	t Name	, First Na	me:			
	Tit	le:			Cre	dential	Click to	enter te	ext.		
	Or	ganizati	ion Name:	Keenan	North Dev	elopme	nt, Ltd.				
	Ma	iling Ac	ldress: <u>28</u>	408 Swe	etgum Roa	<u>.d</u>	City, State	e, Zip C	ode: <u>Ma</u> g	nolia, T	X, 77354
	Ph	one No.	: <u>832-375-</u>	9 <u>897</u>	E-r	nail Ad	dress: <u>OZ</u>	AN_TW	/IST@HC	<u>TMAII</u>	<u>COM</u>
			owner is i						or co-ap	pplican	t, attach a lease
		Attach	ment: Clic	ck to en	ter text.						

F.

E.	Owner of effluent disposal site:								
	Prefix:	Last Name, First Name:							
	Title:	Credential: Click to enter text.							
	Organization Name:								
	Mailing Address:	City, State, Zip Code:							
	Phone No.:	E-mail Address:							
	If the landowner is not the same person as the facility owner or co-applicant, attach a lease agreement or deed recorded easement. See instructions.								
	Attachment: Click to enter te	xt.							
F.	Owner sewage sludge disposal site (if authorization is requested for sludge disposal on property owned or controlled by the applicant)::								
	Prefix: Click to enter text.	Last Name, First Name: Click to enter text.							
	Title: Click to enter text.	Credential: Click to enter text.							
	Organization Name: Click to enter text.								
	Mailing Address: Click to enter to	ext. City, State, Zip Code: Click to enter text.							
	Phone No.: Click to enter text.	E-mail Address: Click to enter text.							
	If the landowner is not the same agreement or deed recorded ease	person as the facility owner or co-applicant, attach a lease ement. See instructions.							
	Attachment: Click to enter te	xt.							
Se	ection 10. TPDES Discharg	ge Information (Instructions Page 31)							
A.	Is the wastewater treatment facil	ity location in the existing permit accurate?							
	□ Yes ⊠ No								
	If no , or a new permit application , please give an accurate description:								
	Approximately 1 mile northwest of Montgomery County.	the intersection of Keenan Cutoff Rd and FM 2854 in							
В.	Are the point(s) of discharge and	the discharge route(s) in the existing permit correct?							
	□ Yes ⊠ No								
	If no , or a new or amendment permit application , provide an accurate description of the point of discharge and the discharge route to the nearest classified segment as defined in 30 TAC Chapter 307:								
	Approximately 1 mile northwest of the intersection of Keenan Cutoff Rd and FM 2854 in Montgomery County. Discharge into Mound Creek Tributary No. 54 then to Mound Creek, Lake Creek, then into the West Fork San Jacinto River, then to San Jacinto River								
	City nearest the outfall(s): Montgomery								
	County in which the outfalls(s) is	s/are located: <u>Montgomery</u>							
C.	Is or will the treated wastewater a flood control district drainage	discharge to a city, county, or state highway right-of-way, or ditch?							
	□ Yes ⊠ No								

	If yes , indicate by a check mark if:
	\square Authorization granted \square Authorization pending
	For new and amendment applications, provide copies of letters that show proof of contact and the approval letter upon receipt.
	Attachment: N/A
D.	For all applications involving an average daily discharge of 5 MGD or more, provide the names of all counties located within 100 statute miles downstream of the point(s) of discharge: $\underline{N/A}$
_	
Se	ection 11. TLAP Disposal Information (Instructions Page 32)
A.	For TLAPs, is the location of the effluent disposal site in the existing permit accurate?
	□ Yes □ No
	If no, or a new or amendment permit application , provide an accurate description of the disposal site location:
	Click to enter text.
B.	City nearest the disposal site: Click to enter text.
C.	County in which the disposal site is located: Click to enter text.
D.	For TLAPs , describe the routing of effluent from the treatment facility to the disposal site:
	Click to enter text.
Е.	For TLAPs , please identify the nearest watercourse to the disposal site to which rainfall runoff might flow if not contained: Click to enter text.
Se	ection 12. Miscellaneous Information (Instructions Page 32)
A.	Is the facility located on or does the treated effluent cross American Indian Land?
	□ Yes ⊠ No
В.	If the existing permit contains an onsite sludge disposal authorization, is the location of the sewage sludge disposal site in the existing permit accurate?
	□ Yes □ No ⊠ Not Applicable
	If No, or if a new onsite sludge disposal authorization is being requested in this permit application, provide an accurate location description of the sewage sludge disposal site.
	Click to enter text.

C.	Did any person formerly employed by the TCEQ represent your company and get paid for service regarding this application?
	□ Yes ⊠ No
	If yes, list each person formerly employed by the TCEQ who represented your company and was paid for service regarding the application: Click to enter text.
D.	Do you owe any fees to the TCEQ?
	□ Yes ⊠ No
	If yes , provide the following information:
	Account number: Click to enter text.
	Amount past due: Click to enter text.
E.	Do you owe any penalties to the TCEQ?
	□ Yes ⊠ No
	If yes , please provide the following information:
	Enforcement order number: Click to enter text.
	Amount past due: Click to enter text.
C	sation 12 Attackments (Instructions Dogs 22)
26	ection 13. Attachments (Instructions Page 33)
	dicate which attachments are included with the Administrative Report. Check all that apply:
In	dicate which attachments are included with the Administrative Report. Check all that apply: Lease agreement or deed recorded easement, if the land where the treatment facility is
Inc	dicate which attachments are included with the Administrative Report. Check all that apply: Lease agreement or deed recorded easement, if the land where the treatment facility is located or the effluent disposal site are not owned by the applicant or co-applicant.
Inc	Lease agreement or deed recorded easement, if the land where the treatment facility is located or the effluent disposal site are not owned by the applicant or co-applicant. Original full-size USGS Topographic Map with the following information: • Applicant's property boundary • Treatment facility boundary • Labeled point of discharge for each discharge point (TPDES only) • Highlighted discharge route for each discharge point (TPDES only) • Onsite sewage sludge disposal site (if applicable) • Effluent disposal site boundaries (TLAP only) • New and future construction (if applicable) • 1 mile radius information • 3 miles downstream information (TPDES only)
Ino	Lease agreement or deed recorded easement, if the land where the treatment facility is located or the effluent disposal site are not owned by the applicant or co-applicant. Original full-size USGS Topographic Map with the following information: • Applicant's property boundary • Treatment facility boundary • Labeled point of discharge for each discharge point (TPDES only) • Highlighted discharge route for each discharge point (TPDES only) • Onsite sewage sludge disposal site (if applicable) • Effluent disposal site boundaries (TLAP only) • New and future construction (if applicable) • 1 mile radius information • 3 miles downstream information (TPDES only) • All ponds.

Section 14. Signature Page (Instructions Page 34)

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

Permit Number: Click to enter text.

Applicant: Keenan North Development, Ltd.

Certification:

County, Texas

I certify under penalty of law that this document and all attachments were prepared under my direction or supervision in accordance with a system designed to assure that qualified personnel properly gather and evaluate the information submitted. Based on my inquiry of the person or persons who manage the system, or those persons directly responsible for gathering the information, the information submitted is, to the best of my knowledge and belief, true, accurate, and complete. I am aware there are significant penalties for submitting false information, including the possibility of fine and imprisonment for knowing violations.

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

Signatory name (typed or printed): Ahmet Ozan	
Signatory title: President	
Signature:	Description of the Party of the
(Use blue ink)	
Subscribed and Sworn to before me by the said Ahmet Ozan	
on this day of November , 2024.	
My commission expires on the 11 day of October, 2027.	
Notary Public LUISA FERNANDEZ Notary ID #132209420 My Commission Expires October 11, 2027 [SEAL]	
.00	

DOMESTIC WASTEWATER PERMIT APPLICATION ADMINISTRATIVE REPORT 1.0

The following information is required for new and amendment applications.

Section 1. Affected Landowner Information (Instructions Page 36)

Α.		cate by a check mark that the landowners map or drawing, with scale, includes the owing information, as applicable:
	\boxtimes	The applicant's property boundaries
	\boxtimes	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
	\boxtimes	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
В.	⊠ addı	Indicate by a check mark that a separate list with the landowners' names and mailing resses cross-referenced to the landowner's map has been provided.
C.	Indi	cate by a check mark in which format the landowners list is submitted:
		☑ USB Drive □ Four sets of labels
D.	Prov	ride the source of the landowners' names and mailing addresses: MCAD
E.		equired by $Texas\ Water\ Code\ \S\ 5.115$, is any permanent school fund land affected by application?
		□ Yes ⊠ No

	If ye land	es, provide the location and foreseeable impacts and effects this application has on the (s):
	Clic	ck to enter text.
Se	ctio	n 2. Original Photographs (Instructions Page 38)
		original ground level photographs. Indicate with checkmarks that the following tion is provided.
	\boxtimes	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
Se	ctio	n 3. Buffer Zone Map (Instructions Page 38)
Α.	info	er zone map. Provide a buffer zone map on 8.5×11 -inch paper with all of the following rmation. The applicant's property line and the buffer zone line may be distinguished by g dashes or symbols and appropriate labels.
	•	The required buffer zone; and Each treatment unit; and
В.		er zone compliance method. Indicate how the buffer zone requirements will be met. ck all that apply.
		☑ Ownership
		Restrictive easement
		Nuisance odor control
] Variance
C.		uitable site characteristics. Does the facility comply with the requirements regarding uitable site characteristic found in 30 TAC § 309.13(a) through (d)?
		I Yes ⊠ No

DOMESTIC WASTEWATER PERMIT APPLICATION SUPPLEMENTAL PERMIT INFORMATION FORM (SPIF)

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

Attachment: Exhibit 23

WATER QUALITY PERMIT

PAYMENT SUBMITTAL FORM

Use this form to submit the Application Fee, if the mailing the payment.

- Complete items 1 through 5 below.
- Staple the check or money order in the space provided at the bottom of this document.
- Do Not mail this form with the application form.
- Do not mail this form to the same address as the application.
- Do not submit a copy of the application with this form as it could cause duplicate permit entries.

Mail this form and the check or money order to:

BY REGULAR U.S. MAIL

BY OVERNIGHT/EXPRESS MAIL

Texas Commission on Environmental Quality

Texas Commission on Environmental Quality

Financial Administration Division Financial Administration Division

Cashier's Office, MC-214
P.O. Box 13088
Austin, Texas 78711-3088
Cashier's Office, MC-214
12100 Park 35 Circle
Austin, Texas 78753

Fee Code: WQP Waste Permit No: Click to enter text.

1. Check or Money Order Number: Click to enter text.

2. Check or Money Order Amount: \$1250.00

3. Date of Check or Money Order: Click to enter text.

4. Name on Check or Money Order: Click to enter text.

5. APPLICATION INFORMATION

Name of Project or Site: <u>Keenan North Development, Ltd.</u> Physical Address of Project or Site: <u>Keenan North WWTP</u>

If the check is for more than one application, attach a list which includes the name of each Project or Site (RE) and Physical Address, exactly as provided on the application.

Staple Check or Money Order in This Space

ATTACHMENT 1

INDIVIDUAL INFORMATION

Section 1. Individual Information (Instructions Page 41)

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

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

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

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

Date of Birth: Click to enter text.

Mailing Address: Click to enter text.

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

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

E-mail Address: Click to enter text.

CN: Click to enter text.

For Commission Use Only:

Customer Number:

Regulated Entity Number:

Permit Number:

DOMESTIC WASTEWATER PERMIT APPLICATION CHECKLIST OF COMMON DEFICIENCIES

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

application until the items below have been addressed.				
Core Data Form (TCEQ Form No. 10400) (Required for all application types. Must be completed in its entirety Note: Form may be signed by applicant representative.)	and s	igned.		Yes
Correct and Current Industrial Wastewater Permit Application Form (TCEQ Form Nos. 10053 and 10054. Version dated 6/25/2018 or late			\boxtimes	Yes
Water Quality Permit Payment Submittal Form (Page 19) (Original payment sent to TCEQ Revenue Section. See instructions fo	r mai	iling ad	⊠ Idress	Yes
7.5 Minute USGS Quadrangle Topographic Map Attached (Full-size map if seeking "New" permit. 8 ½ x 11 acceptable for Renewals and Amendments)				Yes
Current/Non-Expired, Executed Lease Agreement or Easement	\boxtimes	N/A		Yes
Landowners Map (See instructions for landowner requirements)		N/A	\boxtimes	Yes
 Things to Know: All the items shown on the map must be labeled. The applicant's complete property boundaries must be de boundaries of contiguous property owned by the applican. The applicant cannot be its own adjacent landowner. You landowners immediately adjacent to their property, regar from the actual facility. If the applicant's property is adjacent to a road, creek, or on the opposite side must be identified. Although the proapplicant's property boundary, they are considered potent if the adjacent road is a divided highway as identified on map, the applicant does not have to identify the landown the highway. 	nt. mus dless strea pperti tially the U	t identics of how am, the les are a r affectors	ify th v far lande not a ed lar pogra	e they are owners djacent to ndowners. aphic
Landowners Cross Reference List (See instructions for landowner requirements)		N/A	\boxtimes	Yes
Landowners Labels or USB Drive attached (See instructions for landowner requirements)		N/A		Yes
Original signature per 30 TAC § 305.44 – Blue Ink Preferred (If signature page is not signed by an elected official or principle execution)	cutive	e office	×.	Yes

a copy of signature authority/delegation letter must be attached)

Plain Language Summary

Yes

THE TONMENTAL OURS

TEXAS COMMISSION ON ENVIRONMENTAL QUALITY

DOMESTIC WASTEWATER PERMIT APPLICATION TECHNICAL REPORT 1.0

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

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

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

A. Existing/Interim I Phase

Design Flow (MGD): <u>0.165</u> 2-Hr Peak Flow (MGD): <u>0.66</u>

Estimated construction start date: <u>01/01/2026</u> Estimated waste disposal start date: <u>08/01/2026</u>

B. Interim II Phase

Design Flow (MGD): <u>0.33</u> 2-Hr Peak Flow (MGD): <u>1.32</u>

Estimated construction start date: <u>01/01/2027</u> Estimated waste disposal start date: <u>10/01/2027</u>

C. Final Phase

Design Flow (MGD): <u>0.495</u> 2-Hr Peak Flow (MGD): 1.98

Estimated construction start date: <u>01/01/2028</u> Estimated waste disposal start date: <u>10/01/2028</u>

D. Current Operating Phase

Provide the startup date of the facility: 08/01/2026

Section 2. Treatment Process (Instructions Page 43)

A. Current Operating Phase

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

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

The ultimate plant is designed for 495,000 gpd. The aeration basins are planned to be equipped with fine bubble diffusers with a submergence of 10 feet. Chlorine contact tank is designed to add a second activated Sludge basin to increase total plant capacity to 495,000 gpd (Peak of 1,890,000 gpd). Each phase will be an 165k gpd. The final build out will have 4- aeration basins, 3 digesters, 2 clarifiers and 1 chlorine contact basin.

B. Treatment Units

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

Table 1.0(1) - Treatment Units

Treatment Unit Type	Number of Units	Dimensions (L x W x D)

C. Process Flow Diagram

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

Attachment: Exhibit 7

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

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

• Latitude: <u>30°19'</u> 56.06"W

• Longitude: 95°39' 50.01"W

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

Latitude: <u>N/A</u>Longitude: <u>N/A</u>

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: Exhibit 10

Provide the name and a des	cription of the area se	erved by the treatment	facility.
K <u>eenan Cut Off North Subdiv</u> single family residences in Mo		esidential subdivision of	approximately 220
Single running residences in 1430	singomery county, 121.		
Collection System Informati	ion for wastewater T i	PDES permits only: Pr	ovide information for
each uniquely owned collection systems.	ction system, existing	and new, served by th	is facility, including
examples.	riease see the mstru	ictions for a detailed t	explanation and
Collection System Informatio	n		
Collection System Name	Owner Name	Owner Type	Population Served
Keenan North WWTP Collection	Keenan North Development, Ltd.	Privately Owned	
		Choose an item.	
		Choose an item.	
		Choose an item.	
	/ -	D (T)	
Section 4. Unbuilt P	Phases (Instruction	ons Page 45)	
Is the application for a rene	wal of a permit that c	ontains an unbuilt ph	ase or phases?
□ Yes ⊠ No			
If yes, does the existing per	_	hat has not been cons	tructed within five
years of being authorized b	y the TCEQ?		
□ Yes □ No			
If yes, provide a detailed dis Failure to provide sufficient	nt justification may r	esult in the Executive	
recommending denial of th	e unbuilt phase or p	nases.	
Click to enter text.			
Section 5. Closure I	Plans (Instruction	ns Page 45)	
Have any treatment units be out of service in the next fiv		ce permanently, or wil	l any units be taken
□ Yes ⊠ No			

If y	yes, was a closure plan submitted to the TCEQ?
	□ Yes □ No
If y	yes, provide a brief description of the closure and the date of plan approval.
Se	ection 6. Permit Specific Requirements (Instructions Page 45) r applicants with an existing permit, check the Other Requirements or Special
	ovisions of the permit.
Α.	Summary transmittal
	Have plans and specifications been approved for the existing facilities and each proposed phase?
	□ Yes ⊠ No
	If yes, provide the date(s) of approval for each phase: Click to enter text.
	Provide information, including dates, on any actions taken to meet a <i>requirement or provision</i> pertaining to the submission of a summary transmittal letter. Provide a copy of an approval letter from the TCEQ, if applicable .
	N <u>/A</u>
B.	Buffer zones
	Have the buffer zone requirements been met?
	⊠ Yes □ No
	Provide information below, including dates, on any actions taken to meet the conditions of the buffer zone. If available, provide any new documentation relevant to maintaining the buffer zones.
	N <u>/A</u>

	su	bes the <i>Other Requirements</i> or <i>Special Provisions</i> section in the existing permit require bmission of any other information or other required actions? Examples include otification of Completion, progress reports, soil monitoring data, etc.
		□ Yes ⊠ No
		yes, provide information below on the status of any actions taken to meet the nditions of an <i>Other Requirement</i> or <i>Special Provision</i> .
	C	lick to enter text.
D.		it and grease treatment
	1.	Acceptance of grit and grease waste
		Does the facility have a grit and/or grease processing facility onsite that treats and decants or accepts transported loads of grit and grease waste that are discharged directly to the wastewater treatment plant prior to any treatment?
		□ Yes ⊠ No
		If No, stop here and continue with Subsection E. Stormwater Management.
	2.	Grit and grease processing
		Describe below how the grit and grease waste is treated at the facility. In your description, include how and where the grit and grease is introduced to the treatment works and how it is separated or processed. Provide a flow diagram showing how grit and grease is processed at the facility.
		Click to enter text.
	3.	Grit disposal
		Does the facility have a Municipal Solid Waste (MSW) registration or permit for grit disposal?
		□ Yes □ No
		If No , contact the TCEQ Municipal Solid Waste team at 512-239-2335. Note: A registration or permit is required for grit disposal. Grit shall not be combined with treatment plant sludge. See the instruction booklet for additional information on grit disposal requirements and restrictions.

C. Other actions required by the current permit

		Describe the method of grit disposal.
		Click to enter text.
	4.	Grease and decanted liquid disposal
		Note: A registration or permit is required for grease disposal. Grease shall not be combined with treatment plant sludge. For more information, contact the TCEQ Municipal Solid Waste team at 512-239-2335.
		Describe how the decant and grease are treated and disposed of after grit separation.
		Click to enter text.
E.	Sto	ormwater management
	1.	Applicability
		Does the facility have a design flow of 1.0 MGD or greater in any phase?
		□ Yes ⊠ No
		Does the facility have an approved pretreatment program, under 40 CFR Part 403?
		□ Yes ⊠ No
		If no to both of the above, then skip to Subsection F, Other Wastes Received.
	2.	MSGP coverage
		Is the stormwater runoff from the WWTP and dedicated lands for sewage disposal currently permitted under the TPDES Multi-Sector General Permit (MSGP), TXR050000?
		□ Yes □ No
		If yes , please provide MSGP Authorization Number and skip to Subsection F, Other Wastes Received:
		TXR05 Click to enter text. or TXRNE Click to enter text.
		If no, do you intend to seek coverage under TXR050000?
		□ Yes □ No
	3.	Conditional exclusion
		Alternatively, do you intend to apply for a conditional exclusion from permitting based TXR050000 (Multi Sector General Permit) Part II B.2 or TXR050000 (Multi Sector General Permit) Part V, Sector T 3(b)?
		□ Yes □ No

	If yes, please explain below then proceed to Subsection F, Other Wastes Received:
	Click to enter text.
4.	Existing coverage in individual permit
	Is your stormwater discharge currently permitted through this individual TPDES or TLAP permit?
	□ Yes □ No
	If yes , provide a description of stormwater runoff management practices at the site that are authorized in the wastewater permit then skip to Subsection F, Other Wastes Received.
	Click to enter text.
5 .	Zero stormwater discharge
	Do you intend to have no discharge of stormwater via use of evaporation or other means?
	□ Yes □ No
	If yes, explain below then skip to Subsection F. Other Wastes Received.
	Click to enter text.
	Note: If there is a potential to discharge any stormwater to surface water in the state as the result of any storm event, then permit coverage is required under the MSGP or an individual discharge permit. This requirement applies to all areas of facilities with treatment plants or systems that treat, store, recycle, or reclaim domestic sewage, wastewater or sewage sludge (including dedicated lands for sewage sludge disposal located within the onsite property boundaries) that meet the applicability criteria of above. You have the option of obtaining coverage under the MSGP for direct discharges, (recommended), or obtaining coverage under this individual permit.
6.	Request for coverage in individual permit
	Are you requesting coverage of stormwater discharges associated with your treatment plant under this individual permit?
	□ Yes □ No
	If yes , provide a description of stormwater runoff management practices at the site for which you are requesting authorization in this individual wastewater permit and describe whether you intend to comingle this discharge with your treated effluent or discharge it via a separate dedicated stormwater outfall. Please also indicate if you

		it to water in the state.
		Click to enter text.
		Note: Direct stormwater discharges to waters in the state authorized through this individual permit will require the development and implementation of a stormwater pollution prevention plan (SWPPP) and will be subject to additional monitoring and reporting requirements. Indirect discharges of stormwater via headworks recycling will require compliance with all individual permit requirements including 2-hour peak flow limitations. All stormwater discharge authorization requests will require additional information during the technical review of your application.
F.	Di	scharges to the Lake Houston Watershed
	Do	es the facility discharge in the Lake Houston watershed?
		□ Yes ⊠ No
		yes, attach a Sewage Sludge Solids Management Plan. See Example 5 in the instructions. ck to enter text.
G.	Ot	her wastes received including sludge from other WWTPs and septic waste
	1.	Acceptance of sludge from other WWTPs
		Does or will the facility accept sludge from other treatment plants at the facility site?
		□ Yes ⊠ No
		If yes, attach sewage sludge solids management plan. See Example 5 of instructions.
		In addition, provide the date the plant started or is anticipated to start accepting
		sludge, an estimate of monthly sludge acceptance (gallons or millions of gallons), an
		estimate of the BOD ₅ concentration of the sludge, and the design BOD ₅ concentration of the influent from the collection system. Also note if this information has or has not
		changed since the last permit action.
		Click to enter text.
		Note: Permits that accept sludge from other wastewater treatment plants may be required to have influent flow and organic loading monitoring.
	2.	Acceptance of septic waste
		Is the facility accepting or will it accept septic waste?
		□ Yes ⊠ No
		If yes, does the facility have a Type V processing unit?
		□ Yes □ No
		If yes, does the unit have a Municipal Solid Waste permit?
		12) co, does the aim have a Mainerpar some waste permit.

intend to divert stormwater to the treatment plant headworks and indirectly discharge

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

Click to enter text.

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

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

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

□ Yes ⊠ No

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

Click to enter text.			

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

Is the facility in operation?

□ Yes ⊠ No

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

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

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

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

Pollutant	Average Conc.	Max Conc.	No. of Samples	Sample Type	Sample Date/Time
CBOD ₅ , mg/l					
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					
E.coli (CFU/100ml) freshwater					
Entercocci (CFU/100ml) saltwater					
Total Dissolved Solids, mg/l					
Electrical Conductivity, µmohs/cm, †					
Oil & Grease, mg/l					
Alkalinity (CaCO ₃)*, mg/l					

^{*}TPDES permits only †TLAP permits only

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

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

Section 8. Facility Operator (Instructions Page 50)

Facility Operator Name: TBD

Facility Operator's License Classification and Level: TBD

Facility Operator's License Number: TBD

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

WW	TP's Biosolids Management Facility Type
Che	eck all that apply. See instructions for guidance
	Design flow>= 1 MGD
	Serves >= 10,000 people
	Class I Sludge Management Facility (per 40 CFR § 503.9)
	Biosolids generator
	Biosolids end user - land application (onsite)
	Biosolids end user - surface disposal (onsite)
	Biosolids end user – incinerator (onsite)
ww	TP's Biosolids Treatment Process
Che	eck all that apply. See instructions for guidance.
	Aerobic Digestion
	Air Drying (or sludge drying beds)
	Lower Temperature Composting
	Lime Stabilization
	Higher Temperature Composting
	Heat Drying
	Thermophilic Aerobic Digestion
	Beta Ray Irradiation
	Gamma Ray Irradiation
	Pasteurization
	Preliminary Operation (e.g. grinding, de-gritting, blending)
	Thickening (e.g. gravity thickening, centrifugation, filter press, vacuum filter)
	Sludge Lagoon
	Temporary Storage (< 2 years)
	Long Term Storage (>= 2 years)
	Methane or Biogas Recovery
	Other Treatment Process: Click to enter text.

C. Biosolids Management

B.

Provide information on the *intended* biosolids management practice. Do not enter every management practice that you want authorized in the permit, as the permit will authorize

all biosolids management practices listed in the instructions. Rather indicate the management practice the facility plans to use.

Biosolids Management

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

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

D. Disposal site

Disposal site name: <u>TBD</u>

TCEQ permit or registration number: <u>TBD</u> County where disposal site is located: <u>TBD</u>

E. Transportation method

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

Name of the hauler: TBD

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

Sludge is transported as a:

Liquid ⊠	semi-liquid 🗆	semi-solid \square	solid □
----------	---------------	----------------------	---------

Section 10. Permit Authorization for Sewage Sludge Disposal (Instructions Page 53)

A. Beneficial use authorization

Does the existing p	ermit 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
-------	--	----

	ne existing permit include authorization for e or disposal options?	r any	y of the	follow	ing sludge processing,
Sluc	dge Composting		Yes	\boxtimes	No
Mar	keting and Distribution of sludge		Yes	\boxtimes	No
Sluc	lge Surface Disposal or Sludge Monofill		Yes	\boxtimes	No
Ten	nporary storage in sludge lagoons		Yes	\boxtimes	No
authori	to any of the above sludge options and the ization, is the completed Domestic Wastev cal Report (TCEQ Form No. 10056) attach	vate	r Permi	t Appli	ication: Sewage Sludge
	Yes □ No				
Section	11. Sewage Sludge Lagoons (Ins	tru	ctions	Page	: 53)
Does this f	facility include sewage sludge lagoons?				
□ Ye	s 🗵 No				
If yes, com	uplete the remainder of this section. If no, p	proc	eed to S	ection	12.
A. Locatio	on information				
	lowing maps are required to be submitted the Attachment Number.	as p	art of tl	ne app	lication. For each map,
• (Original General Highway (County) Map:				
1	Attachment: Click to enter text.				
• 1	USDA Natural Resources Conservation Serv	лice S	Soil Map):	
1	Attachment: Click to enter text.				
•]	Federal Emergency Management Map:				
1	Attachment: Click to enter text.				
• 5	Site map:				
1	Attachment: Click to enter text.				
Discuss apply.	s in a description if any of the following ex	ist w	vithin th	ie lago	on area. Check all that
	Overlap a designated 100-year frequency	floo	d plain		
	Soils with flooding classification				
	Overlap an unstable area				
	Wetlands				
	Located less than 60 meters from a fault				
	None of the above				
— Atta	achment: Click to enter text.				

B. Sludge processing authorization

-	Temporary storage information
	Provide the results for the pollutant screening of sludge lagoons. These results are in addition to pollutant results in <i>Section 7 of Technical Report 1.0.</i>
	Nitrate Nitrogen, mg/kg: Click to enter text.
	Total Kjeldahl Nitrogen, mg/kg: Click to enter text.
	Total Nitrogen (=nitrate nitrogen + TKN), mg/kg: Click to enter text.
	Phosphorus, mg/kg: Click to enter text.
	Potassium, mg/kg: Click to enter text.
	pH, standard units: Click to enter text.
	Ammonia Nitrogen mg/kg: Click to enter text.
	Arsenic: Click to enter text.
	Cadmium: Click to enter text.
	Chromium: Click to enter text.
	Copper: Click to enter text.
	Lead: Click to enter text.
	Mercury: <u>Click to enter text.</u>
	Molybdenum: Click to enter text.
	Nickel: <u>Click to enter text.</u>
	Selenium: Click to enter text.
	Zinc: <u>Click to enter text.</u>
	Total PCBs: <u>Click to enter text.</u>
]	Provide the following information:
	Volume and frequency of sludge to the lagoon(s): <u>Click to enter text.</u>
	Total dry tons stored in the lagoons(s) per 365-day period: Click to enter text.

C. Liner information

Does the active/	/proposed	sludge	: lagoon(:	s) havo	e a linei	r with a	ı maximum	hydraulic
conductivity of	1x10 ⁻⁷ cm/	/sec?						

