Technical Package Cover Page

This file contains the following documents:

1. Summary of application (in plain language)
   - English
   - Alternative Language (Spanish)
2. First notice (NORI-Notice of Receipt of Application and Intent to Obtain a Permit)
   - English
   - Alternative Language (Spanish)
3. Second notice (NAPD-Notice of Preliminary Decision)
   - English
   - Alternative Language (Spanish)
4. Application materials (**NOTE:** This application was declared Administratively Complete before June 1, 2024. Application materials are available for review at the Public Viewing Location provided in the NORI.)
5. Draft permit
6. Technical summary or fact sheet

Portada de Paquete Técnico

Este archivo contiene los siguientes documentos:

1. Resumen de la solicitud (en lenguaje sencillo)
   - Inglés
   - Idioma alternativo (español)
2. Primer aviso (NORI, Aviso de Recepción de Solicitud e Intención de Obtener un Permiso)
   - Inglés
   - Idioma alternativo (español)
3. Segundo aviso (NAPD, Aviso de Decisión Preliminar)
   - Inglés
   - Idioma alternativo (español)
4. Materiales de la solicitud (**NOTA:** Esta solicitud se declaró administrativamente completa antes del 1 de junio de 2024. Los materiales de la solicitud están disponibles para revisión en la ubicación de consulta pública que se indica en el NORI.)
5. Proyecto de permiso
6. Resumen técnico u hoja de datos

PLAIN LANGUAGE SUMMARY FOR TPDES PERMIT NO. WQ0001954000 (EPA ID NO. TX0065021) RENEWAL APPLICATION

AIR LIQUIDE LARGE INDUSTRIES U.S. LP
FREEPORT ASU
1711 FM 523
FREEPORT, TEXAS 77541

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

Air Liquide Large Industries U.S. LP (CN600300693) operates Freeport Air Separation Unit (ASU), RN102286234, a three-ASU plants facility. Freeport ASU separates the atmospheric air and produces Nitrogen, Oxygen and Argon (SIC Code 2813). The facility is located at 1711 FM 523 in Freeport, Brazoria County, Texas 77541.

The permit application is for renewal to discharge 460,000 gallons per day (permitted on average) of the treated cooling tower blowdown and miscellaneous wash water.

The discharges from the facility are expected to contain Suspended Solids, Chemical Oxygen Demand, Oil and Grease, Temperature, pH and some metals (Aluminum, Copper, Cyanide and Zinc) that are included in the current permit. The Dow canal water and the City water are used for the facility's production operations. The canal water is treated prior to being used for industrial operations. The City water is primarily used for domestic purpose and its miscellaneous amount is also used as wash water.

The types of industrial wastewater generated from the facility are cooling tower blowdown and miscellaneous wash water treated by an oil/water separator. These industrial wastewater streams are collected in the onsite effluent pond. The filter backwash water generated from the onsite canal water treatment system is discharged and separately collected in the onsite settling pond. There is not a discharge from the onsite settling pond. The clear water in the onsite settling pond is recirculated back to the canal water treatment system for treatment and the treated water becomes part of the cooling tower makeup water. Deposited solids are disposed offsite via a licensed hauler.

The industrial wastewater collected in the onsite effluent pond is treated by the onsite industrial wastewater treatment system that consists of treatment technologies of chemical precipitation, clarification, filtration, sludge thickening and dewatering. The onsite industrial treatment system effluent is pumped and discharged to the Flag Lake Drainage Canal via Outfall 001.

Domestic wastewater is routed to a domestic wastewater treatment plant, the City of Oyster Creek Permit No.11837-001.

TEXAS COMMISSION ON ENVIRONMENTAL QUALITY

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

PERMIT NO. WQ0001954000

APPLICATION. Air Liquide Large Industries U.S. LP, 9811 Katy Freeway, Suite 100, Houston, Texas 77024, which owns a cryogenic air separation facility, has applied to the Texas Commission on Environmental Quality (TCEQ) to renew Texas Pollutant Discharge Elimination System (TPDES) Permit No. WQ0001954000 (EPA I.D. No. TX0065021) to authorize the discharge of treated wastewater at a volume not to exceed a daily average flow of 460,000 gallons per day. The facility is located at 1711 Farm-to-Market Road 523, near the city of Freeport, in Brazoria County, Texas 77541. The discharge route is from the plant site via Outfall 001 to Flag Lake Drainage Canal; thence to East Union Bayou (Tidal); thence to Intracoastal Waterway; thence to Old Brazos River Channel Tidal. TCEQ received this application on April 29, 2024. The permit application will be available for viewing and copying at Brazoria County Courthouse, County Clerk's Office, 111 East Locust Street, Angelton, in Brazoria County, Texas prior to the date this notice is published in the newspaper. This link to an electronic map of the site or facility's general location is provided as a public courtesy and not part of the application or notice. For the exact location, refer to the application.
https://gisweb.tceq.texas.gov/LocationMapper/?marker=-95.337327,28.987342&level=18

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

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

PUBLIC COMMENT / PUBLIC MEETING. You may submit public comments or request a public meeting on this application. The purpose of a public meeting is to provide the opportunity to submit comments or to ask questions about the application. TCEQ will hold a public meeting if the Executive Director determines that there