□ Yes □ N

	If yes	, describe the liner below. Please note that a liner is required.				
	Click	to enter text.				
D.	Site development plan					
	Provid	le a detailed description of the methods used to deposit sludge in the lagoon(s):				
	Click	to enter text.				
	Attacl	n the following documents to the application.				
	•	Plan view and cross-section of the sludge lagoon(s)				
		Attachment: Click to enter text.				
	•	Copy of the closure plan				
		Attachment: Click to enter text.				
	•	Copy of deed recordation for the site				
		Attachment: Click to enter text.				
	•	Size of the sludge lagoon(s) in surface acres and capacity in cubic feet and gallons				
		Attachment: Click to enter text.				
	•	Description of the method of controlling infiltration of groundwater and surface water from entering the site				
		Attachment: Click to enter text.				
	•	Procedures to prevent the occurrence of nuisance conditions				
		Attachment: Click to enter text.				
E.	Groun	ndwater monitoring				
	groun	undwater monitoring currently conducted at this site, or are any wells available for dwater monitoring, or are groundwater monitoring data otherwise available for the e lagoon(s)?				
		Yes □ No				
	types	undwater monitoring data are available, provide a copy. Provide a profile of soil encountered down to the groundwater table and the depth to the shallowest dwater as a separate attachment.				
	0	tachment: Click to enter text.				

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

A. Additional authorizations
Does the permittee have additional authorizations for this facility, such as reuse authorization, sludge permit, etc?
□ Yes ⊠ No
If yes, provide the TCEQ authorization number and description of the authorization:
Click to enter text.
B. Permittee enforcement status
Is the permittee currently under enforcement for this facility?
□ Yes ⊠ No
Is the permittee required to meet an implementation schedule for compliance or enforcement?
□ Yes ⊠ No
If yes to either question, provide a brief summary of the enforcement, the implementatio schedule, and the current status:
Click to enter text.
Section 13. RCRA/CERCLA Wastes (Instructions Page 55)
A. RCRA hazardous wastes
Has the facility received in the past three years, does it currently receive, or will it receive RCRA hazardous waste?

Yes ⊠

No

B. Remediation activity wastewater

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

□ Yes ⊠ No

C. Details about wastes received

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

Attachment: Click to enter text.

Section 14. Laboratory Accreditation (Instructions Page 56)

All laboratory tests performed must meet the requirements of *30 TAC Chapter 25*, *Environmental Testing Laboratory Accreditation and Certification*, which includes the following general exemptions from National Environmental Laboratory Accreditation Program (NELAP) certification requirements:

- The laboratory is an in-house laboratory and is:
 - o periodically inspected by the TCEQ; or
 - o located in another state and is accredited or inspected by that state; or
 - o 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.

Title: <u>President</u>

Signature: ______

Date: _____

Printed Name: Ahmet Ozan

DOMESTIC WASTEWATER PERMIT APPLICATION TECHNICAL REPORT 1.1

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

Section 1. Justification for Permit (Instructions Page 57)

A. Justification of permit need

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

The Keenan Cutoff North subdivision will consist of approximately 220 connections. The construction for the Keenan Cutoff North WWTP is dependent on the developer for the subdivision. The first phase of WWTP construction will be sufficient in capacity for the entire subdivision. The Keenan Cutoff North WWTP will then have an additional 2 phases with a timeline on construction depending on the development pace of the area surrounding the Keenan Cutoff North subdivision

B. Regionalization of facilities

For additional guidance, please review <u>TCEO's Regionalization Policy for Wastewater</u> Treatment¹.

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

1. Municipally incorporated areas

If the	applicant is	a city, ther	ı Item 1 i	s not ap	plicable.	Proceed t	to Item :	2 Utility	CCN
areas.									

Is any portion of the proposed service area located in an incorporated city?					
\square Yes \boxtimes No \square Not Applicable					
If yes, within the city limits of: <u>Click to enter text.</u>					
If yes, attach correspondence from the city.					

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

Attachment: Click to enter text.

Attachment: Click to enter text.

2. Utility CCN areas

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

□ Yes ⊠ No

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

If yes, attach a justification for the proposed facility and a cost analysis of expenditures that includes the cost of connecting to the CCN facilities versus the cost of the proposed facility or expansion.				
Attachment: Click to enter text.				
3. Nearby WWTPs or collection systems				
Are there any domestic permitted wastewater treatment facilities or collection systems located within a three-mile radius of the proposed facility?				
⊠ Yes □ No				
If yes, attach a list of these facilities and collection systems that includes each permittee's name and permit number, and an area map showing the location of these facilities and collection systems.				
Attachment: Exhibit 16				
If yes, attach proof of mailing a request for service to each facility and collection system, the letters requesting service, and correspondence from each facility and collection system.				
Attachment: Exhibit 16				
If the facility or collection system agrees to provide service, attach a justification for the proposed facility and a cost analysis of expenditures that includes the cost of connecting to the facility or collection system versus the cost of the proposed facility or expansion.				
Attachment: <u>N/A</u>				
Section 2. Proposed Organic Loading (Instructions Page 59)				
Is this facility in operation?				
□ Yes ⊠ No				
If no, proceed to Item B, Proposed Organic Loading.				
If yes, provide organic loading information in Item A, Current Organic Loading				
A Current organic loading				

A. Current organic loading

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

Average Influent Organic Strength or BOD₅ Concentration in mg/l: Click to enter text.

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

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

Click to enter text.			

B. Proposed organic loading

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

Table 1.1(1) - Design Organic Loading

Source	Total Average Flow (MGD)	Influent BOD5 Concentration (mg/l)
Municipality		
Subdivision	0.165/0.330/0.495	300/300/300
Trailer park - transient		
Mobile home park		
School with cafeteria and showers		
School with cafeteria, no showers		
Recreational park, overnight use		
Recreational park, day use		
Office building or factory		
Motel		
Restaurant		
Hospital		
Nursing home		
Other		
TOTAL FLOW from all sources		
AVERAGE BOD₅ from all sources		

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

A. Existing/Interim I Phase Design Effluent Quality

Biochemical Oxygen Demand (5-day), mg/l: 10

Total Suspended Solids, mg/l: <u>15</u>

Ammonia Nitrogen, mg/l: <u>3.0</u> Total Phosphorus, mg/l: <u>N/A</u> Dissolved Oxygen, mg/l: <u>4.0</u>

Other: N/A

B.	Interim II Phase Design Effluent Quality
	Biochemical Oxygen Demand (5-day), mg/l: <u>10</u>
	Total Suspended Solids, mg/l: <u>15</u>
	Ammonia Nitrogen, mg/l: <u>3.0</u>
	Total Phosphorus, mg/l: <u>N/A</u>
	Dissolved Oxygen, mg/l: <u>4.0</u>
	Other: <u>N/A</u>
C.	Final Phase Design Effluent Quality
	Biochemical Oxygen Demand (5-day), mg/l: <u>10</u>
	Total Suspended Solids, mg/l: <u>15</u>
	Ammonia Nitrogen, mg/l: <u>3.0</u>
	Total Phosphorus, mg/l: <u>N/A</u>
	Dissolved Oxygen, mg/l: <u>4.0</u>
	Other: <u>N/A</u>
D.	Disinfection Method
	Identify the proposed method of disinfection.
	$oxed{\boxtimes}$ Chlorine: <u>2.0</u> mg/l after <u>20</u> minutes detention time at peak flow
	Dechlorination process: Click to enter text.
	□ Ultraviolet Light: <u>Click to enter text.</u> seconds contact time at peak flow
	□ Other: Click to enter text.
Se	ection 4. Design Calculations (Instructions Page 59)
	tach design calculations and plant features for each proposed phase. Example 4 of the
	structions includes sample design calculations and plant features.
	Attachment: Exhibit 17
Se	ection 5. Facility Site (Instructions Page 60)
Α.	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.

Click to enter text.			

	Provide the source(s) used to determine 100-year frequency flood plain.
	FEMA GIS data, FEMA flood map 48339Co350G effective 08/18/2014
	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: <u>Click to enter text.</u>
	If no, provide the approximate date you anticipate submitting your application to the Corps: Click to enter text.
B.	Wind rose
	Attach a wind rose: Exhibit 19
Se	ection 6. Permit Authorization for Sewage Sludge Disposal (Instructions Page 60)
A.	Beneficial use authorization
	Are you requesting to include authorization to land apply sewage sludge for beneficial use on property located adjacent to the wastewater treatment facility under the wastewater permit?
	□ Yes ⊠ No
	If yes, attach the completed Application for Permit for Beneficial Land Use of Sewage Sludge (TCEQ Form No. 10451) : <u>Click to enter text.</u>
B.	Sludge processing authorization
	Identify the sludge processing, storage or disposal options that will be conducted at the wastewater treatment facility:
	□ Sludge Composting
	☐ Marketing and Distribution of sludge
	□ Sludge Surface Disposal or Sludge Monofill
	If any of the above, sludge options are selected, attach the completed Domestic Wastewater Permit Application: Sewage Sludge Technical Report (TCEQ Form No. 10056): Click to enter text.
Se	ection 7. Sewage Sludge Solids Management Plan (Instructions Page

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

Attach a solids management plan to the application.

Attachment: Exhibit 18

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

• Treatment units and processes dimensions and capacities

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

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

DOMESTIC WASTEWATER PERMIT APPLICATION WORKSHEET 2.0: RECEIVING WATERS

The following information is required for all TPDES permit applications.

Section 1. Domestic Drinking Water Supply (Instructions Page 64)
Is there a surface water intake for domestic drinking water supply located within 5 miles downstream from the point or proposed point of discharge?
□ Yes ⊠ No
If no , proceed it Section 2. If yes , provide the following:
Owner of the drinking water supply: <u>Click to enter text.</u>
Distance and direction to the intake: Click to enter text.
Attach a USGS map that identifies the location of the intake.
Attachment: Click to enter text.
Section 2. Discharge into Tidally Affected Waters (Instructions Page 64)
Does the facility discharge into tidally affected waters?
□ Yes ⊠ No
If no , proceed to Section 3. If yes , complete the remainder of this section. If no, proceed to Section 3.
A. Receiving water outfall
Width of the receiving water at the outfall, in feet: Click to enter text.
B. Oyster waters
Are there oyster waters in the vicinity of the discharge?
□ Yes □ No
If yes, provide the distance and direction from outfall(s).
Click to enter text.
C. Sea grasses
Are there any sea grasses within the vicinity of the point of discharge?
□ Yes □ No
If yes, provide the distance and direction from the outfall(s).
Click to enter text.

Is the discharge directly into (or within 300 feet of) a classified segment? Yes ⊠ No If yes, this Worksheet is complete. **If no**, complete Sections 4 and 5 of this Worksheet. Section 4. **Description of Immediate Receiving Waters (Instructions Page 65)** Name of the immediate receiving waters: Click to enter text. A. Receiving water type Identify the appropriate description of the receiving waters. \boxtimes Stream Freshwater Swamp or Marsh Lake or Pond Surface area, in acres: Click to enter text. Average depth of the entire water body, in feet: Click to enter text. Average depth of water body within a 500-foot radius of discharge point, in feet: Click to enter text. Man-made Channel or Ditch Open Bay Tidal Stream, Bayou, or Marsh Other, specify: Click to enter text. **B.** Flow characteristics If a stream, man-made channel or ditch was checked above, provide the following. For existing discharges, check one of the following that best characterizes the area *upstream* of the discharge. For new discharges, characterize the area downstream of the discharge (check one). Intermittent - dry for at least one week during most years Intermittent with Perennial Pools - enduring pools with sufficient habitat to maintain significant aquatic life uses Perennial - normally flowing Check the method used to characterize the area upstream (or downstream for new dischargers). USGS flow records Historical observation by adjacent landowners \boxtimes Personal observation Other, specify: Click to enter text.

Classified Segments (Instructions Page 64)

Section 3.

	List the names of all perennial streams that join the receiving water within three miles downstream of the discharge point.					
	Click t	o enter text.				
D.	Downs	stream characteristics				
		rge (e.g., natural or man-ma		ithin three miles downstream of the ds, reservoirs, etc.)?		
	TC					
		discuss how.				
	Click t	o enter text.				
E.	Norma	l dry weather characteristi	cs			
	Provid	e general observations of the	e water body	during normal dry weather conditions.		
	Click '	to enter text.				
	Date a	nd time of observation: Click	k to enter tex	<u>t.</u>		
	Was th	e water body influenced by	stormwater r	unoff during observations?		
		Yes 🖾 No				
Se	ction	5 General Characte	ristics of	the Waterbody (Instructions		
	ction	Page 66)		the waterbody (motivations		
۸	Unetro	am influences				
A.	-		netroom of tl	na discharga ar proposad discharga sita		
	Is the immediate receiving water upstream of the discharge or proposed discharge site influenced by any of the following? Check all that apply.					
		Oil field activities		Urban runoff		
		Upstream discharges		Agricultural runoff		
		Septic tanks		Other(s), specify: Click to enter text.		

C. Downstream perennial confluences

B. Waterbody uses Observed or evidences of the following uses. Check all that apply. Livestock watering Contact recreation Irrigation withdrawal Non-contact recreation **Fishing Navigation** Domestic water supply Industrial water supply Park activities Other(s), specify: Click to enter text. C. Waterbody aesthetics Check one of the following that best describes the aesthetics of the receiving water and the surrounding area. Wilderness: outstanding natural beauty; usually wooded or unpastured area; water clarity exceptional Natural Area: trees and/or native vegetation; some development evident (from fields, pastures, dwellings); water clarity discolored Common Setting: not offensive; developed but uncluttered; water may be colored or turbid Offensive: stream does not enhance aesthetics; cluttered; highly developed;

dumping areas; water discolored

EXHIBIT 1

USGS MAP



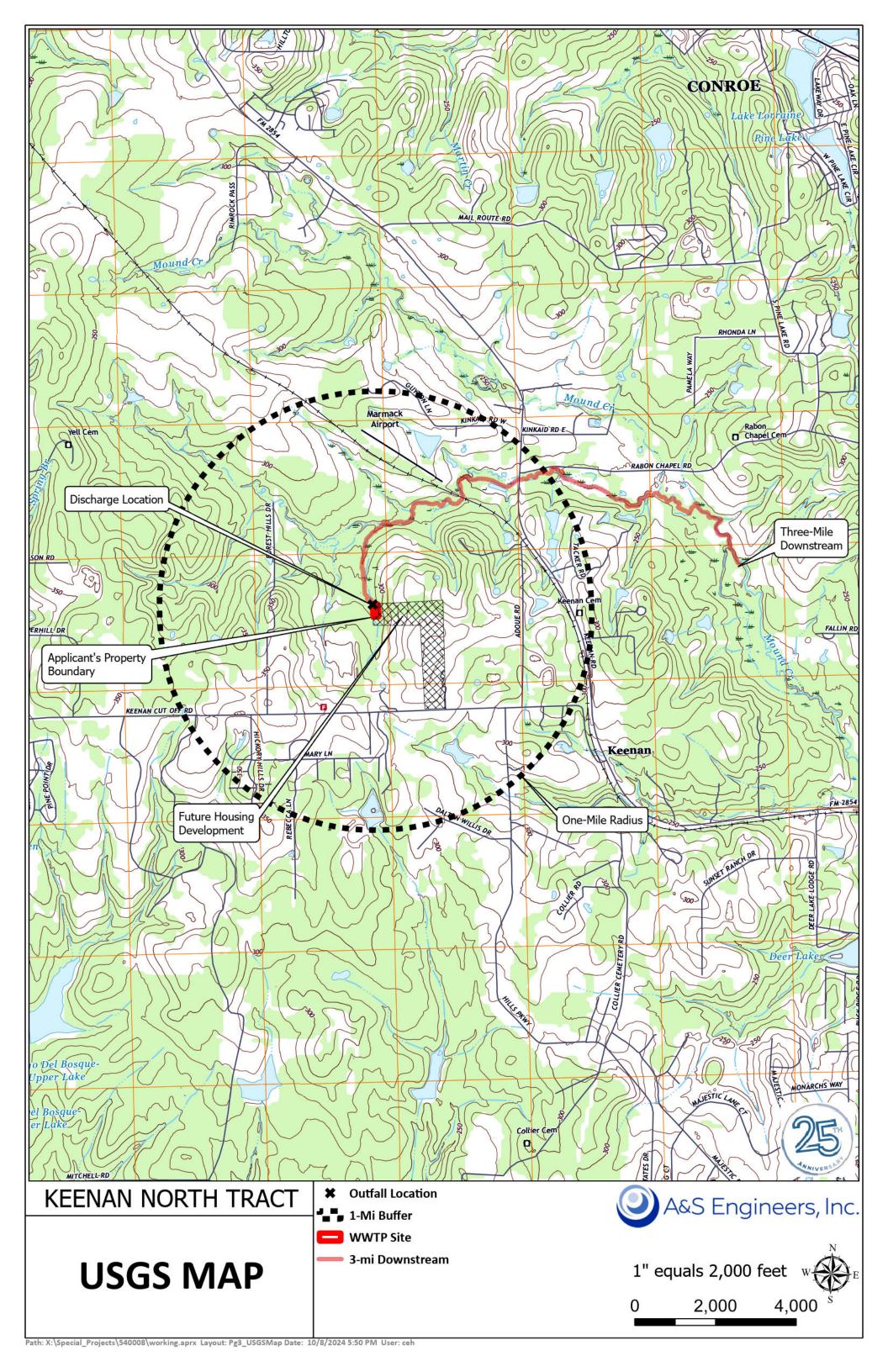


EXHIBIT 2

LOCATION MAP



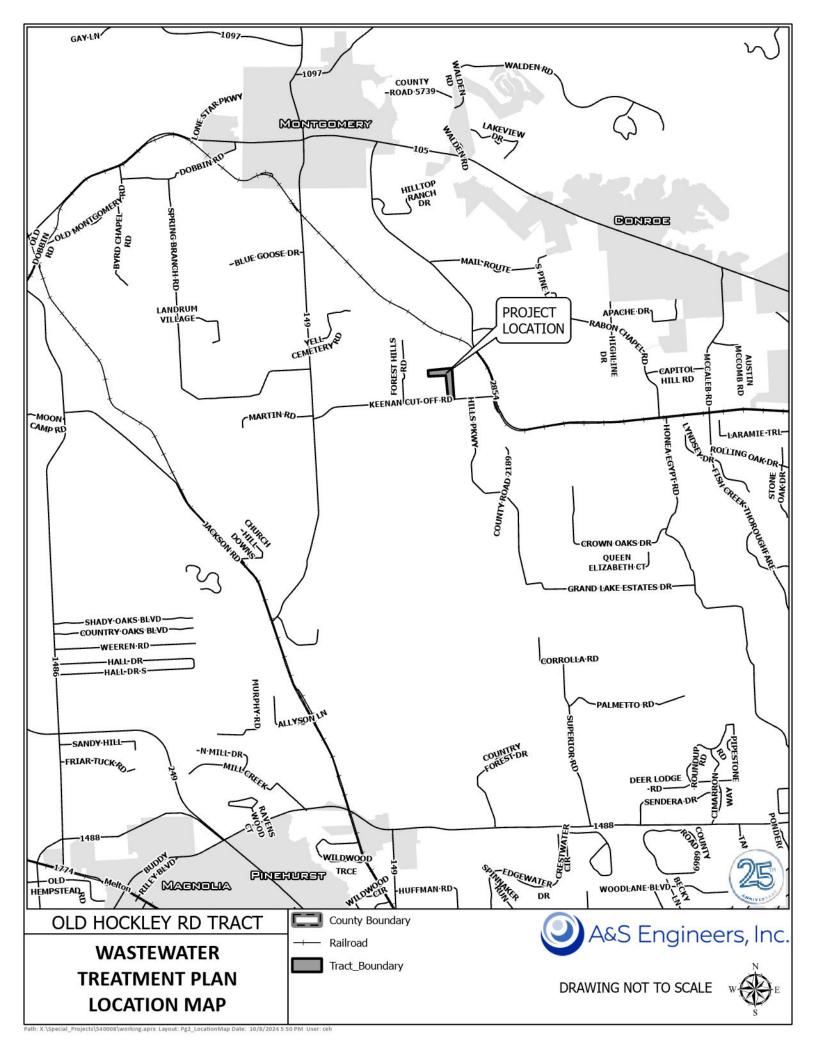


EXHIBIT 3

VICINITY MAP



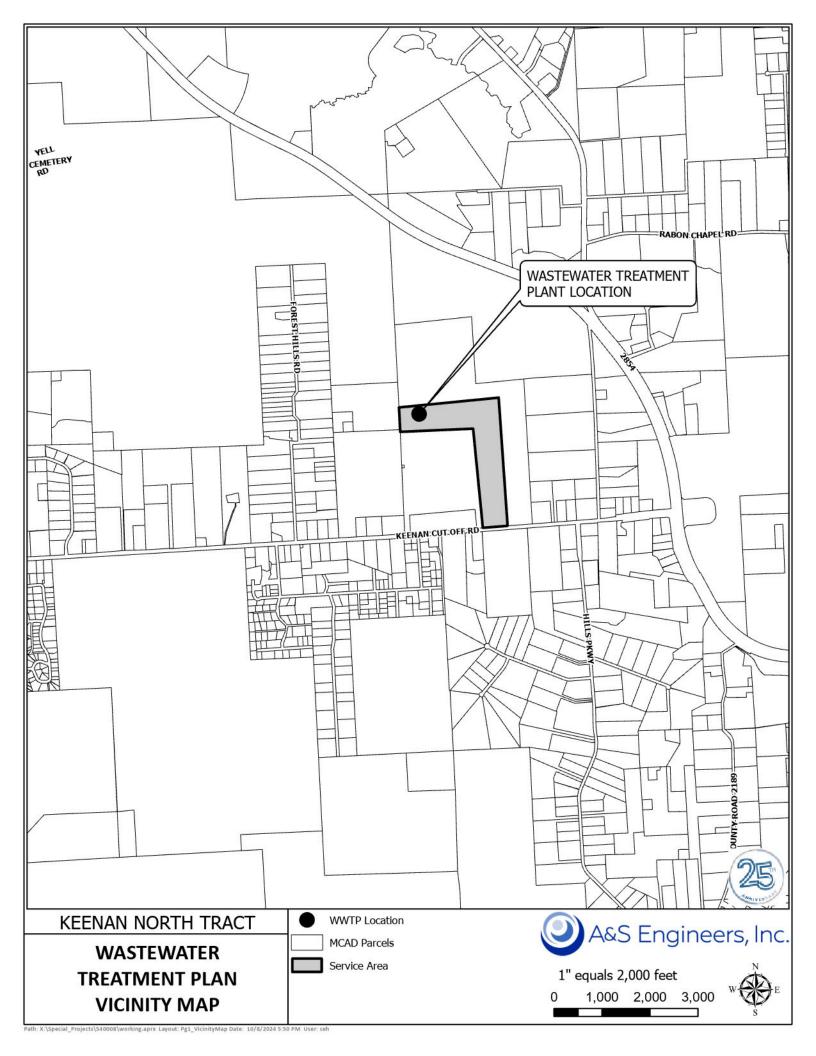
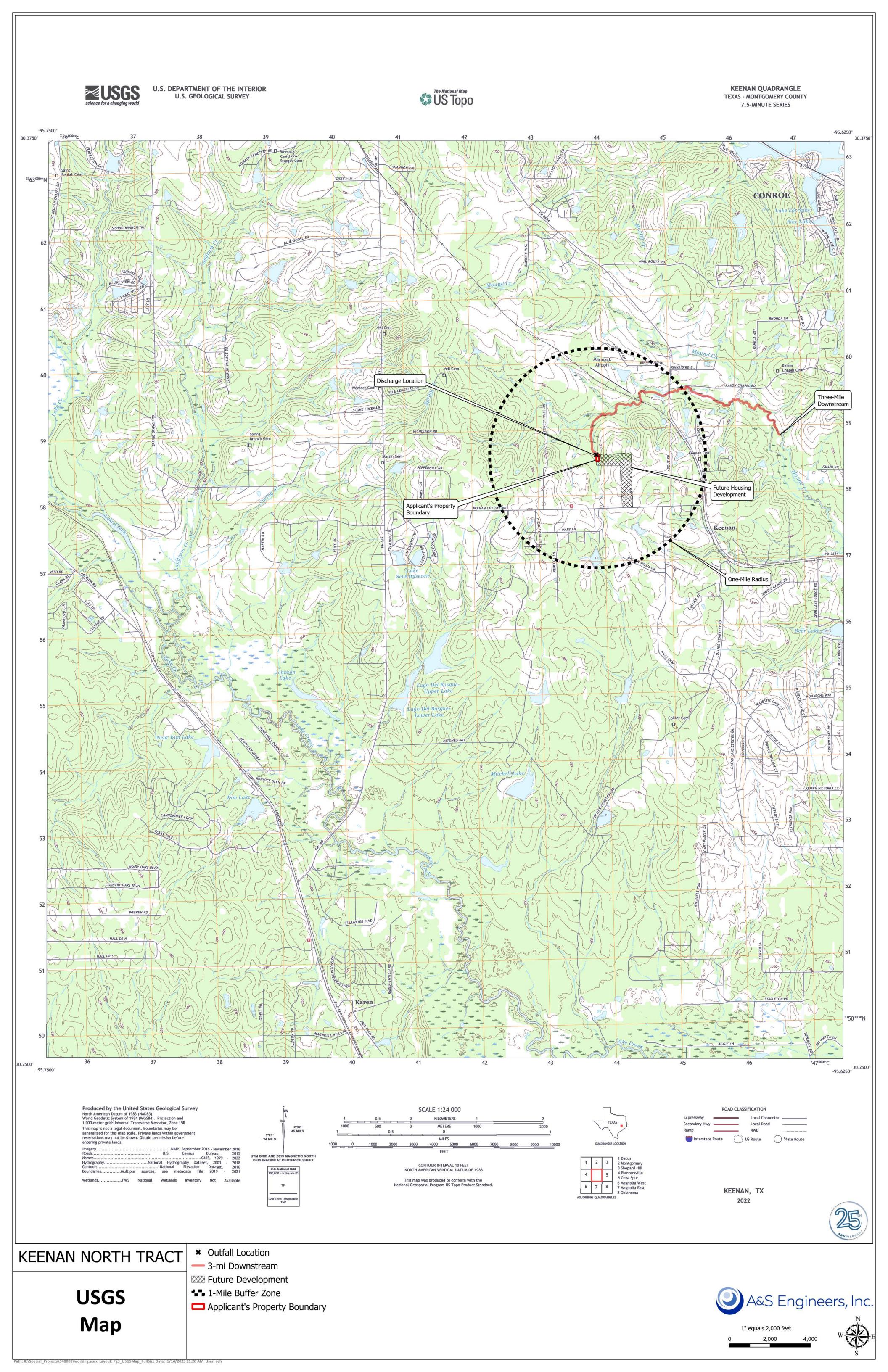


EXHIBIT 4

USGS MAP





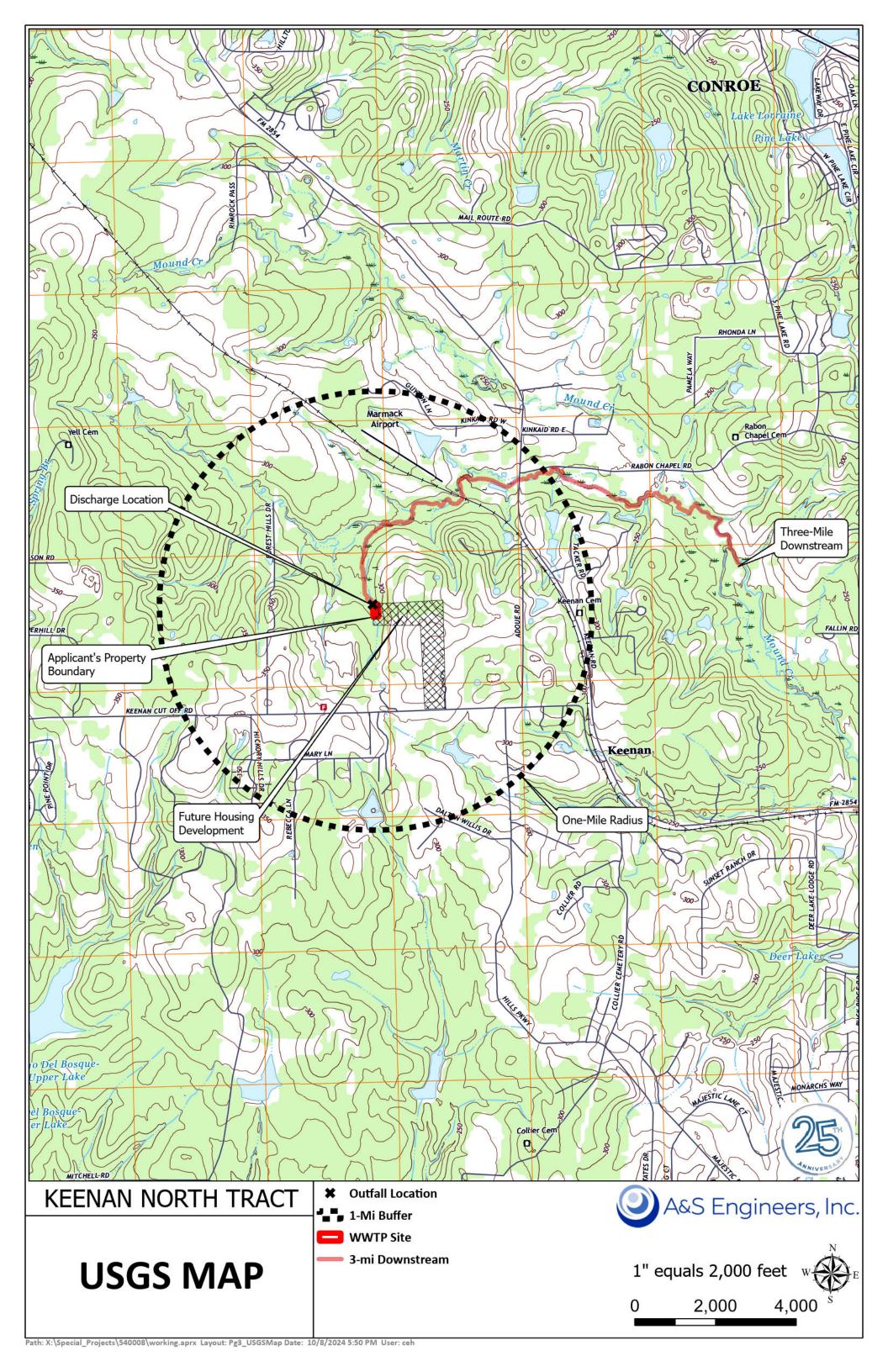


EXHIBIT 5

LOCATION MAP



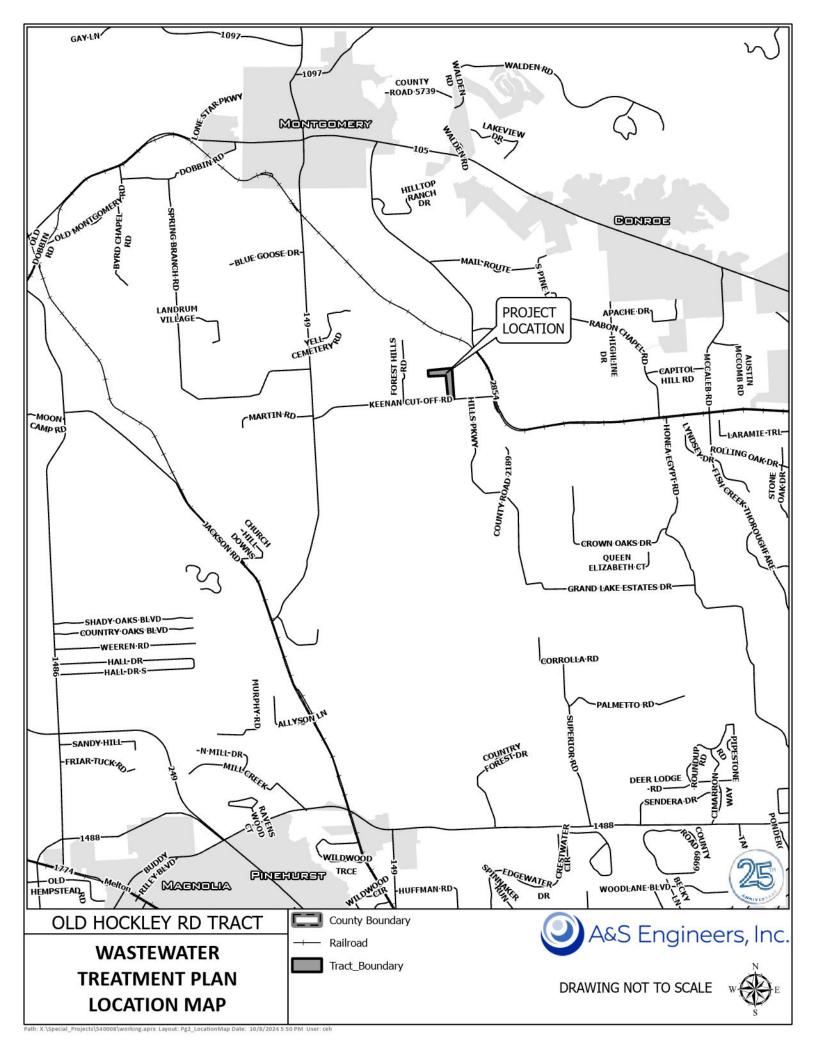


EXHIBIT 6

VICINITY MAP



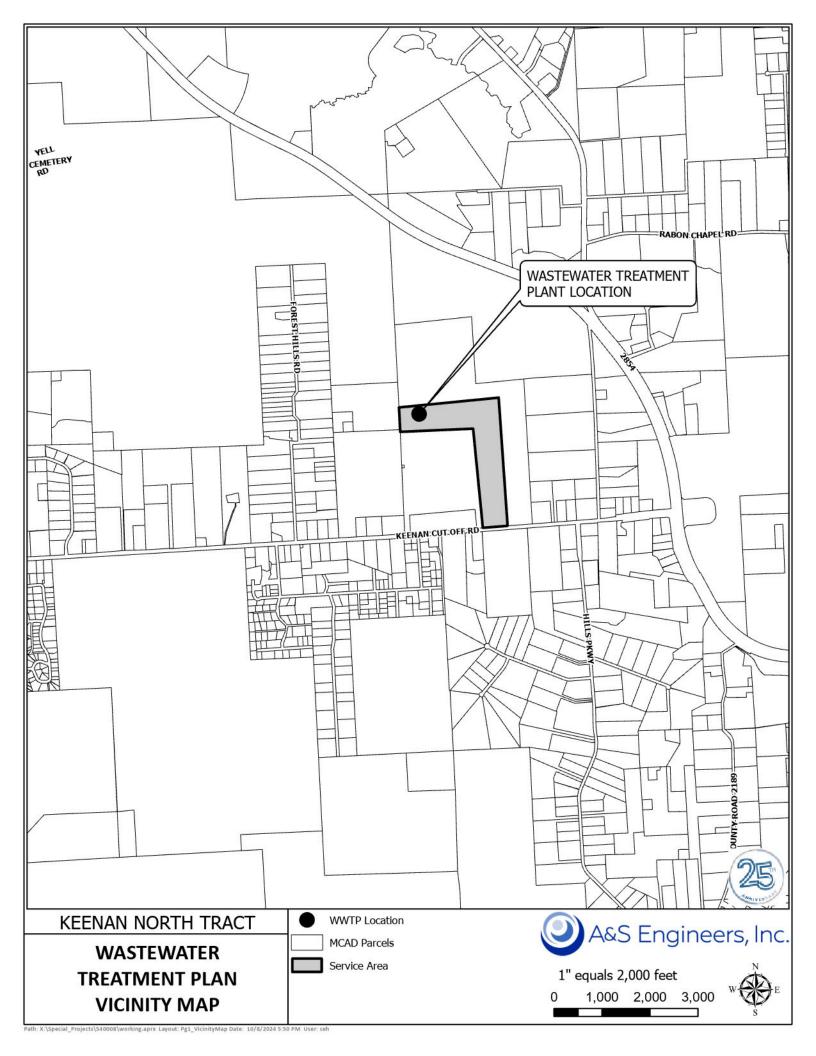


EXHIBIT 7

FLOW DIAGRAMS



EXHIBIT 8

TREATMENT PROCESS DESCRIPTION



Treatment Process Description and Design Features

The proposed Phase I is designed to treat a flow rate 0.165 MGD. The proposed Phase I facility will be a package plant operating as a suspended growth activated sludge process in the single-stage nitrification mode and will be comprised of one (1) onsite grinder pump station, one (1) common headworks with manual bar screen, two (1) aeration basins, one (1) clarifier, one (1) chlorine contact basin, and one (2) aerobic digester. Raw sewage will be pumped from the grinder pump station to the headworks. Then the influent flows to the aeration basin where it will be mixed with return activated sludge to create mixed liquor. The aeration basin will operate in the single –stage nitrification mode to consume organics and break down ammonia. From the aeration basin, the mixed liquor flows to the secondary clarifier for clarification. After clarification, the treated effluent flows to the chorine contact basin for disinfection and the waste activated sludge is pumped to the digester for further treatment before being hauled off. From the chlorine contact basin, the effluent flows over a weir for flow measurement then on to the outfall.

The proposed Phase II is designed to treat a flow rate 0.330 MGD and will expand the existing package plant. The facility will continue to operate as a suspended growth activated sludge process in the single-stage nitrification mode and will be comprised of one (1) onsite lift station, one (1) common headworks with manual bar screens and flow splitting weirs, three (3) aeration basins, two (1) clarifiers, one (1) chlorine contact basin, and four (4) aerobic digesters. Raw sewage will be pumped from the lift station to the existing headworks where flow is split into two (2) separate trains. Then the influent flows to the aeration basins where it is mixed with return activated sludge to create mixed liquor. The aeration basins operate in the single –stage nitrification mode to consume organics and break down ammonia. From the aeration basins, the mixed liquor flows to the secondary clarifiers for clarification. After clarification, the treated effluent flows to the chorine contact basin for disinfection and the waste activated sludge is pumped to the digester for further treatment before being hauled off. From the chlorine contact basin, the effluent flows over a weir for flow measurement then on to the outfall.

The final phase of the facility is the proposed operational phase of 0.495 MGD. The proposed facilities for this phase will replace the existing fabricated steel package plants with a new proposed permanent concrete plant that is designed and constructed to treat 0.495 MGD and will operate as a suspended growth activated sludge process in single-stage nitrification mode. This phase will include the existing onsite lift station, one (1) headworks with mechanical bar screen and flow splitting weirs, two (4) aeration basins, two (2) clarifiers, two (2) chlorine contact basins, and two (3) aerobic digesters. In this phase, raw sewage will be pumped from the existing onsite lift station to the proposed headworks where flow will be split into two (2) separate trains. Then the influent flows to the aeration basins where it is mixed with return activated sludge to create mixed liquor. The aeration basins operate in the single—stage nitrification mode to consume organics and break down ammonia. From the aeration basins, the mixed liquor flows to the secondary clarifiers for clarification. After clarification, the treated effluent flows to the chorine contact basin for disinfection and the waste activated sludge is pumped to the digester for further treatment before being hauled off. From the chlorine contact basin, the effluent flows over a weir for flow measurement then on to the outfall.

- An Autodialer will be installed to detect power outages and equipment failure. The Autodialer
 will incorporate high level sensors on the wastewater treatment plant units. Once a problem is
 detected, the Autodialer will call preprogrammed numbers to notify the operations company.
 Once the notification is answered, the operations company will dispatch an operator to the
 facility.
- The facility will include an onsite generator for emergency power outages. The generator will
 provide sufficient power for the grinder/lift station, blowers, and chemical feed system. An
 automatic transfer switch will be included to transfer the electrical loads to the generator during
 an outage.
- The plant features stand-by blowers. The collection system will be new and minimum infiltration is anticipated. The plant is to be maintained and operated by personnel licensed by the State of Texas.
- The plant is designed to be maintained without bypassing. Replacement or repair of the interior coating system is the only maintenance item that would necessitate bypassing and the epoxy system should last 20-30 years.
- An intruder resistant fence will be placed around the facility.

EXHIBIT 9

TREATMENT UNITS



DIMENSIONS OF TREATMENT UNITS

A. WWTP PLANT: 0.165 MGD WWTP Complete Mix Activated Sludge

Type of Unit	# of Units	Size (depth, width, length & volume)			
Aeration Basin	1	10.5' water depth x 12.0' width x 95.0' length each. Total Volume = 11,970 CF $BOD_5 \ capacity = 342.0 \ lbs./day \ @ 35 \ lbs/day/1000 \ CF.$			
Clarifier	1	42' diameter has 1,385 sq. feet, sidewater depth of 10', Volume of 13,854 CF			
Chlorine Contact	1	Depth = 9', width = 15', Length = 15.0', Volume = 2,025 CF			
Digester	2	10.5' water depth x 12.0' width x 95.0' length each. Total Volume = 23,940 cf			

B. WWTP PLANT: 0.330 MGD WWTP Complete Mix Activated Sludge

Type of Unit	# of Units	Size (depth, width, length & volume)				
Aeration Basin	2	10.5' water depth x 12.0' width x 95.0' length each. Total Volume = 23,940 CF BOD ₅ capacity = 684 lbs./day @ 35 lbs/day/1000 CF.				
Clarifier	1	42' diameter has 1,385 sq. feet, sidewater depth of 10', Total Volume of 13,854 CF				
Chlorine Contact	2	Depth = 9', width = 15, Length = 15.0', Volume = 4,050 CF				
Digester	3	10.5' water depth x 12.0' width x 95.0' length each. Total Volume = 35,910 cf				

C. WWTP PLANT: 0.495 MGD WWTP Complete Mix Activated Sludge

Type of Unit	# of Units	Size (depth, width, length & volume)				
Aeration Basin	4	10.5' water depth x 12.0' width x 95.0' length each. Volume = 47,880 CF total BOD ₅ capacity =1,368 lbs./day @ 35 lbs/day/1000 CF.				
Clarifier	2	42' diameter has 1,385 sq. feet, sidewater depth of 12.0', Volume of 33,250 CF total				
Chlorine Contact	2	Depth = 9.0', width = 15.0', Length = 15.0', Volume = 4,050 CF				
Digester	3	10.5' water depth x 12.0' width x 95.0' length each. Volume = 35,910 CF total				

EXHIBIT 10

SITE PLAN



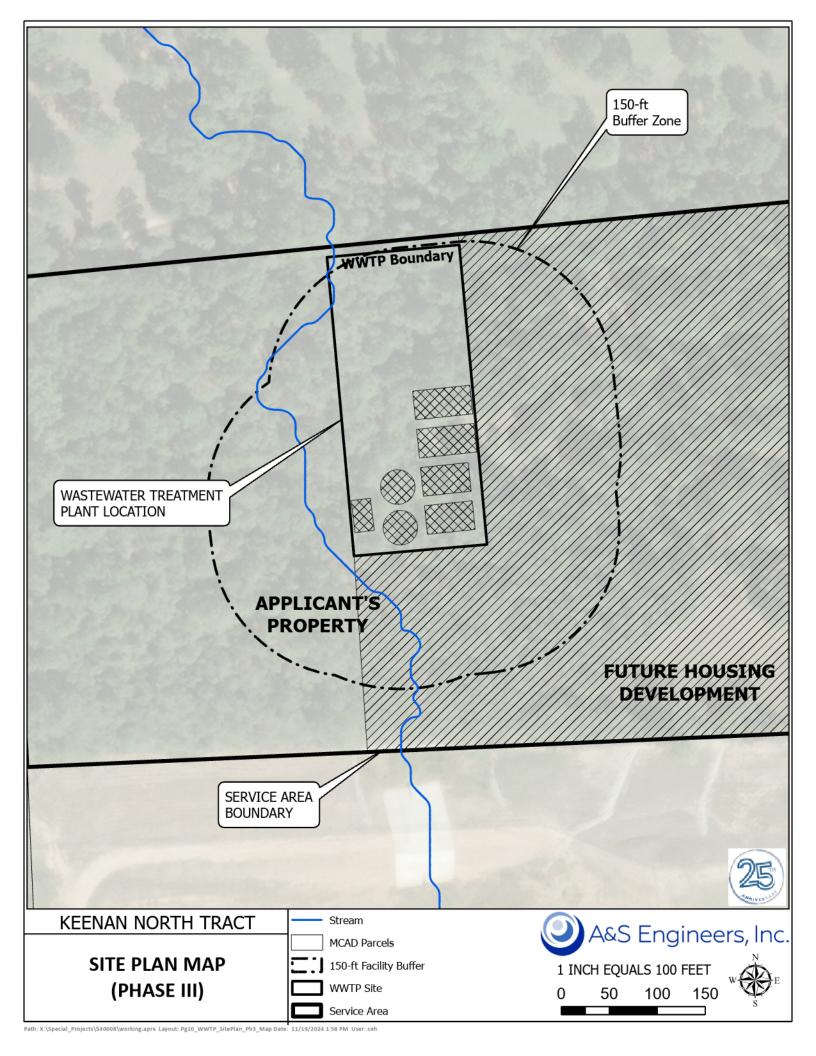


EXHIBIT 11

SERVICE AREA



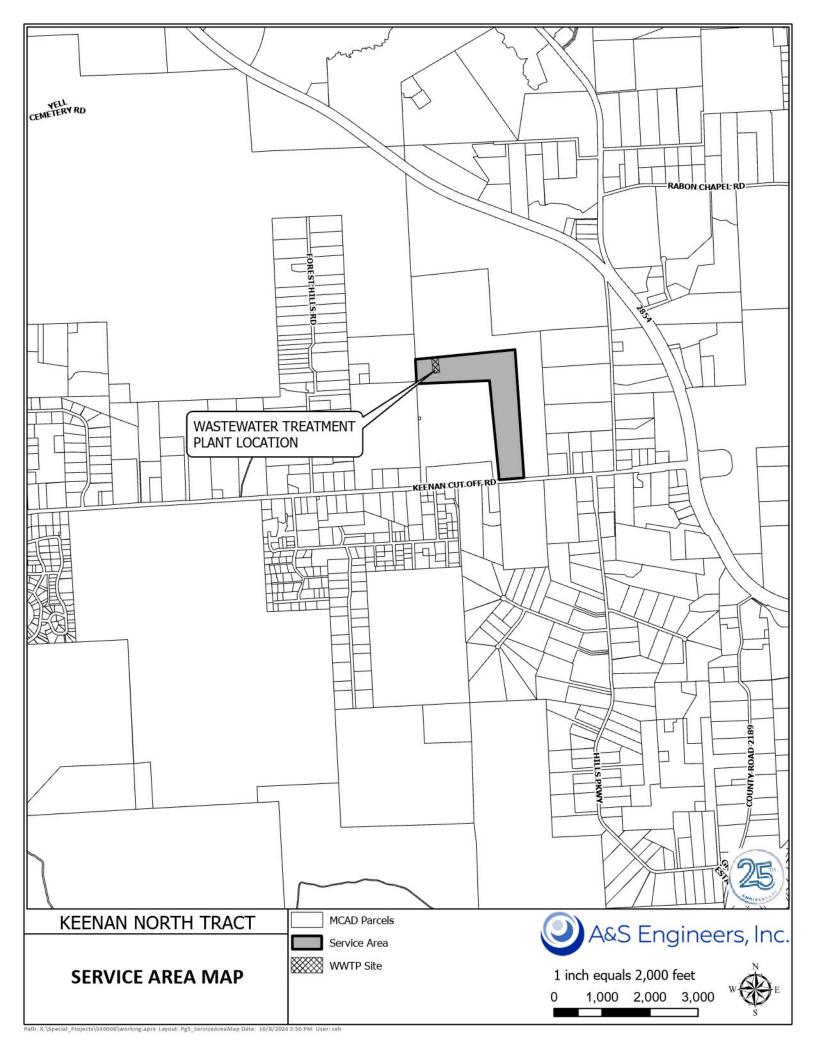
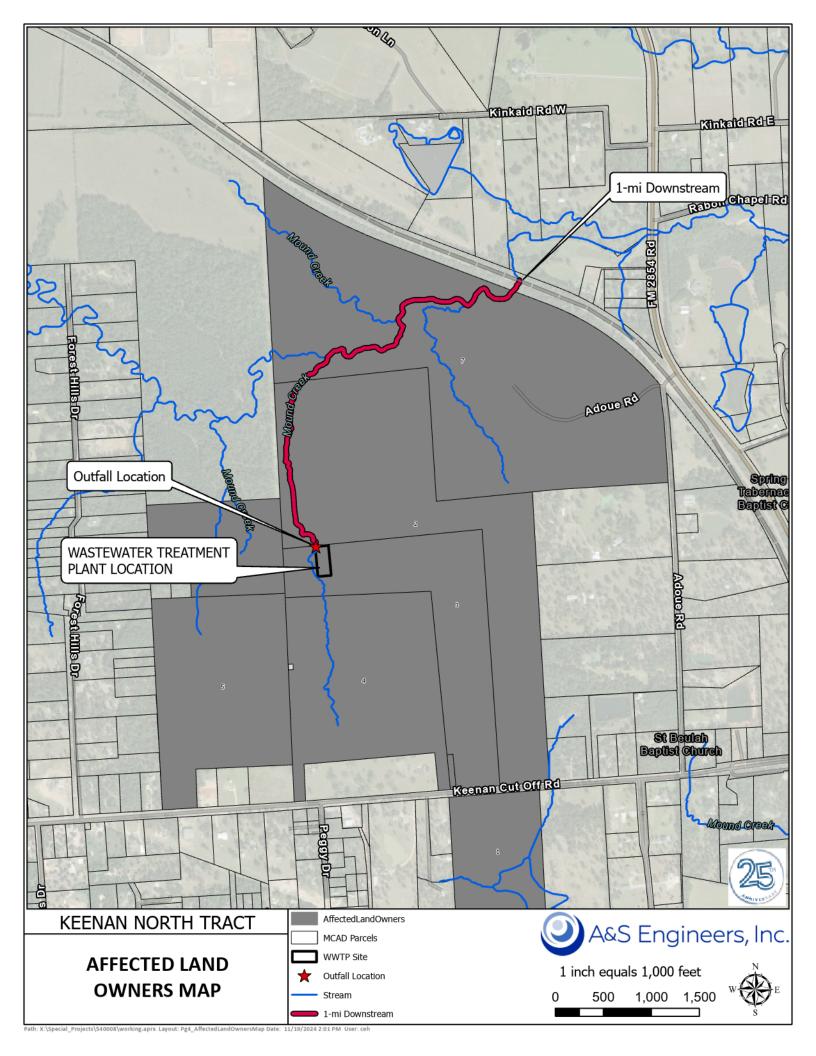


EXHIBIT 12

LANDOWNER MAP & LIST





Affected Landowners List

Tract	Owner Name	Street	City	State	Zip	Property Address	MCAD #
1	KEENAN SOUTH DEVELOPMENT LTD	28408 SWEETGUM RD	MAGNOLIA	TX	77354-7111		56669
2	LABELLA INTERESTS LP	333 SIMONTON ST	CONROE	TX	77301-2667	19012 KEENAN CUT OFF	300461
3	KEENAN NORTH DEVELOPEMENT LTD	28408 SWEETGUM RD UNIT B	MAGNOLIA	TX	77354-3189	19202 KEENAN CUT OFF	243974
4	MONTGOMERY ISD	PO BOX 1475	MONTGOMERY	TX	77356-1475	19190 KEENAN CUT OFF	419419
5	KCOP I LP	9805 KATY FWY	HOUSTON	TX	77024-1271	KEENAN CUT OFF	34716
6	WILLIAMS, JEFFICAL	19943 KEENAN CUT OFF RD	MONTGOMERY	TX	77316-2621	19943 KEENAN CUT OFF	34709
7	ADOUE, NORMAN D	7 SENDERO WOODS	BOERNE	TX	78015-8367	7190 ADOUE	34695

EXHIBIT 13

BUFFER ZONE MAP



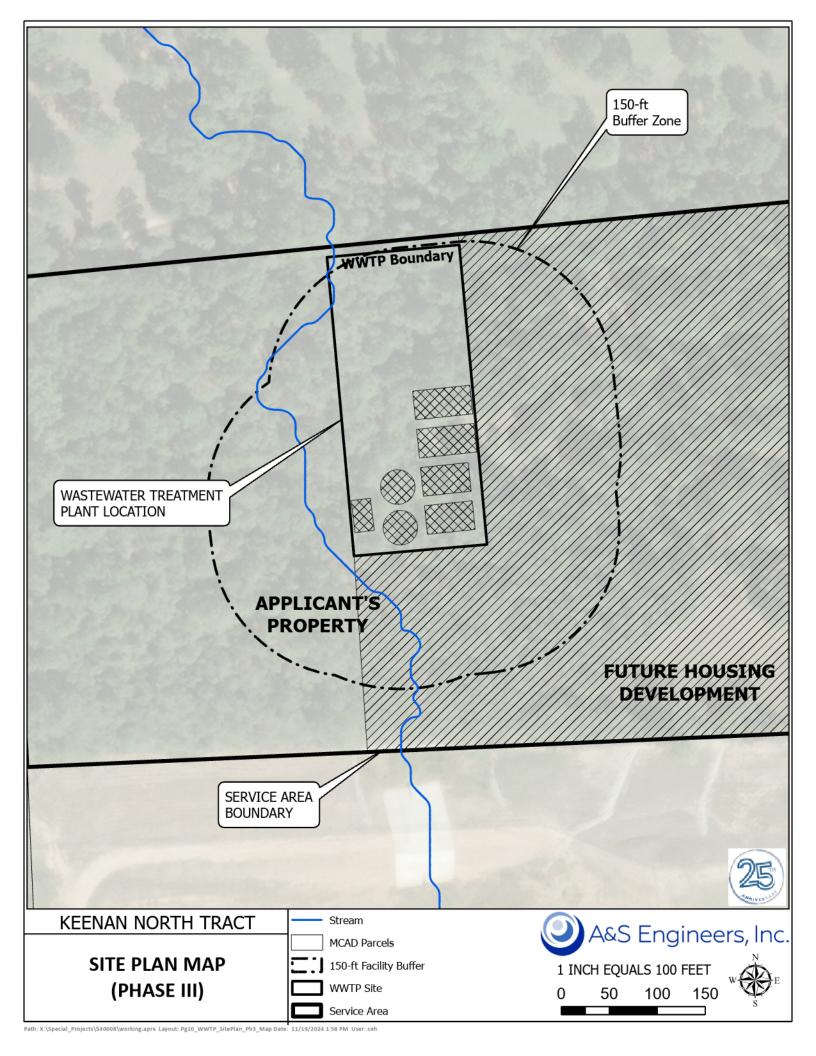
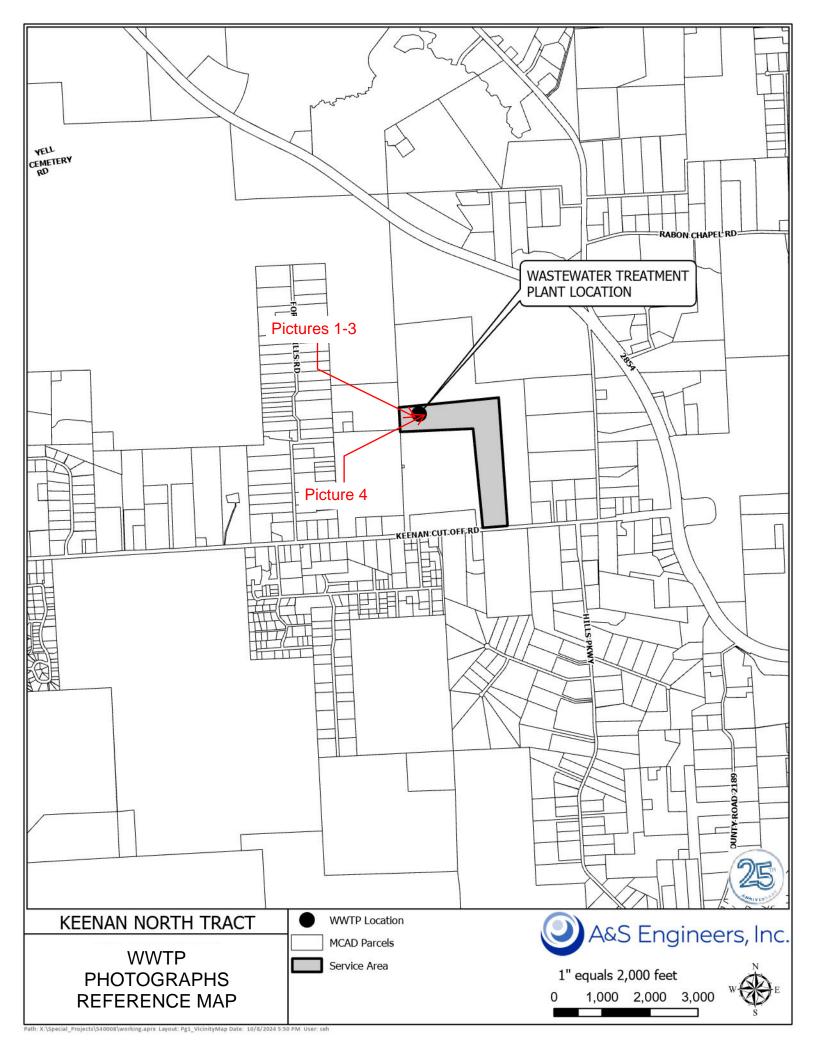


EXHIBIT 14

ORIGINAL PHOTOGRAPHS & MAP

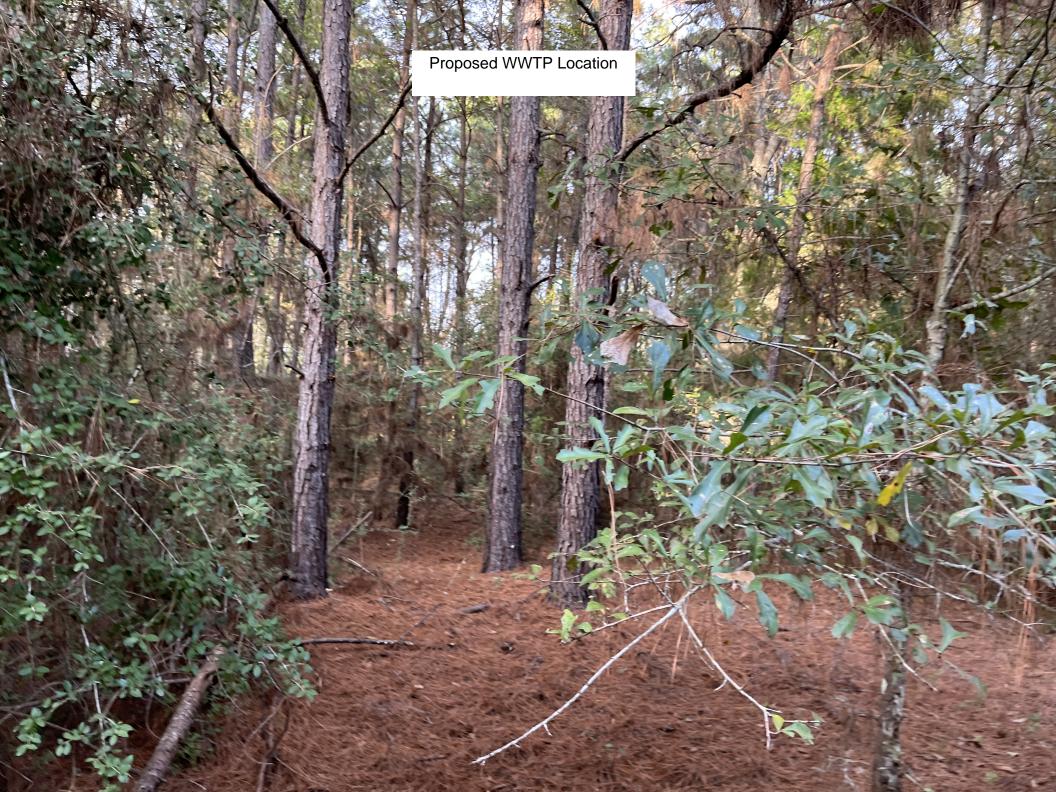












Domestic Wastewater Permit Application Keenan North Development, Ltd. TPDES Permit No. TBD NPDES Permit No. TBD A&S Project No. 540008.02

EXHIBIT 15

SLUDGE DISPOSAL

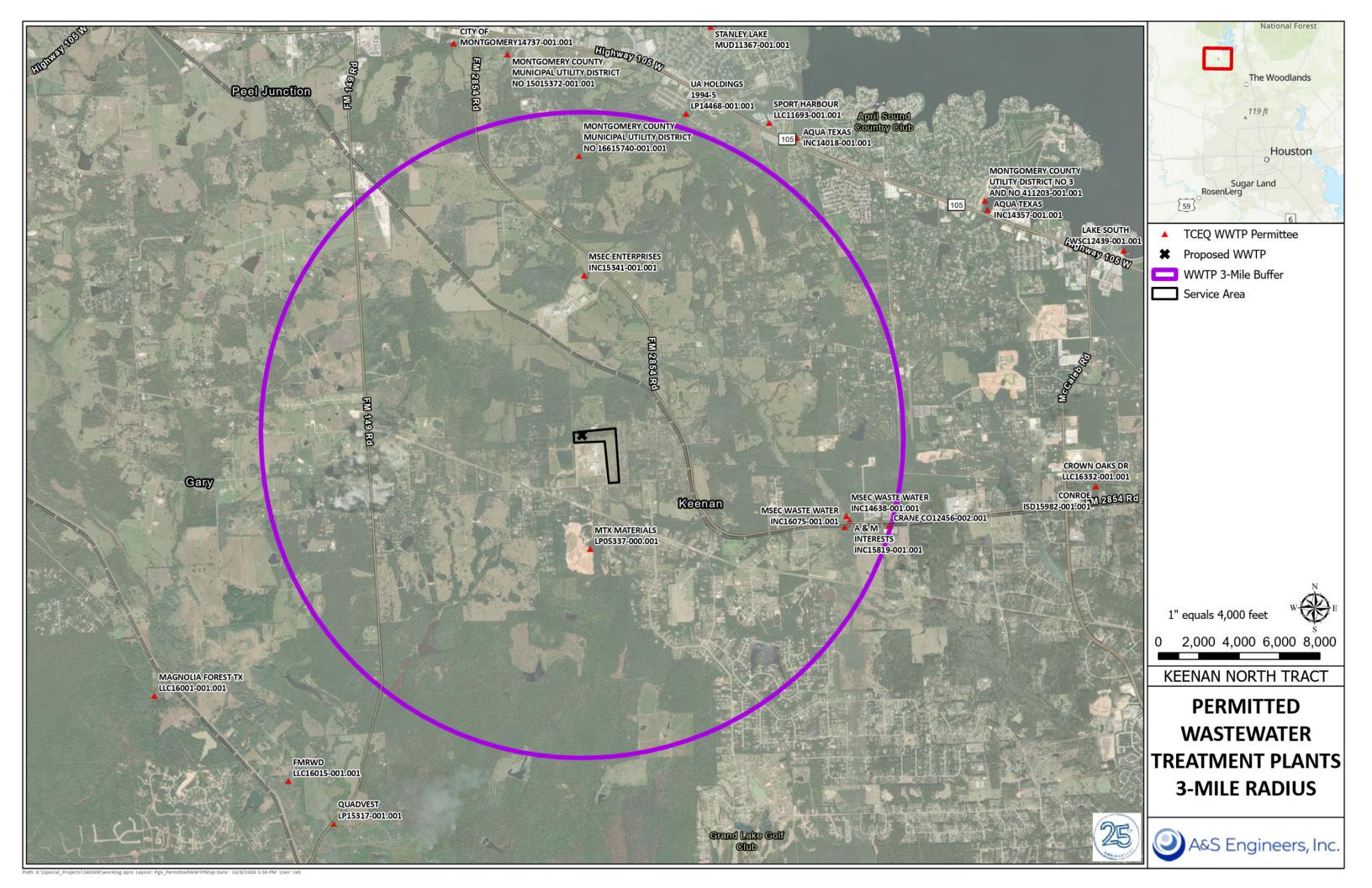


Domestic Wastewater Permit Application Keenan North Development, Ltd. TPDES Permit No. TBD NPDES Permit No. TBD A&S Project No. 540008.02

EXHIBIT 16

REGIONALIZATION MAP AND LETTERS







Crane Co. 9860 JOHNSON RD MONTGOMERY, TX 77316 -9494

Attn: District Engineer

Re: Keenan North Development, Ltd.

TCEQ Wastewater Discharge Permit Application

Regionalization Inquiry - Crane WWTP

A&S Project 540008.02

To Whom It May Concern:

Keenan North Development, Ltd. has prepared a wastewater discharge permit application for a new domestic wastewater treatment plant in Montgomery County with a ultimate final capacity of 0.495 MGD. One of the items to be addressed by the Texas Commission on Environmental Quality in a wastewater discharge permit application is regionalization. As part of this process, we will investigate the feasibility of obtaining capacity for the 0.495 MGD wastewater flow from a neighboring plant.

Is it possible for your utility to accept flo	ws from the proposed faci	ility?	_YES _	NO
If "YES", what is the maximum flow that	t can be accepted	_MGD.		
Ву:	Date:			
Please date, sign and return your reply by	email to elw@as-engine	ers.com		
If you have any questions, please feel free	e to contact me at 713-942	2-2700.		
Regards,				

Eric Williams, P.E. Project Manager

bether



Preserve HW6, LLC 3200 SOUTHWEST FWY STE 1870 HOUSTON, TX 77027 -7502

Attn: District Engineer

Re: Keenan North Development, Ltd.

TCEQ Wastewater Discharge Permit Application Regionalization Inquiry – Haven at Highway 6 WWTP

A&S Project 540008.02

To Whom It May Concern:

Keenan North Development, Ltd. has prepared a wastewater discharge permit application for a new domestic wastewater treatment plant in Montgomery County with a ultimate final capacity of 0.495 MGD. One of the items to be addressed by the Texas Commission on Environmental Quality in a wastewater discharge permit application is regionalization. As part of this process, we will investigate the feasibility of obtaining capacity for the 0.495 MGD wastewater flow from a neighboring plant.

Is it possible for your utility to accept flo	ws from the proposed faci	lity?	_YES _	NO
If "YES", what is the maximum flow tha	t can be accepted	_MGD.		
Ву:	Date:			
Please date, sign and return your reply by	email to elw@as-engined	ers.com		
If you have any questions, please feel fre	e to contact me at 713-942	2-2700.		
Regards,				

Eric Williams, P.E. Project Manager

buth



MSEC WASTE WATER INC PO BOX 970 NAVASOTA, TX 77868 -0970

Attn: District Engineer

Re: Keenan North Development, Ltd.

TCEQ Wastewater Discharge Permit Application Regionalization Inquiry – Lone Star Landing WWTP

A&S Project 540008.02

To Whom It May Concern:

Keenan North Development, Ltd. has prepared a wastewater discharge permit application for a new domestic wastewater treatment plant in Montgomery County with a ultimate final capacity of 0.495 MGD. One of the items to be addressed by the Texas Commission on Environmental Quality in a wastewater discharge permit application is regionalization. As part of this process, we will investigate the feasibility of obtaining capacity for the 0.495 MGD wastewater flow from a neighboring plant.

Is it possible for your utility to accept flows	from the proposed facility	y?YES _	NO
If "YES", what is the maximum flow that ca	n be acceptedN	MGD.	
Ву: Г	Oate:		
Please date, sign and return your reply by er	nail to elw@as-engineers.	.com	
If you have any questions, please feel free to	o contact me at 713-942-2	700.	
Regards,			

Eric Williams, P.E. Project Manager

buth



Montgomery County MUD 406 W. Grand Pkwy S, Ste 260 Katy, Texas 77494

Attn: District Engineer

Re: Keenan North Development, Ltd.

TCEQ Wastewater Discharge Permit Application

Regionalization Inquiry – Montgomery County MUD 166 WWTP

A&S Project 540008.02

To Whom It May Concern:

Keenan North Development, Ltd. has prepared a wastewater discharge permit application for a new domestic wastewater treatment plant in Montgomery County with a ultimate final capacity of 0.495 MGD. One of the items to be addressed by the Texas Commission on Environmental Quality in a wastewater discharge permit application is regionalization. As part of this process, we will investigate the feasibility of obtaining capacity for the 0.495 MGD wastewater flow from a neighboring plant.

Is it possible for your utility to accept flows from the proposed facility?Y	ES _	NO
If "YES", what is the maximum flow that can be acceptedMGD.		
By: Date:		
Please date, sign and return your reply by email to elw@as-engineers.com		
If you have any questions, please feel free to contact me at 713-942-2700.		
Regards,		

Eric Williams, P.E. Project Manager

buth



MSEC Waste Water, Inc. PO BOX 970 Navasota, TX 77868 -0970

Attn: District Engineer

Re: Keenan North Development, Ltd.

TCEQ Wastewater Discharge Permit Application Regionalization Inquiry – MSEC WWTP 2

A&S Project 540008.02

To Whom It May Concern:

Keenan North Development, Ltd. has prepared a wastewater discharge permit application for a new domestic wastewater treatment plant in Montgomery County with a ultimate final capacity of 0.495 MGD. One of the items to be addressed by the Texas Commission on Environmental Quality in a wastewater discharge permit application is regionalization. As part of this process, we will investigate the feasibility of obtaining capacity for the 0.495 MGD wastewater flow from a neighboring plant.

Is it possible for your utility to accept flows from the proposed facility?	_YES _	NO
If "YES", what is the maximum flow that can be acceptedMGD.		
By: Date:		
Please date, sign and return your reply by email to elw@as-engineers.com		
If you have any questions, please feel free to contact me at 713-942-2700.		
Regards,		
6 Alm		

Eric Williams, P.E. Project Manager



MSEC WASTE WATER INC PO BOX 970 NAVASOTA, TX 77868 -0970

Attn: District Engineer

Re: Keenan North Development, Ltd.

TCEQ Wastewater Discharge Permit Application

Regionalization Inquiry – MSEC WWTP

A&S Project 540008.02

To Whom It May Concern:

Keenan North Development, Ltd. has prepared a wastewater discharge permit application for a new domestic wastewater treatment plant in Montgomery County with a ultimate final capacity of 0.495 MGD. One of the items to be addressed by the Texas Commission on Environmental Quality in a wastewater discharge permit application is regionalization. As part of this process, we will investigate the feasibility of obtaining capacity for the 0.495 MGD wastewater flow from a neighboring plant.

Is it possible for your utility to accept flows from the proposed facility?	_YES	NO
If "YES", what is the maximum flow that can be acceptedMGD.		
By: Date:		
Please date, sign and return your reply by email to elw@as-engineers.com		
If you have any questions, please feel free to contact me at 713-942-2700.		
Regards,		
but him		

Eric Williams, P.E. Project Manager



MTX Materials, LP 7720 WESTVIEW DR HOUSTON, TX 77055 -5029

Attn: District Engineer

Re: Keenan North Development, Ltd.

TCEQ Wastewater Discharge Permit Application

Regionalization Inquiry – MTX 1 Plant

A&S Project 540008.02

To Whom It May Concern:

Keenan North Development, Ltd. has prepared a wastewater discharge permit application for a new domestic wastewater treatment plant in Montgomery County with a ultimate final capacity of 0.495 MGD. One of the items to be addressed by the Texas Commission on Environmental Quality in a wastewater discharge permit application is regionalization. As part of this process, we will investigate the feasibility of obtaining capacity for the 0.495 MGD wastewater flow from a neighboring plant.

Is it possible for your utility to accept flows from the proposed facility?	_YES _	NO
If "YES", what is the maximum flow that can be acceptedMGD.		
By: Date:		
Please date, sign and return your reply by email to elw@as-engineers.com		
If you have any questions, please feel free to contact me at 713-942-2700.		
Regards,		
6 Ala		

Eric Williams, P.E. Project Manager



MTX Materials, LP 7720 WESTVIEW DR HOUSTON, TX 77055 -5029

Attn:

District Engineer

Re:

Keenan North Development, Ltd.

TCEQ Wastewater Discharge Permit Application

Regionalization Inquiry - MTX 1 Plant

A&S Project 540008.02

To Whom It May Concern:

Keenan North Development, Ltd. has prepared a wastewater discharge permit application for a new domestic wastewater treatment plant in Montgomery County with a ultimate final capacity of 0.495 MGD. One of the items to be addressed by the Texas Commission on Environmental Quality in a wastewater discharge permit application is regionalization. As part of this process, we will investigate the feasibility of obtaining capacity for the 0.495 MGD wastewater flow from a neighboring plant.

Is it possible for your utility to accept flows from the proposed facility?YESNO
If "YES", what is the maximum flow that can be acceptedNAMGD.
If "YES", what is the maximum flow that can be accepted NA MGD. By: Date: 11/25/20 24
Please date, sign and return your reply by email to elw@as-engineers.com
If you have any questions, please feel free to contact me at 713-942-2700.
Regards,

Eric Williams, P.E. Project Manager

het him

	United States Postal Service	Lin Section and the Control of Co
		USPSTRACKING#
A&S Env 10377 S Houston	ease print your name, add	71 211
A&S Engineers, Inc. 10377 Stella Link Road Houston, TX 77025	 Sender: Please print your name, address, and ZIP+4[®] in this box 	First-Class Mall Postage & Fees Paid USPS Permit No. G-10
	×	Mail ees Paid 3-10

SENDER: COMPLETE THIS SECTION	COMPLETE THIS SECTION ON	DELIVERY
Complete items 1, 2, and 3. Print your name and address on the reverse so that we can return the card to you. Attach this card to the back of the mailpiece, or on the front if space permits.	A. Signature X B. Received by (Printed Name)	☐ Agent ☐ Addressee C. Date of Delivery
1. Article Addressed to: CRANE CO. 9860 JOHNSON RD. MONTGOMERY, TX 77316-9494	D. Is delivery address different from If YES, enter delivery address in the second secon	
9590 9402 8452 3156 4949 17 2. Article Number (Transfer from service label) 7014 1200 0001 1922 633	3. Service Type Adult Signature Cydult Signature Restricted Delivery Cydult Signature Restricted Delivery Certified Mail® Certified Mail® Certified Mail® Restricted Delivery Collect on Delivery Collect on Delivery Restricted Delivery Vall Wall Restricted Delivery	☐ Priority Mail Express® ☐ Registered Mail™ ☐ Registered Mail Restricter Delivery ☐ Signature Confirmation ™ ☐ Signature Confirmation ☐ Restricted Delivery
PS Form 3811, July 2020 PSN 7530-02-000-9053		Domestic Return Receipt

U.S. Postal Service of CERTIFIED MAIL: RECEIPT (Damestic Mail Only, No Insurance Coverage Provided)

For delivery Information visit our website at www.uspc.coms

Postage S

Certified Fee
Return Receipt is

Certified Fee
Return Receipt is

Postage S

Certified Fee
Return Receipt is

Return Receipt is

Certified Fee
Return Receipt is

Receipt is

Certified Fee
Return Receipt is

Receipt is

Receipt is

Return Receipt is

PRESERVE HW6, LLC 3200 SOUTHWEST FWY STE 1870 HOUSTON, TX 77027-7502 3. Service Type Adult Signature Adult Signature Restricted Delivery W Certified Mail Restricted Delivery Oblicat to Betreey Dollector Delivery Dollector Delivery Half Restricted Delivery Mail Restricted Delivery 1 Mail Restricted Delivery 1500) Priority Mail Express® Registered Mail™ Registered Mail Restricted Delivery Signature Confirmation™ Restricted Delivery 9590 9402 8452 3156 4949 86 2. Article Number (Transfer from service label) 7014 1200 0001 1922 6374 PS Form 3811, July 2020 PSN 7530-02-000-9053 Domestic Return Receipt U.S. Postal Service ... CERTIFIED MAIL... RECEIPT (Domestic Mail Only; No Insurance Coverage Provide CERTIFIED WAIL. 0001 1922 6374 0001 1922 6374 For delivery information visit our website at www.usps.com Postage Cartified Fee Return Receipt Fee (Endorsement Required) 7014 1200 0 Restricted Delivery Fee (Endorsement Required) Total Pos Sent To PRESERVE HW6,LLC 3200 SOUTHWEST FWY STE 1870 HOUSTON, TX 77027-7502 PS Form 3800, August 2006 See Reverse for Instructions

SENDER: COMPLETE THIS SECTION

or on the front if space permits.

so that we can return the card to you.

Attach this card to the back of the mailpiece,

■ Complete items 1, 2, and 3.
 ■ Print your name and address on the reverse

COMPLETE THIS SECTION ON DELIVERY

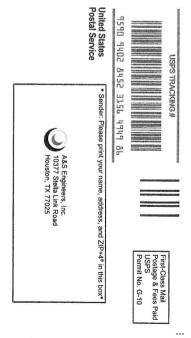
D. Is delivery address different from item 1? ☐ Yes If YES, enter delivery address below: ☐ No

C. Date of Delivery

B. Received by (Printed Name)

A. Signature

X



Complete items 1, 2, and 3. Print your name and address on the reverse X Attach this card to the back of the mailpiece, or on the front if space permits. B. Received by (Printed Name) C. Date of Delivery 1. Article Addressed to: D. Is delivery address different from item 1? ☐ Yes
If YES, enter delivery address below: ☐ No MSEC WASTE WATER INC. PO BOX 970 NAVASOTA, TX 77868-0970 Service Type
 Adult Signature
 Adult Signature
 Adult Signature
 Adult Signature
 Certified Mail
 Certified Mail Restricted Delivery
 Collect Delivery
 Collect Delivery
 Collect Delivery Restricted Delivery
 Mail
 ed Mail Restricted Delivery
 \$500) Priority Mail Express®
☐ Registered Mail™
☐ Registered Mail Restricted Delivery
☐ Signature Confirmation™
☐ Signature Confirmation Restricted Delivery 9590 9402 8452 3156 4949 24 Article Number (Transfer from service label) 7014 1200 0001 1922 6381 PS Form 3811, July 2020 PSN 7530-02-000-9053 Domestic Return Receipt U.S. Postal Service ::
CERTIFIED MAIL:: RECEIPT
(Domestic Meil Only, No Insurance Coverage Provided) 0001 1922 6381 0001 1922 6381 For delivery information visit our website at www.usps.com Postage Certified Fee Postmark Here 7014 1200 C MSEC WASTE WATER INC. Street, Apr. N or PO Box Nc City, State, 21 NAVASOTA, TX 77868-0970

SENDER: COMPLETE THIS SECTION

COMPLETE THIS SECTION ON DELIVERY

United States Postal Service 2046 0656 USPS TRACKING# 2548 372P Sender: Please print your name, THE PARTY OF THE **6**464 A&S Engineers, Inc. 10377 Stella Link Road Houston, TX 77025 먑 address, and ZIP+4® in this First-Class Mail Postage & Fees Paid USPS Permit No. G-10

Complete items 1, 2, and 3. Print your name and address on the reverse so that we can return the card to you. Attach this card to the back of the mailpiece, or on the front if space permits. Article Addressed to: MONTGOMERY COUNTY MUD	A. Signature X
406 W. GRAND PKWY S, STE 260 KATY, TX 77494	
9590 9402 8452 3156 4949 62 2. Article Number (Transfer from service label) 7014 1200 0001 1922 6398	3. Service Type Adult Signature Priority Mail Express® Rejstered Mail*
PS Form 3811, July 2020 PSN 7530-02-000-9053	Domestic Return Receipt
MIL	For delivery information visit our website at www.usps.com⊚
FIED IN	Carillied Fee Return Receipt Fee (Endorsement Required) Restricted Deliver Fee
PACE STOCKEN OF THE STOCKEN OF THE STOCKEN	(Endorsement Required)
	PS Form 3800, August 2006 See Reverse for Instruction

COMPLETE THIS SECTION ON DELIVERY

SENDER: COMPLETE THIS SECTION

United States Postal Service 29 Lh64 95TE 2549 2046 0656 USPS TRACKING# Sender: Please print your name, address, and ZIP+4® in this box First-Class Mail Postage & Fees Paid USPS Permit No. G-10

	United States Postal Service	-1-5-5-5-5-5-5-5-5-5-5-5-5-5-5-5-5-5-5-	Memory
A&S Engineers, Inc. 10377 Stella Link Road Houston, TX 77025	iales Sender: Please print your name, address, and ZIP+4® in this box®	9590 9402 8452 31.56 4949 5.5	USPS TRACKING#

SENDER: COMPLETE THIS SECTION	COMPLETE THIS SECTION ON	DELIVERY
Complete items 1, 2, and 3. Print your name and address on the reverse so that we can return the card to you. Attach this card to the back of the mailpiece,	A. Signature X B. Received by (Printed Name)	Agent Addressee C. Date of Delivery
or on the front if space permits. 1. Article Addressed to:	D. Is delivery address different fro	
MSEC WASTE WATER, INC. PO BOX 970 NAVASOTA, TX 77868-0970		
9590 9402 8452 3156 4949 55 2. Article Number (<i>Transfer from service label</i>) 7014 1200 0001 1922 64	3. Service Type Adult Signature DAdult Signature Restricted Delivery of Certified Mail® D Certified Delivery Collect on Delivery Restricted Delivery Mail Mail Restricted Delivery Mail Restricted Delivery	Priority Mail Express® ☐ Registered Mail™ ☐ Registered Mail Pestricted Delivery ☐ Signature Confirmation™ ☐ Signature Confirmation Restricted Delivery
28 For- 2911, Luly 2020 PSN 7530-02-000-9053	U.S. Postal Service na CERTIFIED MAIL: F (Domestic Mail Only; No Insuran For delivery Information visit our wal	de Goverage Provided)
CERTIFIED MAIL	Postage \$ Carilled Fee Return Receipt Fee (Endossement Required) Resirided Delivery Fee (Endossement Required)	Postmark Here

PS Form 3800, August 2006 See Reverse for Instructions

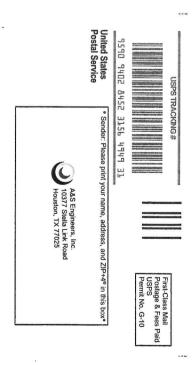
	United States Postal Service	
		USPSTRACKING#
A&S E 10377 Housto	 Sender: Please print your name, address, and ZIP+4® in this box 	94 646h 99
A&S Engineers, Inc. 10377 Stella Link Road Houston, TX 77025	ame, address, and ZIF	
	5+4® in this box®	First-Class Mail Postage & Fees Paid USPS Permit No. G-10

Wilderson Market and Control of the			
SENDER: COMPLETE THIS SECTION		COMPLETE THIS SECTION ON DELIVERY	
Complete items 1, 2, and 3.		A. Signature	
Print your name and address on the rev so that we can return the card to you.	/erse	X Agent	
Attach this card to the back of the mail:	piece.	B. Received by (Printed Name) C. Date of Delivery	
or on the front if space permits.			
Article Addressed to:		D. Is delivery address different from item 1? ☐ Yes If YES, enter delivery address below: ☐ No	
MSEC WASTE WATER, INC.			
PO BOX 970			
NAVASOTA, TX 77868-0970			
SI II MANIENT TAKET THE CENTRAL CAR WE LEAVE WAS READING.		3. Service Type ☐ Priority Mail Express®	
	Ш	☐ Adult Signature ☐ Registered Mail™ ☐ Adult Signature Restricted Delivery ☐ Registered Mail Restricted	
9590 9402 8452 3156 4949 4	18	☐ Certified Mail® Delivery ☐ Certified Mail Restricted Delivery ☐ Signature Confirmation™	
2. Article Number (Transfer from service label)		☐ Collect on Delivery ☐ Signature Confirmation ☐ Collect on Delivery Restricted Delivery Restricted Delivery	
7014 1200 0001 192	2 64	1 1 1 Aaii Restricted Delivery	
PS Form 3811, July 2020 PSN 7530-02-000	0-9053	Domestic Return Receipt	
PS Form 3811, July 2020 PSN 7530-02-000	0-9053	THE RESIDENCE OF THE PARTY OF T	8
PS Form 3811, July 2020 PSN 7530-02-000	0-9053	U.S. Postal Service 100	THE REAL PROPERTY.
PS Form 3811, July 2020 PSN 7530-02-000		U.S. Postal Service CERTIFIED MAIL. RECEIPT	THE REAL PROPERTY.
	4.1.1.1.1.1.1.1.1.1.1.1.1.1.1.1.1.1.1.1	U.S. Postal Service CERTIFIED MAIL RECEIPT (Domestic Mail Only, No Insurance Coverage Provided	THE PERSON NAMED IN
	5411 6411	U.S. Postal Service CERTIFIED MAIL RECEIPT (Domestic Mail Only; No Insurance Coverage Provideo For delivery Information visit our website at www.usps.com.	THE PERSON NAMED IN
	22 6411 22 6411	U.S. Postal Service CERTIFIED MAIL RECEIPT (Domestic Mail Only; No Insurance Coverage Provideo For delivery Information visit our website at www.usps.com.	
	2 6411 2 6411	U.S. Postal Service CERTIFIED MAIL RECEIPT (Domestic Mail Only; No Insurance Coverage Provideo For delivery Information visit our website at www.usps.com.	
	1 1922 6411 1 1922 6411	U.S. Postal Service CERTIFIED MAIL RECEIPT (Domestic Mail Only; No Insurance Coverage Provideo For delivery Information visit our website at www.usps.com. Postage \$ Certified Fee	
	001 1922 6411 001 1922 6411	U.S. Postal Service m CERTIFIED MAIL RECEIPT (Domestic Mail Only; No Insurance Coverage Provided For delivery Information visit our website at www.usps.com.) Postage S Carilled Fee Return Receist Fee	
TOP OF STATE TO THE REST. WENT OF STATE OF STAT	0001 1922 6411 0001 1922 6411	U.S. Postal Service m CERTIFIED MAIL RECEIPT (Domestic Mail Only; No Insurance Coverage Provided For delivery Information visit our website at www.usps.com.) Postage S Carilled Fee Return Receist Fee	
TOP OF STATE TO THE REST. WENT OF STATE OF STAT	00 0001 1922 6411 00 0001 1922 6411	U.S. Postal Service m CERTIFIED MAIL RECEIPT (Domesile Mail Only, No Insurance Coverage Provided For delivery Information visit our website at www.usps.com Postage \$ Certified Fee Return Receipt Fee (Endorsament Required) Rastricted Delivery Fee (Endorsament Required)	
TOP OF STATE TO THE REST. WENT OF STATE OF STAT	0 0001 1922 6411 0 0001 1922 6411	U.S. Postal Service m CERTIFIED MAIL RECEIPT (Domesilo Mail Only, No Insurance Coverage Provideo For delivery Information visit our website at www.usps.com Postage \$ Certified Fee Return Receipt Fee (Endorsament Required) Restricted Delivery Fee (Endorsament Required) Total Pos	
CERTIFIED MAIL.	1200 0001 1922 6411 1200 0001 1922 6411	U.S. Postal Service m CERTIFIED MAIL RECEIPT (Domestic Mail Only; No Insurance Coverage Provided For delivery Information visit our website et www.usps.com.s Postage S Certified Fee Return Receipt Fee (Endorsement Required) Restricted Delivery Fee (Endorsement Required) Total Pos Sant To MSEC WASTE WATER INC.	
CERTIFIED MAIL.	1200 0001 1922 6411 1200 0001 1922 6411	U.S. Postal Service m CERTIFIED MAIL RECEIPT (Domestic Mail Only; No Insurance Coverage Provided For delivery Information visit our website at www.usps.com.s Postage S Cartifled Fee Return Receipt Fee (Endorsement Required) Restricted Delivery Fee (Endorsement Required) Total Pos Sant To MSEC WASTE WATER INC. Street Apr. PO BOX 970	
CERTIFIED MAIL.	4 1200 0001 1922 6411 4 1200 0001 1922 6411	U.S. Postal Service m CERTIFIED MAIL RECEIPT (Damestic Mail Only; No Insurance Coverage Provided For delivery Information visit our website at www.usps.com. Postags S Carilled Fee Return Receipt Fee (Endorsement Required) Restricted Delivery Fee (Endorsement Required) Total Pos Service MASTE WATER INC. Sirest Api: PO BOX 970	

Complete items 1, 2, and 3.		
	A. Signature	☐ Agent
Print your name and address on the reverse so that we can return the card to you.	X	☐ Addressee
Attach this card to the back of the mailpiece, or on the front if space permits.	B. Received by (Printed Name)	C. Date of Delivery
1. Article Addressed to:	D. Is delivery address different from item If YES, enter delivery address below	
MTX MATERIALS, LP		
7720 WESTVIEW DR		
HOUSTON, TX 77055-5029		
9590 9402 8452 3156 4949 31 2. Article Number (Transfer from service label) 7014 1200 0001 1922 6428	☐ Adult Signature ☐ Re ☐ Adult Signature Restricted Delivery ☐ Re ☐ Certified Mail Restricted Delivery ☐ Sig ☐ Collect on Delivery ☐ Sig	iority Mail Express® gistered Mail TM gistered Mail Restricte livery anature Confirmation nature Confirmation stricted Delivery
PS Form 3811, July 2020 PSN 7530-02-000-9053		stic Return Receipt
# # # # # # # # # # # # # # # # # # #	I.S. Postal Service ERTIFIED MAIL RECOMMENT MAIL MAIL MAIL MAIL MAIL MAIL MAIL MAIL	loverage Provid

COMPLETE THIS SECTION ON DELIVERY

SENDER: COMPLETE THIS SECTION



COMPLETE THIS SECTION ON DELIVERY	A. Signature	1 2	B. Heceived by (Printed Name) C. Date of Delivery	D. Is delivery address different from item 1? Yes If YES, enter delivery address below: No			3. Service Type Cault Signature Caldid, Signature Restricted Delivery Certified Mail® Certified Mail® Restricted Delivery Certified Mail® Restricted Delivery Certified Mail® Restricted Delivery Certified Mail	☐ Collect on Delivery ☐ Collect on Delivery ☐ Mail Mail Restricted Delivery from Sign	Domestic Return Receipt		COMPLETE THIS SECTION ON DELIVERY	A. Signature	4	Date	D. Is delivery address different from item 1? ☐ Yes If YES, enter delivery address below: ☐ No				Service Type Adult Signature Adult Signature Restricted Delivery Registered Mail Restricte Registered Mail Restricte Registered Mail Restricted		_	Domestic Return Receipt
SENDER: COMPLETE THIS SECTION	Complete items 1, 2, and 3.	Frint your name and address on the reverse so that we can return the card to you.	Attach this card to the back of the mailpiece, or on the front if space permits.	1. Article Addressed to:	MSEC WASTE WATER, INC.	PO BOX 970 NAVASOTA, TX 77868-0970		1049	PS Form 3811, July 2020 PSN 7530-02-000-9053		SENDER: COMPLETE THIS SECTION	■ Complete items 1, 2, and 3.	 Print your name and address on the reverse so that we can return the card to you. 	Attach this card to the back of the mailpiece, or on the front if space permits.	1. Article Addressed to:	MSEC WASTE WATER INC.	PO BOX 970 NAVASOTA, TX 77868-0970		And the second s	9590 9402 8452 3156 4949 24	2. Article Number (Transfer from service label) 7014 1200 0001 1922 6381	PS Form 3811, July 2020 PSN 7530-02-000-9053
1. A	Comporint y so that Attach or on Article	lete your at we had a thick the to the total and the total	items name can s carc front i ressed	and return to the f space to:	and 3. address the case back ce perm	s on the ard to you of the rinits.	reverse u. nailpiece,	A. S X B. F	deceiv deceiv deceiv deceiv deceiv deceiv	eed by	y (Prinddress	Santed I	Name erent e	from ite	C. Dem 1?	☐ Ag ☐ Ad ate of ☐ Yes ☐ No	dressee Delivery s					
	96 Article 71	590 Num	940: ber (1)	2 84 ransfe	52 31 from se	56 494 ervice lab	el)	☐ Certi ☐ Colle	fied Ma fied Ma ct on I ct on I	ail® ail Res Delive Delive	stricte ry ry Res	d Deliv	ery I Delive	ery F	Delivery Signatur Signatur Restricte	e Confir e Confir ed Delive	mation™ mation	-				

SENDER: COMPLETE THIS SECTION	COMPLETE THIS SECTION ON DELIVERY
 Complete items 1, 2, and 3. Print your name and address on the reverse so that we can return the card to you. Attach this card to the back of the mailpiece, or on the front if space permits. Article Addressed to: PRESERVE HWS, LLC 3200 SOUTHWEST FWY STE 1870 HOUSTON, TX 77027-7502 	A. Signature X
9590 9402 8452 3156 4949 86 2. Article Number (Transfer from service label) 7014 1200 0001 1922 6374	3. Service Type

PS Form 3811, July 2020 PSN 7530-02-000-9053

Domestic Return Recei

SENDER: COMPLETE THIS SECTION COMPLETE THIS SECTION ON DELIVERY A. Signature ■ Complete items 1, 2, and 3. ☐ Agent Print your name and address on the reverse ☐ Address so that we can return the card to you. B. Received by (Printed Name) C. Date of Delive Attach this card to the back of the mailpiece, or on the front if space permits. 1. Article Addressed to: If YES, enter delivery address below: MTX MATERIALS, LP 7720 WESTVIEW DR HOUSTON, TX 77055-5029 Service Type ☐ Priority Mail Express® | 3. Service Type | Adult Signature | Adult Signature Restricted Delivery | Certified Mail® | Certified Mail Restricted Delivery | Collect on Delivery | Collect on Delivery | I Mail ☐ Registered Mail™ ☐ Registered Mail Restri ☐ Delivery ☐ Signature Confirmation☐ Signature Confirmation☐ Restricted Delivery 9590 9402 8452 3156 4949 31 2. Article Number (Transfer from service label) 1 Mail 1 Mail Restricted Delivery 500)

PS Form 3811, July 2020 PSN 7530-02-000-9053

7014 1200 0001 1922 6428

Domestic Return Recei



Preserve HW6, LLC 3200 SOUTHWEST FWY STE 1870 HOUSTON, TX 77027 -7502

Attn: District Engineer

Re: Keenan North Development, Ltd.

TCEQ Wastewater Discharge Permit Application Regionalization Inquiry – Haven at Highway 6 WWTP

A&S Project 540008.02

To Whom It May Concern:

Keenan North Development, Ltd. has prepared a wastewater discharge permit application for a new domestic wastewater treatment plant in Montgomery County with a ultimate final capacity of 0.495 MGD. One of the items to be addressed by the Texas Commission on Environmental Quality in a wastewater discharge permit application is regionalization. As part of this process, we will investigate the feasibility of obtaining capacity for the 0.495 MGD wastewater flow from a neighboring plant.

Is it possible for your utility to accept flows from the proposed facility?	_YES	X	_NO
If "YES", what is the maximum flow that can be acceptedMGD.			
By: Date: 11/26/2024			
Please date, sign and return your reply by email to elw@as-engineers.com			
If you have any questions, please feel free to contact me at 713-942-2700.			
Regards,			
het he			

Eric Williams, P.E. Project Manager Domestic Wastewater Permit Application Keenan North Development, Ltd. TPDES Permit No. TBD NPDES Permit No. TBD A&S Project No. 540008.02

EXHIBIT 17

DESIGN CALCULATIONS



KEENAN NORTH

WASTEWATER TREATMENT PLANT

WWTP PROCESS SIZING CALCULATIONS

PHASE I: 0.165 MGD 10/31/24

I. DESIGN PARAMETERS

A.	Influe	ent Composition		_
	1.	Influent BOD =	300	mg/l
	2.	Influent TSS =	300	mg/l
	3.	Influent NH3-N =	75	mg/l
В.	Hydra	aulic Considerations		_
	1.	Design Flow =	0.165	MGD
	2.	No. 1 Unit Change	115	gpm
	3.	Hydraulic Peaking Factor for Design =	4.00	Q
	4.	Peak Hydraulic Flow =	0.660	MGD
	5.	No. 4 Unit Change	458	gpm
c.	Influe	ent Composition Mass Loading (based on Raw & Post Primary Split		_
	1.	Mass BOD Loading =	413	lb/day
	2.	Mass TSS Loading =	413	lb/day
	3.	Mass NH3-N Loading =	103	lb/day
D.	Efflue	ent Composition		
	1.	Effluent BOD =	0	mg/l
	2.	Effluent TSS =	0	mg/l
	3.	Effluent NH3-N =	0	mg/l
	4.	Effluent TKN =	0	mg/l
	5.	Phosphorous =	0	mg/l

KEENAN NORTH

WASTEWATER TREATMENT PLANT

ACTIVATED SLUDGE

Α.		tion Influent Composition	1		0.17	7
	1.	Total Design Flow		=	0.17	MGD
	2.	Total Influent BOD		=	413	lb/day
	3.	Total Influent TSS		=	413	lb/day
	4.	Total Influent NH3-N		=	103	lb/day
В.	TCEQ	Organic Loading Criteria	1			
	1.	Organic Loading (TCEQ	217.154)	=	35	lb BOD/1000 cu ft
	2.	Organic Loading to Aera	ation	=	413	lb/day
	3.	Aeration Basin Volume	Required	=	11,795	cu. ft
C.	Minir 1.	mum Aeration Volume	Based on controlling criteria	=	11,795	cu. ft
	2.	Equivalent Loading base		=	35.0	lb BOD/1000 cu ft
	۷.	Equivalent Loading basi	ed on will volume	-	35.0	II BOD/1000 cu It
	Solid	s Balance Method				
	1.	(delta X/delta t)	= Excess Sludge Produced per Day			
			= Xi1 + Xi2 + aSo + a*N - bXv - Xe			
			=			
			82.566 lbs/day + 132.1056 lbs/day + (0.6 lb VSS produced / lb BOD applied)(412.83 lbs/day) + (0.12 lb/VSS produced / lb NH3-N			
			applied)(103.2075 lbs/day) - (0.06 lb VSS destroyed / lb MLSS-			
			day)(2195.2 lbs) + 0 lbs/day			
				=	343	lb/day
		Where:				
		where.	% of Fixed Influent TSS to Aeration Basin	=	20%	of TSS
			(Total Influent TSS to Aeration Basin)	=	413	lbs/day
		Xi1 =	Fixed Influent TSS to Aeration Basin	=	83	lbs/day
		XII -	% of Non-biodegradable Influent VSS	=	40%	of VSS
			(Volatile Influent TSS to Aeration Basin)	=	330	lbs/day
		Xi2 =	Non-biodegradable Influent VSS	=	132	lbs/day
		a =	Synthesis Coefficient	=	0.60	lb VSS produced / lb BOD applied
		So =	Influent BOD5	=	413	lbs/day
		a* =	Nitrifier Synthesis Coefficient	=	0.12	lb/ VSS produced / lb NH3-N app
		N =	Influent NH3-N	=	103	lbs/day
		b =	Endogenous Coefficient	=	0.06	lb VSS destroyed / lb MLSS-day
		Xv =	MLVSS in Aeration Basin	=	2,195	lbs
		Xe =	Effluent TSS (based on effluent 5 mg/L)	=	0.0	lbs/day
					,	_
		Find MLSS in Aeration E				٦
		Ratio of Volatile to Tota		=	0.8	MLVSS / MLSS
		Design MLSS Concentra		=	3,000.0	mg/L
		Estimated MLVSS Conc		=	2,400.0	mg/L
		Design Solid Retention		=	8.0	days
		MLSS in Aeration Basin		=	2,744	lbs
		MLVSS in Aeraton Basir		=	2,195	lbs
		Verify MLSS Assumptio	n (SRT x delta X/delta T)	=	2,744	lbs
		Fixed Influent TSS to Ae	eration Basin	=	83	lbs/day
		Nonbiodegradable Influ		=	132	lbs/day
		Growth Due to Synthes		=	247.698	lbs/day
		Growth Due to Nitrifier		=	12	lbs/day
		Endogenous Destructio	on	=	132	lbs/day
					•	-

KEENAN NORTH

WASTEWATER TREATMENT PLANT lbs/day Effluent TSS 0 Excess Sludge Produced per Day 343 lbs/day Design F:M Ratio 0.15 lb BOD / lb SS lbs BOD5 / 1000 cu. Ft. Maximum BOD5 Loading Rate 28.16 Required Aeration Basin Volume 14,662.1 cu. Ft. Hydraulic Retention Time 16.0 hours Required Aeration Basin Volume per Solids Balance Method 2744 lbs / (8.34 x 3000 mg/L)*10^6/7.48 14,662.1 cu. Ft. **Number of Aeration Basin Trains Number of Basins** 1.0 # trains Design per Flow Basin 0.165 MGD 2. **Aeration Basin Sizing Calculations** Minimum Total Volume Required 14,662 cu. ft 1. 10.50 ft. 2. Assumed Side Water Depth of Aeration Basin Minimum Total Surface Area Required 1,396 sq. ft 3. Minimum Total Surface Area Required per Train 1,396 sq. ft 4. **Proposed Aeration Basin Configuration Proposed Basin Dimensions** Width 12.0 a. 95.0 ft. b. Length Proposed Length to Width Ratio 7.92 2. Number of Aeration Basin Trains (from above) 1 # trains 3. **Total Volume of Proposed Basins** 11,970 cu. ft **Actual Aeration Basin Loading** 34 lb BOD5 / 1000 cu. Ft. 4. Actual Hydraulic Retention Time 13 hours 5. Actual F:M Ratio lb BOD / lb SS 0.18 6. Check of Proposed Total Basin Volume ОК 7.

KEENAN NORTH

WASTEWATER TREATMENT PLANT

III.	SECO	ONDARY/FINAL CLARIFICATION			
	A.	Number of Secondary/Final Clarifiers	=	1	
		1. Total Flow to Clarifiers	=	0.17	MGD
	В.	Surface Area Design (TCEQ 217.154(c)(1))			
		Maximum Surface Loading @ Peak Flow	=	1,200	gpd/sq. ft
		2. Surface Area Required @ Peak Flow per Clarifier	=	550	sq. ft
	c.	Hydraulic Detention Time Design (TCEQ 217.154(c))			
		1. Minimum Effective Detention Time @ Peak Flow	=	1.80	Hours
		2. Volume Required @ Peak Flow per Clarifier	=	6,618	cu. Ft.
		3. Surface Area Required @ Peak Flow (From Above) per Clarifier		550	sq. ft.
	D.	Effluent Weir Design (TCEQ 217.152(c)(4-5))			
		1. Weir loading for plants 1.0 MGD or less	=	20,000	gpd/ft
		2. Weir loading for plants over 1.0 MGD	=	30,000	gpd/ft
		3. Controlling Criteria	=	20,000	gpd/ft
		4. Total Length of Weir Required @ Peak Flow per Clarifier	=	33.0	ft
	E.	Clarifer Basin Check			
		1. Number of Clarifiers	=	1	# clarifiers
		2. Minimum Surface Area (From Above) per Clarifier	=	550	sq. ft.
		3. Minimums Volume Time (From Above) per Clarifier	=	6,618	cu. Ft.
		4. Minimum Weir Total Length (From Above) per Clarifier	=	33.0	ft
		5. Clarifier Size (Circular)	=	42	ft
		6. Surface Area Per Clarifier (Circular)	=	1,385	sq. ft.
		7. Total Surface Area	=	1,385	sq. ft.
		8. Surface Area Check	=	ОК	
		9. Effective Side Water Depth	=	10.00	ft.
		10. Total Clarifer Volume	=	13,854	cu. Ft.
		11. Total Clarifer Hydraulic Detention Time (Using Prop. Surface Area)	=	3.8	Hours
		12. Hydraulic Detention Time Check	=	ОК	
		13. Design Weir Width - Width of Launder Trough	=	1.0	ft
		14. Distance From Outer Concrete Wall	=	1.0	ft
		15. Thickness of Each Launder Trough Walls	=	0.00	ft
		16. Subsequent Outer Diameter of Effluent Weir	=	40.0	ft
		17. Weir Length per Clarifier	=	125.7	ft
		18. Weir Loading @ Peak Flow per Clarifier	=	5,252	gpd/ft
		19. Weir Length (Loading Rate) per Clarifier Check	=	ОК	
	F.	Return Activated Sludge Flow Rates			
		1. Lower Limit Underflow Rate (TCEQ 217.152)	=	200	gpd/sq ft
		2. Minimum Total RAS Flow Rate	=	192	gpm
		3. Upper Limit Underflow Rate (TCEQ 217.152)	=	400	gpd/sq ft
		4. Maximum Total RAS Flow Rate	=	385	gpm

KEENAN NORTH

WASTEWATER TREATMENT PLANT

IV.	DISIN	IFECTIO	ON/ CHLORINE CONTACT BASIN			_
	A.	1.	Minimum Effective Detention Time @ Peak Flow Ch. 217.281(b)(1)	=	20	minutes
		2.	Required Volume @ Peak Flow	=	9,167	Gallons
		3.	Unit Change	=	1,225	cu. Ft.
		4.	Proposed Basin Dimensions			
			Number of Proposed Basins	=	1	
			Length of Each Basin	=	15	
			Width of Each Basin	=	15	
			Side Water Depth of Each Basin	=	9	
		4.	Total Volume of Proposed Basin	=	2,025	cu. Ft
		5.	Check of Proposed Total Basin Volume	=	ОК	mins
		6.	Hydraulic Detetion Time at Design Flow	=	132.2	mins
		7.	Hydraulic Detetion Time at Peak Flow	=	33.0	mins
		8.	CHECK	=	ОК	
	В.	Chlo	rine Contact Basin Air			_
		1.	Air Required (CCB Volume * 20 SCFM/1000 CF)	=	40.5	scfm
v.	SOLIE	OS HAN	DLING			
	A.	Dige	ster Sizing			_
		1.	Percent Biodegradeable Volitile Solids in WAS, %	=	70%	
		2.	Percent Destruction, %	=	30%	
		3.	Digested Solids Production, lbs/day	=	326	lbs/day
		4.	Solids from Clarifier	=	413	lbs/day
		5.	Average Solids	=	369	lbs/day
		6.	Assumed Dig. Conc., mg/l	=	15,000	mg/L
		7.	Req'd. Retention Time, days (TCEQ 217.249 (t)(4)(b))	=	40	days
		8.	Req'd. Volume, cf	=	15,794	cu. ft
		9.	Volume to Loading Ratio. cf/lb BOD/day	=	38.3	cf/lb BOD/day
	В.	Dige	ster Design			
		1.	Proposed Digester Dimensions			_
			Width of Each Digester	=	12	
			Length of Each Digester	=	95	
			Side Water Depth of Each Digester	=	10.5	
		2.	Number of Digesters	=	2	
		3.	Total Digester Volume	=	23,940	cu. ft
		3.	Actual Digester Storage Capacity	=	61	days
		3.	Digester Volume check	=	ОК	
	C.	Dige	ster Air			_
		1.	Air Required (Digester Volume x 20scfm/1000cf)	=	479	scfm

KEENAN NORTH

WASTEWATER TREATMENT PLANT

VI. AIRFLOW CALCULATIONS

VII.

A.	Aerati	on Air Requirements TCEQ 217.155 (b) (2) (c)		_
	1.	Total Influent BOD ₅ =	413	lb/day
	2.	Total Influent NH3-N =	103	lb/day
	3.	BOD5 Removal =	413	lb/day
	4.	Nh3-N Removal =	103	lb/day
	5.	Oxygen Required for Carbonaceous Demand TCEQ 217.155 (a) (3) =	1.2	lbs O ₂ /lb BOD ₅
	6.	Oxygen Required for Carbonaceous Demand TCEQ 217.155 (a) (3) =	4.3	lbs O₂/lb NH3-N
	7.	Oxygen Required per Pound of BOD =	2.3	
	8.	Depth of Submergence of Diffusers =	9.00	ft
	9.	Diffuser Type (Coarse or Fine) =	Fine	
	10.	Clean Water Transfer Efficiency of Fine Bubble Diffuser =	1.50%	per ft of submergence
	11.	Clean Water Transfer Efficiency @ Stated Depth =	18.0%	
	12.	Wastewater Transfer Efficiency Coeficient for Fine Bubble Diffusers =	0.45	
	13.	Wastewater Transfer Efficiency =	8.1%	
	14.	Manufacturer Proposed SOTE =	30.0%	
	15.	Maximum Clean Water Transfer Efficiency TCEQ 217.155 (b) (2) (A) (iii) =	26.0%	
	16.	Check if Over Regulated Maximum =	ОК	
	17.	Density of Air @ 20 Deg C =	0.075	
	18.	Ratio of Oxygen to Air =	0.230	
	19.	Diffuser Submergence Correction Factor =	1.690	
	20.	Minimum Air Required for Mixing =	136.800	scfm
	21.	Air Required for Treatment =	789	
	22.	Manufacturer Proposed Air Required for Treatment =	280	scfm
В.	1.	****(Flowrates Must Be Verified Depending on Size, Submergence, etc.)**** Return Scum Scum Pump (1) = RAS (1) =	20	scfm scfm
		WAS (1) =	20	scfm
		Transfer (1) =	20	scfm
	2.	Total Airlifts Air Requirement =	80	scfm
				•
C.	Total A	Air Required =	1,388	scfm
D.	150%	of Design Flow TCEQ 217.155 (b)(5)(c)(iii) for Air Piping =	2,082	scfm
E.	Propo	sed Number of Blowers =	2	# of blowers
F	Invdiv	dual Blower Capacity @ Design Pressure/Largest Out of Service =	1,388	scfm
G.	Propo	sed Maximum Air Loss in Air Piping (Calculated Separately)	1	psig
Н	Design	Pressure of Blower =	5.4	psig
CHLO	RINE DO	SAGE CALCULATIONS		
Α.	Chlori	ne Dosage Rate TCEQ 217.272 (b)	8.0	mg/l
	1.	Calculated Chlorine Dosage Rate @ Design Flow Eq. K.1 TCEQ 217.272 (a)	11	lbs/day
	2.	Calculated Chlorine Dosage Rate @ Peak Flow Eq. K.1 TCEQ 217.272 (a)	44	lbs/day
	3.	System Set-up (Vacuum or Manifold) =	Vacuum	
	4.	Minimum Ambient TemperatureTCEQ 217.275 (a) (1) =	55	Degrees F
	5.	Max Withdrawal Rate for One 150-lb Cylinder TCEQ 217.274 (a) (1)	55	lbs/day
	6.	Max Withdrawal Rate for One Ton Cylinder TCEQ 217.274 (a) (1)	440	lbs/day
	7.	Required Number of 150-lb Cylinders Eq. K.3 TCEQ 217.273 (b)	1	# of cylinders
	8.	Required Number of One Ton Cylinders Eq. K.3 TCEQ 217.273 (b)	1	# of cylinders
	9.	Method of Chlorine Storage ("ton" or "150's") =	150-lb	
	10.	Peak Withdrawal Rate =	55	lbs/day

KEENAN NORTH

WASTEWATER TREATMENT PLANT

WWTP PROCESS SIZING CALCULATIONS

PHASE II: 0.330 MGD 10/31/24

I. DESIGN PARAMETERS

A.	Influe	Influent Composition				
	1.	Influent BOD =	300	mg/l		
	2.	Influent TSS =	300	mg/l		
	3.	Influent NH3-N =	75	mg/l		
В.	Hydra	Hydraulic Considerations				
	1.	Design Flow after Expansion =	0.330	MGD		
	2.	No. 1 Unit Change	229	gpm		
	3.	Hydraulic Peaking Factor for Design =	4.00	Q		
	4.	Peak Hydraulic Flow =	1.32	MGD		
	5.	No. 4 Unit Change	917	gpm		
c.	Influent Composition Mass Loading (based on Raw & Post Primary Split					
	1.	Mass BOD Loading =	826	lb/day		
	2.	Mass TSS Loading =	826	lb/day		
	3.	Mass NH3-N Loading =	206	lb/day		
D.	Effluent Composition					
	1.	Effluent BOD =	0	mg/l		
	2.	Effluent TSS =	0	mg/l		
	3.	Effluent NH3-N =	0	mg/l		
	4.	Effluent TKN =	0	mg/l		
	5.	Phosphorous =	0	mg/l		

KEENAN NORTH

WASTEWATER TREATMENT PLANT

II. ACTIVATED SLUDGE

A.	Aeration Influent Composit	tion			
	Total Design Flow		=	0.33	MGD
	 Total Influent BOD 		=	826	lb/day
	3. Total Influent TSS		=	826	lb/day
	4. Total Influent NH3-I	N	=	206	lb/day
	rotal lillident lillid	•			
В.	TCEQ Organic Loading Crite	eria			
	1. Organic Loading (TC	EQ 217.154)	=	35	lb BOD/1000 cu ft
	2. Organic Loading to	Aeration	=	826	lb/day
	3. Aeration Basin Volu	me Required	=	23,590	cu. ft
c.	C. Minimum Aeration Volume				
		ne Based on controlling criteria	=	23,590	cu. ft
	2. Equivalent Loading	based on Min Volume	=	35.0	lb BOD/1000 cu ft
	Solids Balance Method				
	1. (delta X/delta t)	= Excess Sludge Produced per Day			
	1. (delta /y delta ty	= Xi1 + Xi2 + aSo + a*N - bXv - Xe			
		= 12 : 12 : 135 : 0 : 17 : 570 : 70			
		165.132 lbs/day + 264.2112 lbs/day + (0.6 lb VSS produced / lb BOD			7
		applied)(825.66 lbs/day) + (0.12 lb/VSS produced / lb NH3-N applied)(206.415 lbs/day) - (0.06 lb VSS destroyed / lb MLSS-			
		day)(4390.4 lbs) + 0 lbs/day			
			=	686	lb/day
	Where:	0/ (5) - 1/ (1 - 1/70) - 1/		2004	7.6700
		% of Fixed Influent TSS to Agration Basin	=	20%	of TSS
	V:1 _	(Total Influent TSS to Agration Basin)	=	826	lbs/day
	Xi1 =	Fixed Influent TSS to Aeration Basin % of Non-biodegradable Influent VSS	=	165 40%	lbs/day of VSS
		(Volatile Influent TSS to Aeration Basin)	=	661	lbs/day
	Xi2 =	Non-biodegradable Influent VSS	=	264	lbs/day
	a =	Synthesis Coefficient	=	0.60	lb VSS produced / lb BOD applied
	So =	Influent BOD5	=	826	lbs/day
	a* =	Nitrifier Synthesis Coefficient	=	0.12	lb/ VSS produced / lb NH3-N app
	N =	Influent NH3-N	=	206	lbs/day
	b =	Endogenous Coefficient	=	0.06	lb VSS destroyed / lb MLSS-day
	Xv =	MLVSS in Aeration Basin	=	4,390	lbs
	Xe =	Effluent TSS (based on effluent 5 mg/L)	=	0.0	lbs/day
					_
	Find MLSS in Aeration Basin for WWTP				7
	Ratio of Volatile to	Fotal Suspended Solids	=	0.8	MLVSS / MLSS
	Design MLSS Conce	ntration	=	3,000.0	mg/L
	Estimated MLVSS Co	oncentration	=	2,400.0	mg/L
	Design Solid Retenti	ion Time (SRT)	=	8.0	days
	MLSS in Aeration Ba	isin	=	5,488	lbs
	MLVSS in Aeraton B		=	4,390	lbs
	Verify MLSS Assump	Verify MLSS Assumption (SRT x delta X/delta T)		5,489	lbs
	Fixed Influent TSS to	=	165	lbs/day	
	Nonbiodegradable I		=	264	lbs/day
	Growth Due to Synt		=	495.396	lbs/day
	Growth Due to Synt		=	495.396 25	lbs/day
	Endogenous Destru		=	263	lbs/day
	Endogenous Destru			1 200	1

KEENAN NORTH

WASTEWATER TREATMENT PLANT lbs/day Effluent TSS 0 Excess Sludge Produced per Day 686 lbs/day Design F:M Ratio 0.15 lb BOD / lb SS lbs BOD5 / 1000 cu. Ft. Maximum BOD5 Loading Rate 28.16 Required Aeration Basin Volume 29,324.1 cu. Ft. Hydraulic Retention Time 16.0 hours Required Aeration Basin Volume per Solids Balance Method 5488 lbs / (8.34 x 3000 mg/L)*10^6/7.48 29,324.1 cu. Ft. **Number of Aeration Basin Trains Number of Basins** # trains Design per Flow Basin 0.165 MGD 2. **Aeration Basin Sizing Calculations** 29,324 Minimum Total Volume Required cu. ft 1. 10.50 ft. 2. Assumed Side Water Depth of Aeration Basin Minimum Total Surface Area Required 2,793 sq. ft 3. Minimum Total Surface Area Required per Train 1,396 sq. ft 4. **Proposed Aeration Basin Configuration Proposed Basin Dimensions** Width 12.0 a. 95.0 ft. b. Length Proposed Length to Width Ratio 7.92 2. Number of Aeration Basin Trains (from above) 2 # trains 3. **Total Volume of Proposed Basins** 23,940 cu. ft **Actual Aeration Basin Loading** 34 lb BOD5 / 1000 cu. Ft. 4. Actual Hydraulic Retention Time 13 hours 5. Actual F:M Ratio lb BOD / lb SS 0.18 6. Check of Proposed Total Basin Volume ОК 7.

KEENAN NORTH

WASTEWATER TREATMENT PLANT

III. SE	SECONDARY/FINAL CLARIFICATION						
A.	. Num	nber of Secondary/Final Clarifiers	=	1			
	1.	Total Flow to Clarifiers	=	0.33	MGD		
В.	. Surf	ace Area Design (TCEQ 217.154(c)(1))			_		
	1.	Maximum Surface Loading @ Peak Flow	=	1,200	gpd/sq. ft		
	2.	Surface Area Required @ Peak Flow per Clarifier	=	1,100	sq. ft		
c.	. Hydi	raulic Detention Time Design (TCEQ 217.154(c))					
	1.	Minimum Effective Detention Time @ Peak Flow	=	1.80	Hours		
	2.	Volume Required @ Peak Flow per Clarifier	=	13,235	cu. Ft.		
	3.	Surface Area Required @ Peak Flow (From Above) per Clarifier		1,100	sq. ft.		
_							
D.		nent Weir Design (TCEQ 217.152(c)(4-5))					
	1.	Weir loading for plants 1.0 MGD or less	=	20,000	gpd/ft		
	2.	Weir loading for plants over 1.0 MGD	=	30,000	gpd/ft		
	3.	Controlling Criteria	=	20,000	gpd/ft		
	4.	Total Length of Weir Required @ Peak Flow per Clarifier	=	66.0	ft		
E.	. Clari	ifer Basin Check					
	1.	Number of Clarifiers	=	1	# clarifiers		
	2.	Minimum Surface Area (From Above) per Clarifier	=	1,100	sq. ft.		
	3.	Minimums Volume Time (From Above) per Clarifier	=	13,235	cu. Ft.		
	4.	Minimum Weir Total Length (From Above) per Clarifier	=	66.0	ft		
	5.	Clarifier Size (Circular)	=	42	ft		
	6.	Surface Area Per Clarifier (Circular)	=	1,385	sq. ft.		
	7.	Total Surface Area	=	1,385	sq. ft.		
	8.	Surface Area Check	=	ОК			
	9.	Effective Side Water Depth	=	10.00	ft.		
	10.	Total Clarifer Volume	=	13,854	cu. Ft.		
	11.	Total Clarifer Hydraulic Detention Time (Using Prop. Surface Area)	=	1.9	Hours		
	12.	Hydraulic Detention Time Check	=	ОК			
	13.	Design Weir Width - Width of Launder Trough	=	1.0	ft		
	14.	Distance From Outer Concrete Wall	=	1.0	ft		
	15.	Thickness of Each Launder Trough Walls	=	0.00	ft		
	16.	Subsequent Outer Diameter of Effluent Weir	=	40.0	ft		
	17.	Weir Length per Clarifier	=	125.7	ft		
	18.	Weir Loading @ Peak Flow per Clarifier	=	10,504	gpd/ft		
	19.	Weir Length (Loading Rate) per Clarifier Check	=	ОК			
_	F - 4	Ashirehad Cludes Flour Dates					
F.		Irn Activated Sludge Flow Rates		200			
	1.	Lower Limit Underflow Rate (TCEQ 217.152)	=	200	gpd/sq ft		
	2.	Minimum Total RAS Flow Rate	=	192	gpm		
	3.	Upper Limit Underflow Rate (TCEQ 217.152)	=	400	gpd/sq ft		
	4.	Maximum Total RAS Flow Rate	=	385	gpm		

KEENAN NORTH

WASTEWATER TREATMENT PLANT

IV.	DISIN	DISINFECTION/ CHLORINE CONTACT BASIN						
	A.	1.	Minimum Effective Detention Time @ Peak Flow Ch. 217.281(b)(1)	=	20	minutes		
		2.	Required Volume @ Peak Flow	=	18,333	Gallons		
		3.	Unit Change	=	2,451	cu. Ft.		
		4.	Proposed Basin Dimensions					
			Number of Proposed Basins	=	2			
			Length of Each Basin	=	15			
			Width of Each Basin	=	15			
			Side Water Depth of Each Basin	=	9			
		4.	Total Volume of Proposed Basin	=	4,050	cu. Ft		
		5.	Check of Proposed Total Basin Volume	=	ОК	mins		
		6.	Hydraulic Detetion Time at Design Flow	=	132.2	mins		
		7.	Hydraulic Detetion Time at Peak Flow	=	33.0	mins		
		8.	CHECK	=	ОК			
	B. Chlorine Contact Basin Air					_		
		1.	Air Required (CCB Volume * 20 SCFM/1000 CF)	=	81.0	scfm		
v.	SOLIE	OS HAN	DLING					
	A.	Dige	ster Sizing					
		1.	Percent Biodegradeable Volitile Solids in WAS, %	=	70%			
		2.	Percent Destruction, %	=	30%			
		3.	Digested Solids Production, lbs/day	=	652	lbs/day		
		4.	Solids from Clarifier	=	826	lbs/day		
		5.	Average Solids	=	739	lbs/day		
		6.	Assumed Dig. Conc., mg/l	=	15,000	mg/L		
		7.	Req'd. Retention Time, days (TCEQ 217.249 (t)(4)(b))	=	40	days		
		8.	Req'd. Volume, cf	=	31,588	cu. ft		
		9.	Volume to Loading Ratio. cf/lb BOD/day	=	38.3	cf/lb BOD/day		
	В.	Dige	ster Design					
		1.	Proposed Digester Dimensions			_		
			Width of Each Digester	=	12			
			Length of Each Digester	=	95			
			Side Water Depth of Each Digester	=	10.5			
		2.	Number of Digesters	=	3			
		3.	Total Digester Volume	=	35,910	cu. ft		
		3.	Actual Digester Storage Capacity	=	45	days		
		3.	Digester Volume check	=	OK			
	C.	Dige	ster Air					
		1.	Air Required (Digester Volume x 20scfm/1000cf)	=	718	scfm		

KEENAN NORTH

WASTEWATER TREATMENT PLANT

VI. AIRFLOW CALCULATIONS

VII.

A.	Δerat	on Air Requirements TCEQ 217.155 (b) (2) (c)			
۸.	1.	Total Influent BOD ₅	=	826	lb/day
	2.	Total Influent NH3-N	=	206	lb/day
	3.	BOD5 Removal	=	826	lb/day
	4.	Nh3-N Removal	=	206	lb/day
	5.	Oxygen Required for Carbonaceous Demand TCEQ 217.155 (a) (3)	=	1.2	lbs O ₂ /lb BOD ₅
	6.	Oxygen Required for Carbonaceous Demand TCEQ 217.155 (a) (3)	=	4.3	lbs O ₂ /lb NH3-N
	7.	Oxygen Required per Pound of BOD	=	2.3	
	8.	Depth of Submergence of Diffusers	=	9.00	ft
	9.	Diffuser Type (Coarse or Fine)	=	Fine	
	10.	Clean Water Transfer Efficiency of Fine Bubble Diffuser	=	1.50%	per ft of submergence
	11.	Clean Water Transfer Efficiency @ Stated Depth	=	18.0%	
	12.	Wastewater Transfer Efficiency Coeficient for Fine Bubble Diffusers	=	0.45	
	13.	Wastewater Transfer Efficiency	=	8.1%	
	14.	Manufacturer Proposed SOTE	=	30.0%	
	15.	Maximum Clean Water Transfer Efficiency TCEQ 217.155 (b) (2) (A) (iii)	=	26.0%	
	16.	Check if Over Regulated Maximum	=	ОК	
	17.	Density of Air @ 20 Deg C	=	0.075	
	18.	Ratio of Oxygen to Air	=	0.230	
	19.	Diffuser Submergence Correction Factor	=	1.690	
	20.	Minimum Air Required for Mixing	=	273.600	scfm
	21.	Air Required for Treatment	=	1,578	
	22.	Manufacturer Proposed Air Required for Treatment	=	560	scfm
		Scum Pump (1) RAS (1) WAS (1) Transfer (1)	= = =	20 20 20 20	scfm scfm scfm
	2	Transfer (1)		20	scfm
	2.	Total Airlifts Air Requirement	=	80	scfm
c.	Total	Air Required	=	2,457	scfm
D.		of Design Flow TCEQ 217.155 (b)(5)(c)(iii) for Air Piping	=	3,685	scfm
E.		sed Number of Blowers	=	3	# of blowers
F	-	idual Blower Capacity @ Design Pressure/Largest Out of Service	=	1,228	scfm
G.	Propo	sed Maximum Air Loss in Air Piping (Calculated Separately)	=	1	psig
н	Desig	n Pressure of Blower	=	4.9	psig
					-
CHLO	RINE DO	SAGE CALCULATIONS			_
A.	Chlori	ne Dosage Rate TCEQ 217.272 (b)	=	8.0	mg/l
	1.	Calculated Chlorine Dosage Rate @ Design Flow Eq. K.1 TCEQ 217.272 (a)	=	22	lbs/day
	2.	Calculated Chlorine Dosage Rate @ Peak Flow Eq. K.1 TCEQ 217.272 (a)	=	88	lbs/day
	3.	System Set-up (Vacuum or Manifold)	=	Vacuum	
	4.	Minimum Ambient TemperatureTCEQ 217.275 (a) (1)	=	55	Degrees F
	5.	Max Withdrawal Rate for One 150-lb Cylinder TCEQ 217.274 (a) (1)	=	55	lbs/day
	6.	Max Withdrawal Rate for One Ton Cylinder TCEQ 217.274 (a) (1)	=	440	lbs/day
	7.	Required Number of 150-lb Cylinders Eq. K.3 TCEQ 217.273 (b)	=	2	# of cylinders
	8.	Required Number of One Ton Cylinders Eq. K.3 TCEQ 217.273 (b)	=	1	# of cylinders
	9.	Method of Chlorine Storage ("ton" or "150's")	=	150-lb	
	10.	Peak Withdrawal Rate	=	110	lbs/day

KEENAN NORTH

WASTEWATER TREATMENT PLANT

WWTP PROCESS SIZING CALCULATIONS

PHASE III: 0.495 MGD 10/31/24

I. DESIGN PARAMETERS

A.	A. Influent Composition			
	1.	Influent BOD =	300	mg/l
	2.	Influent TSS =	300	mg/l
	3.	Influent NH3-N =	75	mg/l
В.	Hydra	aulic Considerations		_
	1.	Design Flow after Expansion =	0.495	MGD
	2.	No. 1 Unit Change	344	gpm
	3.	Hydraulic Peaking Factor for Design =	4.00	Q
	4.	Peak Hydraulic Flow =	1.98	MGD
	5.	No. 4 Unit Change	1,375	gpm
c.	Influe	ent Composition Mass Loading (based on Raw & Post Primary Split		_
	1.	Mass BOD Loading =	1,238	lb/day
	2.	Mass TSS Loading =	1,238	lb/day
	3.	Mass NH3-N Loading =	310	lb/day
D.	Efflue	ent Composition		_
	1.	Effluent BOD =	0	mg/l
	2.	Effluent TSS =	0	mg/l
	3.	Effluent NH3-N =	0	mg/l
	4.	Effluent TKN =	0	mg/l
	5.	Phosphorous =	0	mg/l

KEENAN NORTH

WASTEWATER TREATMENT PLANT

ACTIVATED SLUDGE

Α.	Aerat	tion Influent Composition				
Α.	1.	Total Design Flow		=	0.50	MGD
	2.	Total Influent BOD		=	1,238	lb/day
	3.	Total Influent TSS		=	1,238	lb/day
	4.	Total Influent NH3-N		=	310	lb/day
		rotal illiacite Wils W			310	
В.	TCEQ	Organic Loading Criteria				_
	1.	Organic Loading (TCEQ	217.154)	=	35	lb BOD/1000 cu ft
	2.	Organic Loading to Aera	ation	=	1,238	lb/day
	3.	Aeration Basin Volume	Required	=	35,385	cu. ft
C.	Minir	num Aeration Volume				
C.	1.		ased on controlling criteria	=	35,385	cu. ft
	2.	Equivalent Loading base	ed on Min Volume	=	35.0	lb BOD/1000 cu ft
		s Balance Method				
	1.	(delta X/delta t)	= Excess Sludge Produced per Day			
			= Xi1 + Xi2 + aSo + a*N - bXv - Xe			
			= 247.698 lbs/day + 396.3168 lbs/day + (0.6 lb VSS produced / lb BOD)		
			applied)(1238.49 lbs/day) + (0.12 lb/VSS produced / lb NH3-N applied)(309.6225 lbs/day) - (0.06 lb VSS destroyed / lb MLSS-			
			day)(6586.4 lbs) + 0 lbs/day			
				=	1029	lb/day
		Where:				_
			% of Fixed Influent TSS to Aeration Basin	=	20%	of TSS
			(Total Influent TSS to Aeration Basin)	=	1,238	lbs/day
		Xi1 =	Fixed Influent TSS to Aeration Basin	=	248	lbs/day
			% of Non-biodegradable Influent VSS	=	40%	of VSS
			(Volatile Influent TSS to Aeration Basin)	=	991	lbs/day
		Xi2 =	Non-biodegradable Influent VSS	=	396	lbs/day
		a =	Synthesis Coefficient	=	0.60	lb VSS produced / lb BOD applied
		So =	Influent BOD5	=	1,238	lbs/day
		a* =	Nitrifier Synthesis Coefficient	=	0.12	lb/ VSS produced / lb NH3-N app
		N =	Influent NH3-N	=	310	lbs/day
		b =	Endogenous Coefficient	=	0.06	lb VSS destroyed / lb MLSS-day
		Xv =	MLVSS in Aeration Basin	=	6,586	lbs
		Xe =	Effluent TSS (based on effluent 5 mg/L)	=	0.0	lbs/day
		Find MLSS in Aeration B	Basin for WWTP			
		Ratio of Volatile to Tota	al Suspended Solids	=	0.8	MLVSS / MLSS
		Design MLSS Concentra	ation	=	3,000.0	mg/L
		Estimated MLVSS Conce	entration	=	2,400.0	mg/L
		Design Solid Retention	Time (SRT)	=	8.0	days
		MLSS in Aeration Basin		=	8,233	lbs
		MLVSS in Aeraton Basin	1	=	6,586	lbs
		Verify MLSS Assumption	n (SRT x delta X/delta T)	=	8,233	lbs
		Floral Inflores TOO 10	senting Design		246	
		Fixed Influent TSS to Ae		=	248	lbs/day
		Nonbiodegradable Influ		=	396	lbs/day
		Growth Due to Synthesi		=	743.094	lbs/day
		Growth Due to Nitrifiers		=	37	lbs/day
		Endogenous Destruction	11	=	395	lbs/day

KEENAN NORTH

WASTEWATER TREATMENT PLANT lbs/day Effluent TSS 0 Excess Sludge Produced per Day 1,029 lbs/day Design F:M Ratio 0.15 lb BOD / lb SS Maximum BOD5 Loading Rate lbs BOD5 / 1000 cu. Ft. 28.15 Required Aeration Basin Volume 43,991.5 cu. Ft. Hydraulic Retention Time 16.0 hours Required Aeration Basin Volume per Solids Balance Method 8233 lbs / (8.34 x 3000 mg/L)*10^6/7.48 43,991.5 cu. Ft. **Number of Aeration Basin Trains Number of Basins** # trains Design per Flow Basin 0.124 MGD 2. **Aeration Basin Sizing Calculations** Minimum Total Volume Required 43,992 cu. ft 1. ft. 2. Assumed Side Water Depth of Aeration Basin 10.50 Minimum Total Surface Area Required 4,190 sq. ft 3. Minimum Total Surface Area Required per Train 1,047 sq. ft 4. **Proposed Aeration Basin Configuration Proposed Basin Dimensions** Width 12.0 a. 95.0 ft. b. Length Proposed Length to Width Ratio 7.92 2. Number of Aeration Basin Trains (from above) 4 # trains 3. **Total Volume of Proposed Basins** 47,880 cu. ft **Actual Aeration Basin Loading** 26 lb BOD5 / 1000 cu. Ft. 4. Actual Hydraulic Retention Time 17 hours 5. Actual F:M Ratio lb BOD / lb SS 0.14 6. Check of Proposed Total Basin Volume ОК 7.

KEENAN NORTH

WASTEWATER TREATMENT PLANT

III.	SECO	NDARY	//FINAL CLARIFICATION			
	A.	Num	ber of Secondary/Final Clarifiers	=	2	
		1.	Total Flow to Clarifiers	=	0.50	MGD
	В.	Surfa	ace Area Design (TCEQ 217.154(c)(1))			
		1.	Maximum Surface Loading @ Peak Flow	=	1,200	gpd/sq. ft
		2.	Surface Area Required @ Peak Flow per Clarifier	=	825	sq. ft
	C.	Hydi	raulic Detention Time Design (TCEQ 217.154(c))			_
		1.	Minimum Effective Detention Time @ Peak Flow	=	1.80	Hours
		2.	Volume Required @ Peak Flow per Clarifier	=	9,926	cu. Ft.
		3.	Surface Area Required @ Peak Flow (From Above) per Clarifier		825	sq. ft.
	D.		ent Weir Design (TCEQ 217.152(c)(4-5))			\neg
		1.	Weir loading for plants 1.0 MGD or less	=	20,000	gpd/ft
		2.	Weir loading for plants over 1.0 MGD	=	30,000	gpd/ft
		3.	Controlling Criteria	=	20,000	gpd/ft
		4.	Total Length of Weir Required @ Peak Flow per Clarifier	=	49.5	ft
	_	01	for Particular I			
	E.		fer Basin Check			
		1.	Number of Clarifiers	=	2	# clarifiers
		2.	Minimum Surface Area (From Above) per Clarifier	=	825	sq. ft.
		3.	Minimums Volume Time (From Above) per Clarifier	=	9,926	cu. Ft.
		4.	Minimum Weir Total Length (From Above) per Clarifier	=	49.5	ft
		5.	Clarifier Size (Circular)	=	42	ft
		6.	Surface Area Per Clarifier (Circular)	=	1,385	sq. ft.
		7.	Total Surface Area	=	2,771	sq. ft.
		8.	Surface Area Check	=	OK	
		9.	Effective Side Water Depth	=	12.00	ft.
		10.	Total Clarifer Volume	=	33,250	cu. Ft.
		11.	Total Clarifer Hydraulic Detention Time (Using Prop. Surface Area)	=	3.0	Hours
		12.	Hydraulic Detention Time Check	=	OK	6.
		13.	Design Weir Width - Width of Launder Trough	=	1.0	ft
		14.	Distance From Outer Concrete Wall	=	1.0	ft
		15.	Thickness of Each Launder Trough Walls	=	0.00	ft
		16.	Subsequent Outer Diameter of Effluent Weir	=	40.0	ft
		17.	Weir Length per Clarifier	=	125.7	ft
		18. 19.	Weir Loading @ Peak Flow per Clarifier	=	7,878 OK	gpd/ft
		19.	Weir Length (Loading Rate) per Clarifier Check	=	- OK	
	F.	Retu	rn Activated Sludge Flow Rates			
		1.	Lower Limit Underflow Rate (TCEQ 217.152)	=	200	gpd/sq ft
		2.	Minimum Total RAS Flow Rate	=	385	gpm
		3.	Upper Limit Underflow Rate (TCEQ 217.152)	=	400	gpd/sq ft
		4.	Maximum Total RAS Flow Rate	=	770	gpm

KEENAN NORTH

WASTEWATER TREATMENT PLANT

IV. DI	ISINFECTION	ON/ CHLORINE CONTACT BASIN			
A.	. 1.	Minimum Effective Detention Time @ Peak Flow Ch. 217.281(b)(1)	=	20	minutes
	2.	Required Volume @ Peak Flow	=	27,500	Gallons
	3.	Unit Change	=	3,676	cu. Ft.
	4.	Proposed Basin Dimensions			
		Number of Proposed Basins	=	2	
		Length of Each Basin	=	15	
		Width of Each Basin	=	15.0	
		Side Water Depth of Each Basin	=	9	
	4.	Total Volume of Proposed Basin	=	4,050	cu. Ft
	5.	Check of Proposed Total Basin Volume	=	ОК	mins
	6.	Hydraulic Detetion Time at Design Flow	=	88.1	mins
	7.	Hydraulic Detetion Time at Peak Flow	=	22.0	mins
	8.	CHECK	=	ОК	
В.	. Chlo	orine Contact Basin Air			
	1.	Air Required (CCB Volume * 20 SCFM/1000 CF)	=	81.0	scfm
v. sc	OLIDS HAN	NDLING			
Α.	. Dige	ester Sizing			
	1.	Percent Biodegradeable Volitile Solids in WAS, %	=	70%	
	2.	Percent Destruction, %	=	30%	
	3.	Digested Solids Production, lbs/day	=	978	lbs/day
	4.	Solids from Clarifier	=	1,238	lbs/day
	5.	Average Solids	=	1,108	lbs/day
	6.	Assumed Dig. Conc., mg/l	=	15,000	mg/L
	7.	Req'd. Retention Time, days (TCEQ 217.249 (t)(4)(b))	=	28	days
	8.	Req'd. Volume, cf	=	33,168	cu. ft
	9.	Volume to Loading Ratio. cf/lb BOD/day	=	26.8	cf/lb BOD/day
В.	. Dige	ester Design			
	1.	Proposed Digester Dimensions			
		Width of Each Digester	=	12	
		Length of Each Digester	=	95	
		Side Water Depth of Each Digester	=	10.5	
	2.	Number of Digesters	=	3	
	3.	Total Digester Volume	=	35,910	cu. ft
	3.	Actual Digester Storage Capacity	=	30	days
	3.	Digester Volume check	=	ОК	
C.	. Dige	ester Air			
	1.	Air Required (Digester Volume x 20scfm/1000cf)	=	718	scfm

KEENAN NORTH

WASTEWATER TREATMENT PLANT

VI. AIRFLOW CALCULATIONS

VII.

A.	Aerati	on Air Requirements TCEQ 217.155 (b) (2) (c)			_
	1.	Total Influent BOD ₅	=	1,238	lb/day
	2.	Total Influent NH3-N	=	310	lb/day
	3.	BOD5 Removal	=	1,238	lb/day
	4.	Nh3-N Removal	=	310	lb/day
	5.	Oxygen Required for Carbonaceous Demand TCEQ 217.155 (a) (3)	=	1.2	lbs O ₂ /lb BOD ₅
	6.	Oxygen Required for Carbonaceous Demand TCEQ 217.155 (a) (3)	=	4.3	lbs O₂/lb NH3-N
	7.	Oxygen Required per Pound of BOD	=	2.3	
	8.	Depth of Submergence of Diffusers	=	9.00	ft
	9.	Diffuser Type (Coarse or Fine)	=	Fine	
	10.	Clean Water Transfer Efficiency of Fine Bubble Diffuser	=	1.50%	per ft of submergence
	11.	Clean Water Transfer Efficiency @ Stated Depth	=	18.0%	
	12.	Wastewater Transfer Efficiency Coeficient for Fine Bubble Diffusers	=	0.45	
	13.	Wastewater Transfer Efficiency	=	8.1%	
	14.	Manufacturer Proposed SOTE	=	30.0%	
	15.	Maximum Clean Water Transfer Efficiency TCEQ 217.155 (b) (2) (A) (iii)	=	26.0%	
	16.	Check if Over Regulated Maximum	=	ОК	
	17.	Density of Air @ 20 Deg C	=	0.075	
	18.	Ratio of Oxygen to Air	=	0.230	
	19.	Diffuser Submergence Correction Factor	=	1.690	
	20.	Minimum Air Required for Mixing	=	547.200	scfm
	21.	Air Required for Treatment	=	2,367	
	22.	Manufacturer Proposed Air Required for Treatment	=	840	scfm
В.	Airlifts 1.		=	20	scfm
		10.00 (2)	=	20	scfm scfm
		- A 444	=	20	scfm
	2.		=	80	scfm
		Total / III III o / III Tequile II e II		- 55	J
C.	Total A	Air Required	=	3,246	scfm
D.	150%	of Design Flow TCEQ 217.155 (b)(5)(c)(iii) for Air Piping	=	4,869	scfm
E.	Propo	sed Number of Blowers	=	3	# of blowers
F	Invdiv	idual Blower Capacity @ Design Pressure/Largest Out of Service	=	1,623	scfm
G.	Propo	sed Maximum Air Loss in Air Piping (Calculated Separately)	=	1	psig
н	Design	Pressure of Blower	=	4.9	psig
СНГО	RINE DO	SAGE CALCULATIONS			
A.	Chlori	ne Dosage Rate TCEQ 217.272 (b)	=	8.0	mg/l
	1.	Calculated Chlorine Dosage Rate @ Design Flow Eq. K.1 TCEQ 217.272 (a)	=	33	lbs/day
	2.	Calculated Chlorine Dosage Rate @ Peak Flow Eq. K.1 TCEQ 217.272 (a)	=	132	lbs/day
	3.	System Set-up (Vacuum or Manifold)	=	Vacuum	
	4.	Minimum Ambient TemperatureTCEQ 217.275 (a) (1)	=	55	Degrees F
	5.	Max Withdrawal Rate for One 150-lb Cylinder TCEQ 217.274 (a) (1)	=	55	lbs/day
	6.	Max Withdrawal Rate for One Ton Cylinder TCEQ 217.274 (a) (1)	=	440	lbs/day
	7.	Required Number of 150-lb Cylinders Eq. K.3 TCEQ 217.273 (b)	=	3	# of cylinders
	8.	Required Number of One Ton Cylinders Eq. K.3 TCEQ 217.273 (b)	=	1	# of cylinders
	9.	Method of Chlorine Storage ("ton" or "150's")	=	150-lb	
	10.	Peak Withdrawal Rate	=	165	lbs/day

Domestic Wastewater Permit Application Keenan North Development, Ltd. TPDES Permit No. TBD NPDES Permit No. TBD A&S Project No. 540008.02

EXHIBIT 18

SOLIDS MANAGEMENT PLAN



SLUDGE MANAGEMENT PLAN OLD HOCKLEY

Proposed Phase I – 0.500 MGD

1. Type of Treatment Process

AERATION BASINS

The proposed facility is a 0.495 million gallons per day (MGD) conventional activated sludge process utilizing an aeration basin. The following table shows the process design and sludge generation calculations for the design flow of this facility.

BOD = 300 mg/l x 8.34 lbs/gal x 0.495 MGD = 1,240 lbs BOD per Day

2. Dimensions and Capacities

AEROBIC DIGESTER

The treatment facility has two solids holding tank with maximum total volume of 35,910 cubic feet. The tanks are 12-feet W by 95-feet L with 10.5-foot side water depth.

The total Digester capacity of 35,910 cubic feet is greater than the required digester capacity based on 20 cubic feet per lb. of BOD times 1,240 lbs of BOD loading for the 0.495 MGD WWTP.

3. Sludge Generation Calculations

Sludge generation calculations showing the amount of solids generated at 100%, 75%, 50% and 25% of design flow are included in the following tables. These represent the solids that must be wasted from the activated sludge process and that must be stabilized in the aerobic digester.

Solids @ 100%	Solids @ 75%	Solids @ 50%	Solids @ 25%
Qavg lb/day	Qavg lb/day	Qavg lb/day	Qavg lb/day
1,240	930	620	310

4. Operating Range of Mixed Liquor Suspended Solids

It is anticipated that the MLSS for all phases will be approximately 2,400 mg/l on the average. The range for MLSS is anticipated to be between 2,000 and 4,000 mg/l during various stages of loading.

5. Solids Removal Procedures

Conventional Aerated Mixed Liquor WWTP

The removal of waste activated sludge from the proposed conventional aerated mixed liquor activated sludge WWTP is achieved by wasting sludge from the clarifier and transferred by airlift pump to the aerobic digester. Additional thickening of sludge prior to transfer to the digester by periodically, (two or three times per week) having the air supply and mixing in the aerobic digester shut off allowing solids to settle to the bottom of the digester. The supernatant liquor is decanted by an adjustable decant airlift pump located in each digester and is returned to influent grinder pump station via the plant drain system. After sufficient digestion, sludge is hauled in liquid form by a licensed transporter. The liquid sludge is transported to registered site.

6. Quantity of Solids to be Removed and Solids Removal Schedule

The quantity of solids to be removed at various plant loadings are presented in the following table. The quantities shown in the tabulation are monthly quantities based upon the influent BOD of 300 mg/l and TSS of 300 mg/l. If the strength of the influent wastewater varies significantly, solids removal quantities will be different.

PHASE	@100% Flow		@75%	Flow	@50%	@50% Flow		Flow
Ш	Capacity		Capaci	ty	Capaci	ty	Capacity	
0.495	%	Gal/Day	%	Gal/Day	%	Gal/Day	%	Gal/Day
MGD	Solids	-	Solids	-	Solids	•	Solids	_
	2.5	12,375	2.5	9,281	2.5	6,187	2.5	3,093

Sludge Age

The sludge age based on having 35,910 cubic feet (268,625 gallons) of total digester capacity, 2.5% solids and the above generated sludge volume is 21 days for 100% flow capacity, 29 days for 75% capacity, 42 days for 50% capacity and 86 days for 25% capacity.

7. Identification of Disposal Site

The disposal of sludge from the WWTP will be contracted to a sludge management and disposal contractor for either further treatment or disposal. The sludge will be hauled to either to treatment facility permitted to handle sludge or a registered land fill or a land application site. Solids documentation will be assured by measuring the volume of each sludge withdrawal and measuring the sludge solids concentrations. All required data will be included in the annual sludge report to the TCEQ.

SLUDGE MANAGEMENT PLAN OLD HOCKLEY

Proposed Phase I – 0.165 MGD

1. Type of Treatment Process

AERATION BASINS

The proposed facility is a 0.165 million gallons per day (MGD) conventional activated sludge process utilizing an aeration basin. The following table shows the process design and sludge generation calculations for the design flow of this facility.

BOD = 300 mg/l x 8.34 lbs/gal x 0.165 MGD = 413 lbs BOD per Day

2. Dimensions and Capacities

AEROBIC DIGESTER

The treatment facility has a solids holding tank with maximum total volume of 23,940 cubic feet. The tanks are 12-feet W by 95-feet L with 10.5 foot side water depth.

The total Digester capacity of 11,970 cubic feet is greater than the required digester capacity based on 20 cubic feet per lb. of BOD times 413 lbs of BOD loading for the 0.165 MGD WWTP.

3. Sludge Generation Calculations

Sludge generation calculations showing the amount of solids generated at 100%, 75%, 50% and 25% of design flow are included in the following tables. These represent the solids that must be wasted from the activated sludge process and that must be stabilized in the aerobic digester.

Solids @ 100%	Solids @ 75%	Solids @ 50%	Solids @ 25%
Qavg lb/day	Qavg lb/day	Qavg lb/day	Qavg lb/day
413	310	207	103

4. Operating Range of Mixed Liquor Suspended Solids

It is anticipated that the MLSS for all phases will be approximately 2,400 mg/l on the average. The range for MLSS is anticipated to be between 2,000 and 4,000 mg/l during various stages of loading.

5. Solids Removal Procedures

Conventional Aerated Mixed Liquor WWTP

The removal of waste activated sludge from the proposed conventional aerated mixed liquor activated sludge WWTP is achieved by wasting sludge from the clarifier and transferred by airlift pump to the aerobic digester. Additional thickening of sludge prior to transfer to the digester by periodically, (two or three times per week) having the air supply and mixing in the aerobic digester shut off allowing solids to settle to the bottom of the digester. The supernatant liquor is decanted by an adjustable decant airlift pump located in each digester and is returned to influent grinder pump station via the plant drain system. After sufficient digestion, sludge is hauled in liquid form by a licensed transporter. The liquid sludge is transported to registered site.

6. Quantity of Solids to be Removed and Solids Removal Schedule

The quantity of solids to be removed at various plant loadings are presented in the following table. The quantities shown in the tabulation are monthly quantities based upon the influent BOD of 300 mg/l and TSS of 300 mg/l. If the strength of the influent wastewater varies significantly, solids removal quantities will be different.

PHASE I	@100% Flow		@75%	Flow	@50% Flow		Flow	
	Capacity		Capaci	ty	Capacity Capacity		ty	
0.165	%	Gal/Day	%	Gal/Day	%	Gal/Day	%	Gal/Day
MGD	Solids	-	Solids	-	Solids	-	Solids	-
	2.5	4,125	2.5	3,094	2.5	2,063	2.5	1,031

Sludge Age

The sludge age based on having 23,940 cubic feet (179,083 gallons) of total digester capacity, 2.5% solids and the above generated sludge volume is 43 days for 100% flow capacity, 57 days for 75% capacity, 86 days for 50% capacity and 173 days for 25% capacity.

7. Identification of Disposal Site

The disposal of sludge from the WWTP will be contracted to a sludge management and disposal contractor for either further treatment or disposal. The sludge will be hauled to either to treatment facility permitted to handle sludge or a registered land fill or a land application site. Solids documentation will be assured by measuring the volume of each sludge withdrawal and measuring the sludge solids concentrations. All required data will be included in the annual sludge report to the TCEQ.

SLUDGE MANAGEMENT PLAN OLD HOCKLEY

Proposed Phase I – 0.330 MGD

1. Type of Treatment Process

AERATION BASINS

The proposed facility is a 0.330 million gallons per day (MGD) conventional activated sludge process utilizing an aeration basin. The following table shows the process design and sludge generation calculations for the design flow of this facility.

BOD = 300 mg/l x 8.34 lbs/gal x 0.330 MGD = 826 lbs BOD per Day

2. Dimensions and Capacities

AEROBIC DIGESTER

The treatment facility has two solids holding tank with maximum total volume of 35,910 cubic feet. The tanks are 12-feet W by 95-feet L with 10.5 foot side water depth.

The total Digester capacity of 26,208 cubic feet is greater than the required digester capacity based on 20 cubic feet per lb. of BOD times 826 lbs of BOD loading for the 0.330 MGD WWTP.

3. Sludge Generation Calculations

Sludge generation calculations showing the amount of solids generated at 100%, 75%, 50% and 25% of design flow are included in the following tables. These represent the solids that must be wasted from the activated sludge process and that must be stabilized in the aerobic digester.

Solids @ 100%	Solids @ 75%	Solids @ 50%	Solids @ 25%
Qavg lb/day	Qavg lb/day	Qavg lb/day	Qavg lb/day
826	620	414	206

4. Operating Range of Mixed Liquor Suspended Solids

It is anticipated that the MLSS for all phases will be approximately 2,400 mg/l on the average. The range for MLSS is anticipated to be between 2,000 and 4,000 mg/l during various stages of loading.

5. Solids Removal Procedures

Conventional Aerated Mixed Liquor WWTP

The removal of waste activated sludge from the proposed conventional aerated mixed liquor activated sludge WWTP is achieved by wasting sludge from the clarifier and transferred by airlift pump to the aerobic digester. Additional thickening of sludge prior to transfer to the digester by periodically, (two or three times per week) having the air supply and mixing in the aerobic digester shut off allowing solids to settle to the bottom of the digester. The supernatant liquor is decanted by an adjustable decant airlift pump located in each digester and is returned to influent grinder pump station via the plant drain system. After sufficient digestion, sludge is hauled in liquid form by a licensed transporter. The liquid sludge is transported to registered site.

6. Quantity of Solids to be Removed and Solids Removal Schedule

The quantity of solids to be removed at various plant loadings are presented in the following table. The quantities shown in the tabulation are monthly quantities based upon the influent BOD of 300 mg/l and TSS of 300 mg/l. If the strength of the influent wastewater varies significantly, solids removal quantities will be different.

	PHASE	@100% Flow		@75%	Flow	@50%	50% Flow @25% Flow		Flow
	II	Capacity		Capaci	ty	Capaci	ty	Capacity	
Ī	0.330	%	Gal/Day	%	Gal/Day	%	Gal/Day	%	Gal/Day
	MGD	Solids		Solids		Solids	-	Solids	_
		2.5	8,250	2.5	6,187	2.5	4,125	2.5	2,062

Sludge Age

The sludge age based on having 35,910 cubic feet (268,625 gallons) of total digester capacity, 2.5% solids and the above generated sludge volume is 32 days for 100% flow capacity, 43 days for 75% capacity, 64 days for 50% capacity and 130 days for 25% capacity.

7. Identification of Disposal Site

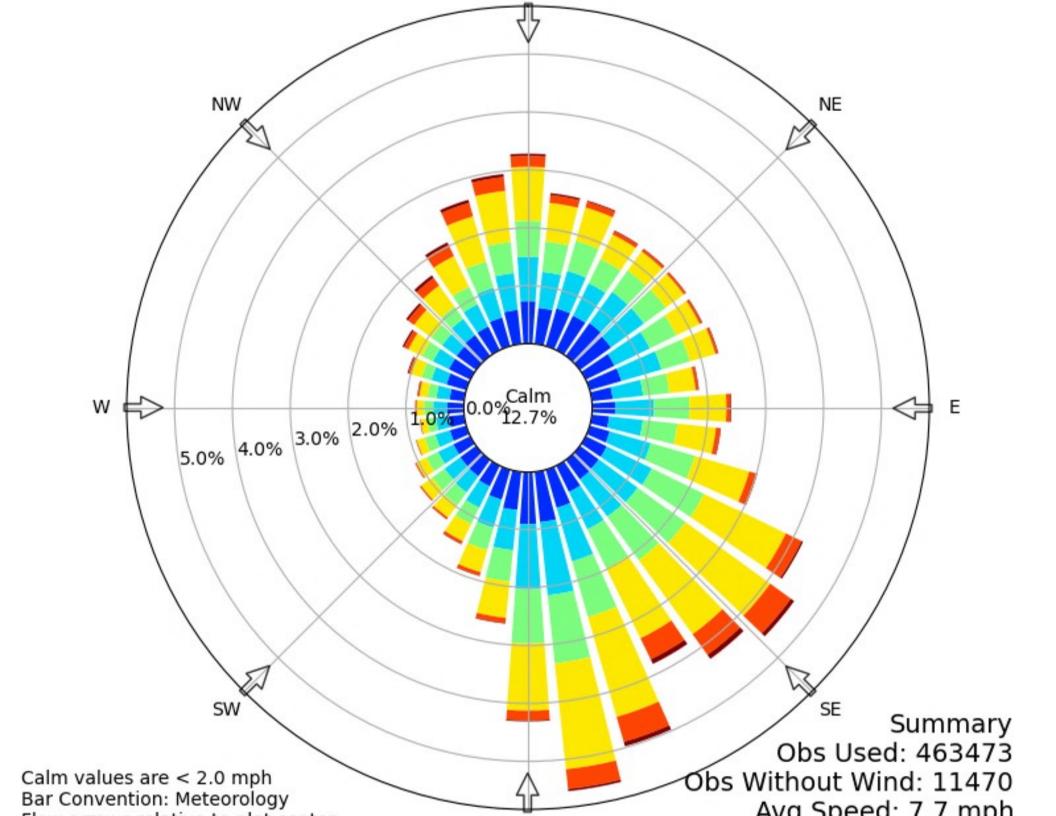
The disposal of sludge from the WWTP will be contracted to a sludge management and disposal contractor for either further treatment or disposal. The sludge will be hauled to either to treatment facility permitted to handle sludge or a registered land fill or a land application site. Solids documentation will be assured by measuring the volume of each sludge withdrawal and measuring the sludge solids concentrations. All required data will be included in the annual sludge report to the TCEQ.

Domestic Wastewater Permit Application Keenan North Development, Ltd. TPDES Permit No. TBD NPDES Permit No. TBD A&S Project No. 540008.02

EXHIBIT 19

WIND ROSE





Domestic Wastewater Permit Application Keenan North Development, Ltd. TPDES Permit No. TBD NPDES Permit No. TBD A&S Project No. 540008.02

EXHIBIT 20

CORE DATA FORM





TCEQ Core Data Form

For detailed instructions on completing this form, please read the Core Data Form Instructions or call 512-239-5175.

SECTION I: General Information

1. Reason for	Submissi	i on (If other is checked	l please describe	e in space pr	rovided.)						
New Perr	nit, Registra	ation or Authorization	(Core Data Forn	n should be s	submitted	with the pro	gram application.)				
Renewal	Renewal (Core Data Form should be submitted with the renewal form)				Other						
2. Customer	2. Customer Reference Number (if issued) Follow this link to sear				rch 3. Ro	egulated Entity F	Reference	Number (if i	issued)		
CN				for CN or RN Central R	N numbers Registry**	s in RN					
SECTIO	N II:	<u>Customer</u>	Inform	<u>nation</u>	<u>1</u>						
			1								
4. General Cu	ıstomer Ir	nformation	5. Effective	Date for Cu	ustomer	Information	updates (mm/d	d/yyyy)			
New Custo	mer		pdate to Custor	mer Informa	ition	Cha	ange in Regulated E	ntity Own	ership		
☐Change in L	egal Name	(Verifiable with the Te	xas Secretary of	State or Tex	kas Compt	roller of Publ	ic Accounts)				
The Custome	r Name sı	ubmitted here may	be updated au	utomaticali	lly based	on what is	current and activ	ve with th	he Texas Seci	retary of State	
(SOS) or Texa	s Comptro	oller of Public Accou	ınts (CPA).								
6. Customer	Legal Nam	ne (If an individual, pri	nt last name firs	st: eg: Doe, J	John)		If new Custome	r, enter pr	evious Custom	ner below:	
Keenan North	Developme	ent. Ltd.									
7. TX SOS/CP	A Filing N	umber	8. TX State 1	Гах ID (11 d	ligits)		9. Federal Tax	(ID	applicable)	10. DUNS Number (if	
							(9 digits)		иррпсиые)		
							99-2592231				
		<u></u>				r	33 2332231				
11. Type of C	ustomer:	☐ Corpora	tion			☐ Indiv	idual	Partne	ership: 🗌 Ger	neral 🛛 Limited	
Government: [City 🔲	County 🗌 Federal 📗	Local State	Other		Sole	Proprietorship	□ Ot	her:		
12. Number	of Employ	ees				•	13. Independ	ently Ow	ned and Ope	erated?	
⊠ 0-20	21-100 [101-250 251-	500 🗌 501 a	and higher			⊠ Yes	☐ No			
14. Customer	r Role (Pro	posed or Actual) – as i	t relates to the	Regulated Er	ntity listed	on this form	. Please check one	of the follo	owing		
Owner		Operator	⊠ Ow	ner & Opera	ator						
Occupation	al Licensee	Responsible Pa	rty 🔲 V	/CP/BSA App	plicant		☐ Othe	er:			
45 84 '"	28408 Sv	veetgum Road, Suite B	3								
15. Mailing											
Address:	City	Magnolia		State	TX	ZIP	77354		ZIP + 4		
	J,						1.331				
16. Country I	Mailing In	formation (if outside	USA)			17. E-Mail <i>I</i>	Address (if applica	ble)			
						OZAN_TWIST	@HOTMAIL.COM				
18. Telephon	e Number	•	1	9. Extensio	on or Cod	de	20. Fax	Number	(if applicable)		

TCEQ-10400 (11/22) Page 1 of 3

() - 832-375-989	7
-------------------	---

SECTION III: Regulated Entity Information

21. General Regulated En	tity Informa	ation (If 'New Regul	ated Entity" is sele	ected, a new	permit applica	ation is a	Ilso required.)		
New Regulated Entity [Update to	Regulated Entity Na	ame 🔲 Update	to Regulated	d Entity Inform	nation			
The Regulated Entity Nan as Inc, LP, or LLC).	ne submitte	d may be updated	d, in order to m	eet TCEQ Co	ore Data Sta	ndards	(removal of or	rganization	al endings such
22. Regulated Entity Nam	e (Enter nam	ne of the site where t	the regulated action	on is taking p	lace.)				
Keenan North WWTP									
23. Street Address of the Regulated Entity:	TBD Keenan Cutoff Rd								
(No PO Boxes)	City	Montgomery	State	TX	ZIP	7731	6	ZIP + 4	
24. County	Montgome	ry							<u> </u>
		If no Street	Address is prov	ided, fields	25-28 are re	quired	•		
25. Description to Physical Location:	Approximat	ely 1 mile northwest	t of the intersection	on of Keenan	Cutoff Rd and	FM 285	4 in Montgomer	y County.	
26. Nearest City						State		Nea	rest ZIP Code
Montgomery						TX		7731	16
Latitude/Longitude are required and may be added/updated to meet TCEQ Core Data Standards. (Geocoding of the Physical Address may be used to supply coordinates where none have been provided or to gain accuracy).									
_	-					aras. (G	eocoaing of th	ie Pnysicai	Address may be
_	es where no			accuracy).		-		ie Physical	Address may be
used to supply coordinate	es where no	ne have been pro		accuracy).	Longitude (\	-		e Physical	Seconds
used to supply coordinate 27. Latitude (N) In Decima	es where no	ne have been pro	vided or to gair	accuracy).	Longitude (\	-	ecimal:	e Physical	
27. Latitude (N) In Decima Degrees	Minutes 30.	ne have been pro	econds	28.	Longitude (Verees 95	W) In De	ecimal: Minutes 39	ndary NAIC	Seconds 45.7
27. Latitude (N) In Decima Degrees 30 29. Primary SIC Code	Minutes 30.	19 Secondary SIC Co	econds	28. Degr	Longitude (Verees 95 Pary NAICS Cogits)	W) In De	ecimal: Minutes 39 32. Seco	ndary NAIC	Seconds 45.7
Degrees 30 29. Primary SIC Code (4 digits)	Minutes 30.	Secondary SIC Co	econds 56.4	28. Degr 31. Prima (5 or 6 dig	95 Pary NAICS Cogits)	W) In De	ecimal: Minutes 39 32. Seco	ndary NAIC	Seconds 45.7
used to supply coordinate 27. Latitude (N) In Decima Degrees 30 29. Primary SIC Code (4 digits) 4952	Minutes 30. (4 d	Secondary SIC Co	econds 56.4	28. Degr 31. Prima (5 or 6 dig	95 Pary NAICS Cogits)	W) In De	ecimal: Minutes 39 32. Seco	ndary NAIC	Seconds 45.7
Degrees 29. Primary SIC Code (4 digits) 4952 33. What is the Primary B	Minutes 30. (4 d	Secondary SIC Co	econds 56.4 ode	28. Degr 31. Prima (5 or 6 dig	95 Pary NAICS Cogits)	W) In De	ecimal: Minutes 39 32. Seco	ndary NAIC	Seconds 45.7
used to supply coordinate 27. Latitude (N) In Decima Degrees 30 29. Primary SIC Code (4 digits) 4952 33. What is the Primary B Wastewater treatment plant	Minutes 30. (4 d	Secondary SIC Codigits) this entity? (Do note the control of the	econds 56.4 ode not repeat the SIC	28. Degr 31. Prima (5 or 6 dig	rees 95 ary NAICS Cogits) 20 cription.)	W) In Do	ecimal: Minutes 39 32. Seco (5 or 6 dig	ndary NAIC	Seconds 45.7
27. Latitude (N) In Decimal Degrees 30 29. Primary SIC Code (4 digits) 4952 33. What is the Primary B Wastewater treatment plant 34. Mailing Address:	Minutes 30. (4 d	Secondary SIC Codigits) Chis entity? (Do note the settle of the settle	econds 56.4 ode State	28. Degr 31. Prima (5 or 6 dig	95 Pary NAICS Cogits)	W) In De	ecimal: Minutes 39 32. Seco (5 or 6 dig	ndary NAIC	Seconds 45.7
27. Latitude (N) In Decimal Degrees 30 29. Primary SIC Code (4 digits) 4952 33. What is the Primary B Wastewater treatment plant 34. Mailing Address: 35. E-Mail Address:	Minutes 30. (4 d	Secondary SIC Codigits) Chis entity? (Do note the set gum Road, Suite Magnolia AN_TWIST@HOTMA	econds 56.4 ode State ML.COM	28. Degr 31. Prima (5 or 6 dig	rees 95 ary NAICS Cogits) 20 cription.)	W) In Do	ecimal: Minutes 39 32. Seco (5 or 6 dig	ndary NAIC gits)	Seconds 45.7
27. Latitude (N) In Decimal Degrees 30 29. Primary SIC Code (4 digits) 4952 33. What is the Primary B Wastewater treatment plant 34. Mailing Address:	Minutes 30. (4 d	Secondary SIC Codigits) Chis entity? (Do note the set gum Road, Suite Magnolia AN_TWIST@HOTMA	econds 56.4 ode State	28. Degr 31. Prima (5 or 6 dig	rees 95 ary NAICS Cogits) 20 cription.)	W) In Do	ecimal: Minutes 39 32. Seco (5 or 6 dig	ndary NAIC gits)	Seconds 45.7

39. TCEQ Programs and ID Numbers Check all Programs and write in the permits/registration numbers that will be affected by the updates submitted on this form. See the Core Data Form instructions for additional guidance.

TCEQ-10400 (11/22) Page 2 of 3

☐ Dam Safety		Districts	Districts Edwards Aquifer		Emissions Inventory Air		☐ Industrial Hazardous Waste	
Municipal Solid Waste		New Source Review Air	OSSF		Petroleum St	orage Tank	☐ PWS	
Sludge		Storm Water	☐ Title V Air		Tires		Used Oil	
☐ Voluntary Cleanu	h		☐ Wastewater Agricul	lture	☐ Water Rights		Other:	
SECTION I	V: Pre	eparer Inf	<u>ormation</u>					
40. Name: Eric	Williams, PE			41. Title:	Project Ma	nager		
42. Telephone Num	nber	43. Ext./Code	44. Fax Number	45. E-Ma	il Address			
(713)942-2700		() -	- elw@as-engineers.com					
SECTION V	/: Aut	horized S	<u>ignature</u>					
46. By my signature be	low, I certify,	to the best of my kno					e, and that I have signature authority ntified in field 39.	
Company:	Keenan No	orth Development, Ltd.	0	Job Title:	President			
Name (In Print):	Ahmet Oza	an /				Phone:	(832) 375- 9897	
Signature:	>	Ju				Date:	11/04/2024	

Domestic Wastewater Permit Application Keenan North Development, Ltd. TPDES Permit No. TBD NPDES Permit No. TBD A&S Project No. 540008.02

EXHIBIT 21

PLAIN LANGUAGE SUMMARY



TCEQ

TEXAS COMMISSION ON ENVIRONMENTAL QUALITY

PLAIN LANGUAGE SUMMARY FOR TPDES OR TLAP PERMIT APPLICATIONS

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

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

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

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

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

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

Keenan North Development, Ltd. (CN TBD) proposes to operate Keenan North WWTP (RN TBD), a domestic wastewater treatment plant. The facility will be located at approximately 1 mile northwest of the intersection of Keenan Cutoff Rd and FM 2854, in Montgomery, Montgomery County, Texas 77355. Requesting to permit a WWTP to treat up to 0.495 MGD.

Discharges from the facility are expected to contain five-day carbonaceous biochemical oxygen demand (CBOD5), total suspended solids (TSS), ammonia nitrogen (NH3-N). Domestic wastewater will be treated by a complete mix mode of activated sludge process, including screening, aeration, final clarification, and disinfection..

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

AGUAS RESIDUALES DOMESTICAS /AGUAS PLUVIALES

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

Keenan North Development, Ltd. (CN TPD) propone operar Keenan North WWTP RN TBD, una planta de tratamiento de aguas residuales. La instalación estará ubicada en aproximadamente 1 milla al noroeste de la intersección de Keenan Cutoff Rd y FM 2854, en Montgomery, Condado de Montgomery, Texas 77355. La solicitud es para la instalación de WWTP por 0.495 MGD.

Se espera que las descargas de la instalación contengan bioquímica de oxígeno carbonoso (CBOD5), solidos suspendidos totales (TSS), nitrógeno amoniacal (NH3-N). Las aguas residuales domésticas. estará tratado por un modo de mezcla completa del proceso de lodos activados, que incluye cribado, balsas de aireación, clarificadores, digestores aerobios y desinfección.

INSTRUCTIONS

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

Questions or comments concerning this form may be directed to the Water Quality Division's Application Review and Processing Team by email at <a href="https://www.wevenue.com/worden.com/w

Example

Individual Industrial Wastewater Application

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

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

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

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

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

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

Domestic Wastewater Permit Application Keenan North Development, Ltd. TPDES Permit No. TBD NPDES Permit No. TBD A&S Project No. 540008.02

EXHIBIT 22

PUBLIC INVOLVEMENT PLAN





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, <u>and</u>
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.

TCEQ-20960 (02-09-2023) Page 1 of 4

Section 3. Application Information
Type of Application (check all that apply): Air Initial Federal Amendment Standard Permit Title V Waste Municipal Solid Waste Industrial and Hazardous Waste Scrap Tire Radioactive Material Licensing Underground Injection Control
Water Quality
Texas Pollutant Discharge Elimination System (TPDES)
Texas Land Application Permit (TLAP)
State Only Concentrated Animal Feeding Operation (CAFO)
Water Treatment Plant Residuals Disposal Permit
Class B Biosolids Land Application Permit
Domestic Septage Land Application Registration
Water Rights New Permit New Appropriation of Water New or existing reservoir
Amendment to an Existing Water Right
Add a New Appropriation of Water
Add a New or Existing Reservoir
Major Amendment that could affect other water rights or the environment
Section 4. Plain Language Summary
Provide a brief description of planned activities.
Keenan North Development, Ltd. (CN TBD) proposes to operate Keenan North WWTP (RN TBD), a domestic wastewater treatment plant. The facility will be located at approximately 1 mile northwest of the intersection of Keenan Cutoff Rd and FM 2854, in Montgomery, Montgomery County, Texas 77355. Requesting to permit a WWTP to treat up to 0.495 MGD. Discharges from the facility are expected to contain five-day carbonaceous biochemical oxygen demand (CBOD5), total suspended solids (TSS), ammonia nitrogen (NH3-N). Domestic wastewater will be treated by a complete mix mode of activated sludge process, including screening, aeration, final clarification, and disinfection

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.
Montgomery
(City)
Montgomery
(County)
(Census Tract)
Please indicate which of these three is the level used for gathering the following information. City Census Tract
City County Celisus 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
(e) Languages commonly spoken in area by percentage
(f) Community and/or Stakeholder Groups
(g) Historic public interest or involvement

TCEQ-20960 (02-09-2023) Page 4 of 4

Domestic Wastewater Permit Application Keenan North Development, Ltd. TPDES Permit No. TBD NPDES Permit No. TBD A&S Project No. 540008.02

EXHIBIT 23

SPIF



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:RenewalMaj	or AmendmentNinor AmendmentNew
County:	Segment Number:
Admin Complete Date:	
Agency Receiving SPIF:	
Texas Historical Commission	U.S. Fish and Wildlife
Texas Parks and Wildlife Departm	nent U.S. Army Corps of Engineers
This form applies to TPDES permit appli	<u>cations only.</u> (Instructions, Page 53)
our agreement with EPA. If any of the item	nt. TCEQ will mail a copy to each agency as required by as are not completely addressed or further information the information before issuing the permit. Address
attachment for this form separately from application will not be declared administration of the completed in its entirety including all atta	m in the permit application form. Provide each the Administrative Report of the application. The atively complete without this SPIF form being achments. Questions or comments concerning this form sion's Application Review and Processing Team by by phone at (512) 239-4671.
The following applies to all applications:	
1. Permittee: <u>Keenan North Development</u>	<u>, Ltd.</u>
Permit No. WQ00 <u>N/A</u>	EPA ID No. TX <u>N/A</u>
and county):	escription that includes street/highway, city/vicinity,
Approximately 1 mile northwest of t in Montgomery County.	the intersection of Keenan Cutoff Rd and FM 2854

	the name, address, phone and fax number of an individual that can be contacted to specific questions about the property.
Prefix (I	Mr., Ms., Miss): <u>Mr.</u>
First an	d Last Name: <u>Louis Toumajian</u>
Credent	tial (P.E, P.G., Ph.D., etc.): <u>E.I.T.</u>
Title: <u>Pr</u>	oject Coordinator II
Mailing	Address: 10377 Stella Link Road
City, Sta	ate, Zip Code: <u>Houston, TX 77025-5445</u>
Phone N	No.: <u>713-942-2700</u> Ext.: Fax No.:
E-mail A	Address: <u>lat@as-engineers.com</u>
List the	county in which the facility is located: <u>Montgomery</u>
please l	roperty is publicly owned and the owner is different than the permittee/applicant, ist the owner of the property.
N/A	
Provide	a description of the effluent discharge route. The discharge route must follow the flow
	ent from the point of discharge to the nearest major watercourse (from the point of
	ge to a classified segment as defined in 30 TAC Chapter 307). If known, please identify sified segment number.
in Mo	oximately 1 mile northwest of the intersection of Keenan Cutoff Rd and FM 2854 entgomery County. Discharge into Mound Creek Tributary No. 54 then to Mound , Lake Creek, then into the West Fork San Jacinto River, then to San Jacinto
plotted route fr	provide a separate 7.5-minute USGS quadrangle map with the project boundaries and a general location map showing the project area. Please highlight the discharge com the point of discharge for a distance of one mile downstream. (This map is d in addition to the map in the administrative report).
Provide	original photographs of any structures 50 years or older on the property.
Does yo	our project involve any of the following? Check all that apply.
\boxtimes	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

2.3.

4.

5.

	□ 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):
	Normal grading and drainage work as well as clearing and grubbing.
2.	Describe existing disturbances, vegetation, and land use:
	Existing land is wooded and vegetated.
	E FOLLOWING ITEMS APPLY ONLY TO APPLICATIONS FOR NEW TPDES PERMITS AND MAJOR IENDMENTS TO TPDES PERMITS
3.	List construction dates of all buildings and structures on the property:
	Projected construction dates of Summer 2026
4.	Provide a brief history of the property, and name of the architect/builder, if known.
	The property is currently vacant, to be developed into single family residence development



TPDES PERMIT NO. WQ0016686001 [For TCEQ office use only - EPA I.D. No. TX0147095]

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

PERMIT TO DISCHARGE WASTES

under provisions of Section 402 of the Clean Water Act and Chapter 26 of the Texas Water Code

Keenan North Development, Ltd.

whose mailing address is

28408 Sweetgum Road, Suite B3 Magnolia, Texas 77354

is authorized to treat and discharge wastes from the Keenan North Wastewater Treatment Plant, SIC Code 4952

located approximately 1.0 mile northwest of the intersection of Farm-to-Market Road 2854 and Keenan Cutoff Road, in Montgomery County, Texas 77316

to an unnamed tributary of Mound Creek, thence to Mound Creek, thence to Lake Creek in Segment No. 1015 of the San Jacinto River Basin

only according to effluent limitations, monitoring requirements, and other conditions set forth in this permit, as well as the rules of the Texas Commission on Environmental Quality (TCEQ), the laws of the State of Texas, and other orders of the TCEQ. The issuance of this permit does not grant to the permittee the right to use private or public property for conveyance of wastewater along the discharge route described in this permit. This includes, but is not limited to, property belonging to any individual, partnership, corporation, or other entity. Neither does this permit authorize any invasion of personal rights nor any violation of federal, state, or local laws or regulations. It is the responsibility of the permittee to acquire property rights as may be necessary to use the discharge route.

This permit shall expire at midnight, five years from the date of issuance.								
ISSUED DATE:								

For the Commission

This permit shall expire at midnight five years from the date of issuance

INTERIM I EFFLUENT LIMITATIONS AND MONITORING REQUIREMENTS

Outfall Number 001

 During the period beginning upon the date of issuance and lasting through the completion of expansion to the 0.33 million gallons per day (MGD) facility, the permittee is authorized to discharge subject to the following effluent limitations:

The daily average flow of effluent shall not exceed 0.165 million gallons per day (MGD), nor shall the average discharge during any two-hour period (2-hour peak) exceed 458 gallons per minute.

Effluent Characteristic	Discharge Limitations			Min. Self-Monitoring Requirements		
	Daily Avg mg/l (lbs/day)	7-day Avg mg/l	Daily Max mg/l	Single Grab mg/l	Report Daily Avg Measurement Frequency	g. & Max. Single Grab Sample Type
Flow, MGD	Report	N/A	Report	N/A	Continuous	Totalizing Meter
Carbonaceous Biochemical Oxygen Demand (5-day)	10 (14)	15	25	35	One/week	Grab
Total Suspended Solids	15 (21)	25	40	60	One/week	Grab
Ammonia Nitrogen	3 (4.1)	6	10	15	One/week	Grab
<i>E. coli</i> , colony-forming units or most probable number per 100 ml	63	N/A	N/A	200	One/month	Grab

- 2. The effluent shall contain a total chlorine residual of at least 1.0 mg/l and shall not exceed a total chlorine residual of 4.0 mg/l after a detention time of at least 20 minutes (based on peak flow), and shall be monitored five times per week by grab sample. 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 4.0 mg/l and shall be monitored once per week by grab sample.

INTERIM II EFFLUENT LIMITATIONS AND MONITORING REQUIREMENTS

Outfall Number 001

1. During the period beginning upon the completion of expansion to the 0.33 million gallons per day (MGD) facility and lasting through the completion of expansion to the 0.495 million gallons per day (MGD) facility, the permittee is authorized to discharge subject to the following effluent limitations:

The daily average flow of effluent shall not exceed 0.33 million gallons per day (MGD), nor shall the average discharge during any two-hour period (2-hour peak) exceed 917 gallons per minute.

Effluent Characteristic	Discharge Limitations			Min. Self-Monitoring Requirements		
	Daily Avg mg/l (lbs/day)	7-day Avg mg/l	Daily Max mg/l	Single Grab mg/l	Report Daily Avg Measurement Frequency	s. & Max. Single Grab Sample Type
Flow, MGD	Report	N/A	Report	N/A	Continuous	Totalizing Meter
Carbonaceous Biochemical Oxygen Demand (5-day)	7 (19)	12	22	32	One/week	Grab
Total Suspended Solids	12 (33)	20	40	60	One/week	Grab
Ammonia Nitrogen	2 (5.5)	5	10	15	One/week	Grab
E. coli, colony-forming units or most probable number per 100 ml	63	N/A	N/A	200	One/month	Grab

- 2. The effluent shall contain a total chlorine residual of at least 1.0 mg/l and shall not exceed a total chlorine residual of 4.0 mg/l after a detention time of at least 20 minutes (based on peak flow), and shall be monitored five times per week by grab sample. 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 4.0 mg/l and shall be monitored once per week by grab sample.

FINAL EFFLUENT LIMITATIONS AND MONITORING REQUIREMENTS

Outfall Number 001

1. During the period beginning upon the completion of expansion to the 0.495 million gallons per day (MGD) facility 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 0.495 million gallons per day (MGD), nor shall the average discharge during any two-hour period (2-hour peak) exceed 1375 gallons per minute.

Effluent Characteristic	Discharge Limitations			Min. Self-Monitoring Requirements		
	Daily Avg mg/l (lbs/day)	7-day Avg mg/l	Daily Max mg/l	Single Grab mg/l	Report Daily Av Measurement Frequency	vg. & Max. Single Grab Sample Type
Flow, MGD	Report	N/A	Report	N/A	Continuous	Totalizing Meter
Carbonaceous Biochemical Oxygen Demand (5-day)	7 (29)	12	22	32	One/week	Grab
Total Suspended Solids	12 (50)	20	40	60	One/week	Grab
Ammonia Nitrogen	2 (8.3)	5	10	15	One/week	Grab
<i>E. coli</i> , colony-forming units or most probable number per 100 ml	63	N/A	N/A	200	One/month	Grab

- 2. The effluent shall contain a total chlorine residual of at least 1.0 mg/l and shall not exceed a total chlorine residual of 4.0 mg/l after a detention time of at least 20 minutes (based on peak flow), and shall be monitored five times per week by grab sample 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.

DEFINITIONS AND STANDARD PERMIT CONDITIONS

As required by Title 30 Texas Administrative Code (TAC) Chapter 305, certain regulations appear as standard conditions in waste discharge permits. 30 TAC § 305.121 - 305.129 (relating to Permit Characteristics and Conditions) as promulgated under the Texas Water Code (TWC) §§ 5.103 and 5.105, and the Texas Health and Safety Code (THSC) §§ 361.017 and 361.024(a), establish the characteristics and standards for waste discharge permits, including sewage sludge, and those sections of 40 Code of Federal Regulations (CFR) Part 122 adopted by reference by the Commission. The following text includes these conditions and incorporates them into this permit. All definitions in TWC § 26.001 and 30 TAC Chapter 305 shall apply to this permit and are incorporated by reference. Some specific definitions of words or phrases used in this permit are as follows:

1. Flow Measurements

- a. Annual average flow the arithmetic average of all daily flow determinations taken within the preceding 12 consecutive calendar months. The annual average flow determination shall consist of daily flow volume determinations made by a totalizing meter, charted on a chart recorder and limited to major domestic wastewater discharge facilities with one million gallons per day or greater permitted flow.
- b. Daily average flow the arithmetic average of all determinations of the daily flow within a period of one calendar month. The daily average flow determination shall consist of determinations made on at least four separate days. If instantaneous measurements are used to determine the daily flow, the determination shall be the arithmetic average of all instantaneous measurements taken during that month. Daily average flow determination for intermittent discharges shall consist of a minimum of three flow determinations on days of discharge.
- c. Daily maximum flow the highest total flow for any 24-hour period in a calendar month.
- d. Instantaneous flow the measured flow during the minimum time required to interpret the flow measuring device.
- e. 2-hour peak flow (domestic wastewater treatment plants) the maximum flow sustained for a two-hour period during the period of daily discharge. The average of multiple measurements of instantaneous maximum flow within a two-hour period may be used to calculate the 2-hour peak flow.
- f. Maximum 2-hour peak flow (domestic wastewater treatment plants) the highest 2-hour peak flow for any 24-hour period in a calendar month.

2. Concentration Measurements

- a. Daily average concentration the arithmetic average of all effluent samples, composite or grab as required by this permit, within a period of one calendar month, consisting of at least four separate representative measurements.
 - i. For domestic wastewater treatment plants When four samples are not available in a calendar month, the arithmetic average (weighted by flow) of all values in the previous four consecutive month period consisting of at least four measurements shall be utilized as the daily average concentration.

- ii. For all other wastewater treatment plants When four samples are not available in a calendar month, the arithmetic average (weighted by flow) of all values taken during the month shall be utilized as the daily average concentration.
- 7-day average concentration the arithmetic average of all effluent samples, composite
 or grab as required by this permit, within a period of one calendar week, Sunday through
 Saturday.
- c. Daily maximum concentration the maximum concentration measured on a single day, by the sample type specified in the permit, within a period of one calendar month.
- d. Daily discharge the discharge of a pollutant measured during a calendar day or any 24-hour period that reasonably represents the calendar day for purposes of sampling. For pollutants with limitations expressed in terms of mass, the daily discharge is calculated as the total mass of the pollutant discharged over the sampling day. For pollutants with limitations expressed in other units of measurement, the daily discharge is calculated as the average measurement of the pollutant over the sampling day.

The daily discharge determination of concentration made using a composite sample shall be the concentration of the composite sample. When grab samples are used, the daily discharge determination of concentration shall be the arithmetic average (weighted by flow value) of all samples collected during that day.

- e. Bacteria concentration (*E. coli* or Enterococci) Colony Forming Units (CFU) or Most Probable Number (MPN) of bacteria per 100 milliliters effluent. The daily average bacteria concentration is a geometric mean of the values for the effluent samples collected in a calendar month. The geometric mean shall be determined by calculating the nth root of the product of all measurements made in a calendar month, where n equals the number of measurements made; or, computed as the antilogarithm of the arithmetic mean of the logarithms of all measurements made in a calendar month. For any measurement of bacteria equaling zero, a substituted value of one shall be made for input into either computation method. If specified, the 7-day average for bacteria is the geometric mean of the values for all effluent samples collected during a calendar week.
- f. Daily average loading (lbs/day) the arithmetic average of all daily discharge loading calculations during a period of one calendar month. These calculations must be made for each day of the month that a parameter is analyzed. The daily discharge, in terms of mass (lbs/day), is calculated as (Flow, MGD x Concentration, mg/l x 8.34).
- g. Daily maximum loading (lbs/day) the highest daily discharge, in terms of mass (lbs/day), within a period of one calendar month.

3. Sample Type

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

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

MONITORING AND REPORTING REQUIREMENTS

1. Self-Reporting

Monitoring results shall be provided at the intervals specified in the permit. Unless otherwise specified in this permit or otherwise ordered by the Commission, the permittee shall conduct effluent sampling and reporting in accordance with 30 TAC §§ 319.4 - 319.12. Unless otherwise specified, effluent monitoring data shall be submitted each month, to the 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.
- d. Prior to accepting or generating wastes which are not described in the permit application or which would result in a significant change in the quantity or quality of the existing discharge, the permittee must report the proposed changes to the Commission. The permittee must apply for a permit amendment reflecting any necessary changes in permit conditions, including effluent limitations for pollutants not identified and limited by this permit.
- e. In accordance with the TWC § 26.029(b), after a public hearing, notice of which shall be given to the permittee, the Commission may require the permittee, from time to time, for good cause, in accordance with applicable laws, to conform to new or additional conditions.
- f. If any toxic effluent standard or prohibition (including any schedule of compliance specified in such effluent standard or prohibition) is promulgated under CWA § 307(a) for a toxic pollutant which is present in the discharge and that standard or prohibition is more stringent than any limitation on the pollutant in this permit, this permit shall be modified or revoked and reissued to conform to the toxic effluent standard or

prohibition. The permittee shall comply with effluent standards or prohibitions established under CWA § 307(a) for toxic pollutants within the time provided in the regulations that established those standards or prohibitions, even if the permit has not yet been modified to incorporate the requirement.

5. Permit Transfer

- a. Prior to any transfer of this permit, Commission approval must be obtained. The Commission shall be notified in writing of any change in control or ownership of facilities authorized by this permit. Such notification should be sent to the Applications Review and Processing Team (MC 148) of the Water Quality Division.
- b. A permit may be transferred only according to the provisions of 30 TAC § 305.64 (relating to Transfer of Permits) and 30 TAC § 50.133 (relating to Executive Director Action on Application or WQMP update).

6. Relationship to Hazardous Waste Activities

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

7. Relationship to Water Rights

Disposal of treated effluent by any means other than discharge directly to water in the state must be specifically authorized in this permit and may require a permit pursuant to TWC Chapter 11.

8. Property Rights

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

9. Permit Enforceability

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

10. Relationship to Permit Application

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

11. Notice of Bankruptcy

- a. Each permittee shall notify the Executive Director, in writing, immediately following the filing of a voluntary or involuntary petition for bankruptcy under any chapter of Title 11 (Bankruptcy) of the United States Code (11 USC) by or against:
 - i. the permittee;
 - ii. an entity (as that term is defined in 11 USC, § 101(14)) controlling the permittee or listing the permit or permittee as property of the estate; or

- iii. an affiliate (as that term is defined in 11 USC, § 101(2)) of the permittee.
- b. This notification must indicate:
 - i. the name of the permittee;
 - ii. the permit number(s);
 - iii. the bankruptcy court in which the petition for bankruptcy was filed; and
 - iv. the date of filing of the petition.

OPERATIONAL REQUIREMENTS

- 1. The permittee shall at all times ensure that the facility and all of its systems of collection, treatment, and disposal are properly operated and maintained. This includes, but is not limited to, the regular, periodic examination of wastewater solids within the treatment plant by the operator in order to maintain an appropriate quantity and quality of solids inventory as described in the various operator training manuals and according to accepted industry standards for process control. Process control, maintenance, and operations records shall be retained at the facility site, or shall be readily available for review by a TCEQ representative, for a period of three years.
- 2. Upon request by the Executive Director, the permittee shall take appropriate samples and provide proper analysis in order to demonstrate compliance with Commission rules. Unless otherwise specified in this permit or otherwise ordered by the Commission, the permittee shall comply with all applicable provisions of 30 TAC Chapter 312 concerning sewage sludge or biosolids use and disposal and 30 TAC §§ 319.21 319.29 concerning the discharge of certain hazardous metals.
- 3. Domestic wastewater treatment facilities shall comply with the following provisions:
 - a. The permittee shall notify the Domestic Permits Team, Domestic Wastewater 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 Domestic Permits Team, Domestic Wastewater 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

1. 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 (TCLP)] or other method that receives the prior approval of the TCEQ for the contaminants listed in 40 CFR Part 261.24, Table 1. Sewage sludge or biosolids failing this test shall be managed according to RCRA standards for generators of hazardous waste, and the waste's disposition must be in accordance with all applicable requirements for hazardous waste processing, storage, or disposal. Following failure of any TCLP test, the management or disposal of sewage sludge or biosolids at a facility other than an authorized hazardous waste processing, storage, or disposal facility shall be prohibited until such time as the permittee can demonstrate the sewage sludge or biosolids no longer exhibits the hazardous waste toxicity characteristics (as demonstrated by the results of the TCLP tests). A written report shall be provided to both the TCEQ Registration and Reporting Section (MC 129) of the Permitting and Registration Support Division and the Regional Director (MC Region 12) within seven (7) days after failing the TCLP Test.

The report shall contain test results, certification that unauthorized waste management has stopped, and a summary of alternative disposal plans that comply with RCRA standards for the management of hazardous waste. The report shall be addressed to: Director, Permitting and Registration Support Division (MC 129), Texas Commission on Environmental Quality, P.O. Box 13087, Austin, Texas 78711-3087. In addition, the permittee shall prepare an annual report on the results of all sludge toxicity testing. 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 permittee requests and obtains an electronic reporting waiver, the annual report can be submitted in hard copy to the TCEQ Regional Office (MC Region 12) and the Enforcement Division (MC 224).

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

TABLE 1

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

^{*} Dry weight basis

3. Pathogen Control

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

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

Alternative 1 - The temperature of the sewage sludge that is used or disposed shall be maintained at or above a specific value for a period of time. See 30 TAC § 312.82(a)(3)(A) for specific information;

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

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

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

<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

Alternative 3 - The sewage sludge shall be analyzed for enteric viruses prior to pathogen treatment. The limit for enteric viruses is less than one Plaque-forming Unit per four grams of total solids (dry weight basis) either before or following pathogen treatment. See 30 TAC \S 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 \S 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%.
- Alternative 2 If Alternative 1 cannot be met for an anaerobically digested sludge, demonstration can be made by digesting a portion of the previously digested sludge anaerobically in the laboratory in a bench-scale unit for 40 additional days at a temperature between 30° and 37° Celsius. Volatile solids must be reduced by less than 17% to demonstrate compliance.
- Alternative 3 If Alternative 1 cannot be met for an aerobically digested sludge, demonstration can be made by digesting a portion of the previously digested sludge with percent solids of two percent or less aerobically in the laboratory in a bench-scale unit for 30 additional days at 20° Celsius. Volatile solids must be reduced by less than 15% to demonstrate compliance.
- Alternative 4 The specific oxygen uptake rate (SOUR) for sewage sludge treated in an aerobic process shall be equal to or less than 1.5 milligrams of oxygen per hour per gram of total solids (dry weight basis) at a temperature of 20° Celsius.
- Alternative 5 Sewage sludge shall be treated in an aerobic process for 14 days or longer. During that time, the temperature of the sewage sludge shall be higher than 40° Celsius and the average temperature of the sewage sludge shall be higher than 45° Celsius.
- Alternative 6 The pH of sewage sludge shall be raised to 12 or higher by alkali addition and, without the addition of more alkali shall remain at 12 or higher for two hours and then remain at a pH of 11.5 or higher for an additional 22 hours at the time the sewage sludge is prepared for sale or given away in a bag or other container.
- Alternative 7 The percent solids of sewage sludge that does not contain unstabilized solids generated in a primary wastewater treatment process shall be equal to or greater than 75% based on the moisture content and total solids prior to mixing with other materials. Unstabilized solids are defined as organic materials in sewage sludge that have not been treated in either an aerobic or anaerobic treatment process.

Alternative 8 -

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

Alternative 9 -

- i. Biosolids shall be injected below the surface of the land.
- ii. No significant amount of the biosolids shall be present on the land surface within one hour after the biosolids are injected.
- iii. When sewage sludge that is injected below the surface of the land is Class A or Class AB with respect to pathogens, the biosolids shall be injected below the land surface within eight hours after being discharged from the pathogen treatment process.

Alternative 10-

- i. Biosolids applied to the land surface or placed on a surface disposal site shall be incorporated into the soil within six hours after application to or placement on the land.
- ii. When biosolids that 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 (TCLP) Test
PCBs
- once during the term of this permit
- 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 (*)

metric tons per 365-day period Monitoring Frequency

o 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:

A. Pollutant Limits

Table 2

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

Table 3

Monthly Average	
Concentration	
(milligrams per kilogram)*	
41	
39	
1200	
1500	
300	
17	
Report Only	
420	
36	
2800	

^{*}Dry weight basis

B. Pathogen Control

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

C. Management Practices

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

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), or the applicable cumulative pollutant loading rate and the applicable cumulative pollutant loading rate limit (lbs/ac) listed in Table 2 above.
- 2. A description of how the pathogen reduction requirements are met (including site restrictions for Class AB and Class B biosolids, if applicable).
- 3. A description of how the vector attraction reduction requirements are met.
- 4. A description of how the management practices listed above in Section II.C are being met.
- 5. The following certification statement:
 - "I certify, under penalty of law, that the applicable pathogen requirements in 30 TAC § 312.82(a) or (b) and the vector attraction reduction requirements in 30 TAC § 312.83(b) have been met for each site on which bulk biosolids are applied. This determination has been made under my direction and supervision in accordance with the system designed to ensure that qualified personnel properly gather and evaluate the information used to determine that the management practices have been met. I am aware that there are significant penalties for false certification including fine and imprisonment."
- 6. The recommended agronomic loading rate from the references listed in Section II.C.3. above, as well as the actual agronomic loading rate shall be retained. The person who applies bulk biosolids shall develop the following information and shall retain the information at the facility site and/or shall be readily available for review by a TCEQ representative <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 permittee requests and obtains an electronic reporting waiver, the annual report can be submitted in hard copy to the TCEQ Regional Office (MC Region 12) and the Enforcement Division ((MC 224).

- 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. 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 12) of the appropriate TCEQ field office within 7 days after failing the TCLP Test.

The report shall contain test results, certification that unauthorized waste management has stopped, and a summary of alternative disposal plans that comply with RCRA standards for the management of hazardous waste. The report shall be addressed to: Director, Permitting and Registration Support Division (MC 129), Texas Commission on Environmental Quality, P. O. Box 13087, Austin, Texas 78711-3087. In addition, the permittee shall prepare an annual report on the results of all sludge toxicity testing. This annual report shall be submitted to the TCEQ Regional Office (MC Region 12) and the Enforcement Division (MC 224) of the by September 30th of each year.

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

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

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

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

F. Reporting Requirements

The permittee shall submit the following information in an annual report to the TCEQ by September 30th of each year. The permittee must submit this annual report using the online electronic reporting system available through TCEQ's website. If the permittee requests and obtains an electronic reporting waiver, the annual report can be submitted in hard copy to the TCEQ Regional Office (MC Region 12) 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 permittee requests and obtains an electronic reporting waiver, the annual report can be submitted in hard copy to the TCEQ Regional Office (MC Region 12) 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 comply with the requirements of 30 TAC § 309.13(a) through (d). In addition, by ownership of the required buffer zone area, the permittee shall comply with the requirements of 30 TAC § 309.13(e).
- 4. The permittee shall provide facilities for the protection of its wastewater treatment facility from a 100-year flood.
- 5. The permittee shall comply with 30 TAC § 311.36, which requires the permittees of all domestic wastewater treatment facilities discharging into the Lake Houston Watershed to install dual-feed chlorination systems capable of automatically changing from one cylinder to another if gaseous chlorination is used for disinfection.
- 6. In accordance with 30 TAC § 319.9, a permittee that has at least twelve months of uninterrupted compliance with its bacteria limit may notify the commission in writing of its compliance and request a less frequent measurement schedule. To request a less frequent schedule, the permittee shall submit a written request to the TCEQ Domestic Wastewater Section (MC 148) for each phase that includes a different monitoring frequency. The request must contain all of the reported bacteria values (Daily Avg. and Daily Max/Single Grab) for the twelve consecutive months immediately prior to the request. If the Executive Director finds that a less frequent measurement schedule is protective of human health and the environment, the permittee may be given a less frequent measurement schedule. For this permit, one/month may be reduced to one/quarter in the Interim I, Interim II, and Final phases. 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 Domestic Wastewater Section (MC 148). The permittee may not apply for another reduction in measurement frequency for at least 24 months from the date of the last violation. The Executive Director may establish a more frequent measurement schedule if necessary to protect human health or the environment.
- 7. Prior to construction of the treatment facility, the permittee shall submit to the TCEQ Domestic Wastewater Section (MC 148) a summary transmittal letter in accordance with the

requirements in 30 TAC § 217.6(d). If requested by the Domestic Wastewater 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 Pages 2, 2a, and 2b 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.

8. 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 12) 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, and prior to completion of each additional phase on Notification of Completion Form 20007.

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

DESCRIPTION OF APPLICATION

Applicant: Keenan North Development, Ltd.;

Texas Pollutant Discharge Elimination System (TPDES) Permit No.

WQ0016686001, EPA I.D. No. TX0147095

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 0.165 million gallons per day (MGD) in the Interim I phase, a daily average flow not to exceed 0.33 MGD in the Interim II phase, and a daily average flow not to exceed 0.495 MGD in the Final phase. The proposed wastewater treatment facility will serve Keenan Cut Off North Subdivision.

PROJECT DESCRIPTION AND LOCATION

The Keenan North WWTP will be an activated sludge process plant operated in the complete mix mode with nitrification. Treatment units in the Interim I phase will include an onsite grinder pump station, a common headworks with manual bar screen, two aeration basins, a clarifier, an aerobic digester, and a chlorine contact basin. Treatment units in the Interim II phase will include an onsite lift station, a common headworks with manual bar screens and flow splitting weirs, three aeration basins, two clarifiers, four aerobic digesters, and a chlorine contact basin. Treatment units in the Final phase will include the existing onsite lift station, a headworks with mechanical bar screen and flow splitting weirs, two aeration basins, two clarifiers, two aerobic digesters, two chlorine contact basins, and dechlorination chamber. 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 1.0 mile northwest of the intersection of Farm-to-Market Road 2854 and Keenan Cutoff Road, in Montgomery County, Texas 77316.

Outfall Location:

Outfall Number	Latitude	Longitude
001	30.332406 N	95.663892 W

The treated effluent will be discharged to an unnamed tributary of Mound Creek, thence to Mound Creek, thence to Lake Creek in Segment No. 1015 of the San Jacinto River Basin. The unclassified receiving water uses are limited aquatic life use for the unnamed tributary of Mound Creek, minimal aquatic life use for Mound Creek (upstream of Appendix D section), and high aquatic life use for Mound Creek. The designated uses for Segment No. 1015 are primary contact recreation, public water supply, and high aquatic life use. The effluent limitations in the draft permit will maintain and protect the existing instream uses. In accordance with 30 Texas Administrative Code §307.5 and TCEQ's *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 Mound Creek (Appendix D section), which has been identified as having high 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) 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. 1015 is not currently listed on the state's inventory of impaired and threatened waters (the

2024 CWA § 303(d) list).

One finalized Total Maximum Daily Load (TMDL) Project is available for this segment: Seven Total Maximum Daily Loads for Indicator Bacteria in Lake Houston, East Fork San Jacinto River, West Fork San Jacinto River, and Crystal Creek Watersheds Segments: 1002, 1003, 1004, and 1004D (Project No. 82B). Addendums to the original Project No. 82B TMDL subsequently added additional assessment units to the original TMDL project.

On August 24, 2016, the Texas Commission on Environmental Quality (TCEQ) adopted Seven Total Maximum Daily Loads for Indicator Bacteria in Lake Houston, East Fork San Jacinto River, West Fork San Jacinto River, and Crystal Creek Watersheds. The USEPA approved the TMDL on October 7, 2016. The total maximum daily load (TMDL) addresses elevated levels of bacteria in multiple segments and assessment units in these watersheds. The waste load allocation (WLA) for wastewater treatment facilities was established as the permitted flow for each facility multiplied by one-half the geometric mean criterion for bacteria. Future growth from existing or new permitted sources is not limited by these TMDLs as long as the sources do not exceed the limits of one-half the bacteria geometric mean criterion for *Escherichia coli* (*E. coli*). To ensure that effluent limitations for this discharge are consistent with the WLAs provided in the TMDL, a concentration-based effluent limitation for *E. coli* of 63 colony forming units (CFU) or most probable number (MPN) per 100 ml has been included in 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 an Interim I volume not to exceed a daily average flow of 0.165 MGD, an Interim II volume not to exceed a daily average flow of 0.33 MGD, and a Final volume not to exceed a daily average flow of 0.495 MGD.

The effluent limitations in the Interim I phase of the draft permit, based on a 30-day average, are 10 mg/l five-day carbonaceous biochemical oxygen demand (CBOD $_5$), 15 mg/l total suspended solids (TSS), 3 mg/l ammonia-nitrogen (NH $_3$ -N), 63 CFU or MPN of *E. coli* per 100 ml, and 4.0 mg/l minimum dissolved oxygen (DO). The effluent shall contain a total chlorine residual of at least 1.0 mg/l and shall not exceed a total chlorine residual of 4.0 mg/l after a detention time of at least 20 minutes based on peak flow.

The effluent limitations in the Interim II phase of the draft permit, based on a 30-day average, are 7 mg/l CBOD₅, 12 mg/l TSS, 2 mg/l NH₃-N, 63 CFU or MPN of E. coli per 100 ml, and 4.0 mg/l minimum DO. The effluent shall contain a total chlorine residual of at least 1.0 mg/l and shall not exceed a total chlorine residual of 4.0 mg/l after a detention time of at least 20 minutes based on peak flow.

The effluent limitations in the Final phase of the draft permit, based on a 30-day average, are 7 mg/l CBOD₅, 12 mg/l TSS, 2 mg/l NH₃-N, 63 CFU or MPN of *E. coli* per 100 ml, and 5.0 mg/l minimum DO. The effluent shall contain a total chlorine residual of at least 1.0 mg/l and shall not exceed a total chlorine residual of 4.0 mg/l after a detention time of at least 20 minutes based on peak flow.

The permittee shall comply with the requirements of 30 TAC § 309.13(a) through (d). In addition, by ownership of the required buffer zone area, the permittee shall comply with the requirements of 30 TAC § 309.13(e).

The draft permit includes Sludge Provisions according to the requirements of 30 TAC Chapter 312, Sludge Use, Disposal, and Transportation. The draft permit authorizes the disposal of sludge at a TCEQ-authorized land application site, co-disposal landfill, wastewater treatment facility, or facility that further processes sludge.

SUMMARY OF CHANGES FROM APPLICATION

The applicant requested effluent limitations, based on a 30-day average, of 10 mg/l $CBOD_5$, 15 mg/l TSS, 3 mg/l NH_3 -N, and 4.0 mg/l minimum DO for all three phases. However, effluent limitations in the Interim II phase of the draft permit, based on a 30-day average, are 7 mg/l $CBOD_5$, 12 mg/l TSS, and 2 mg/l NH_3 -N. The effluent limitations in the Final phase of the draft permit, based on a 30-day average, are 7 mg/l $CBOD_5$, 12 mg/l TSS, 2 mg/l NH_3 -N, 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 December 11, 2024, and additional information received on September 26, 2025.
- 2. 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.
- 3. 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.
- 4. Interoffice Memoranda from the Water Quality Assessment Section of the TCEQ Water Quality Division.
- 5. Consistency with the Coastal Management Plan: The facility is not located in the Coastal Management Program boundary.
- 6. *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.
- 7. Texas 2024 Clean Water Act Section 303(d) List, Texas Commission on Environmental Quality, June 26, 2024; approved by the U.S. Environmental Protection Agency on November 13, 2024.
- 8. 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.
- 10. TMDL Project No. 82B has been approved for this segment: Seven Total Maximum Daily Loads for Indicator Bacteria in Lake Houston, East Fork San Jacinto River, West Fork San Jacinto River, and Crystal Creek Watersheds Segments: 1002, 1003, 1004, and 1004D. Addendums to the original Project No. 82B TMDL subsequently added additional assessment units to the original TMDL project.

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 Sujata Sinha at (512) 239-1963.

Sujata Sinha	9/29/2025
Sujata Sinha	Date
Domestic Permits Team	
Domestic Wastewater Section (MC 148)	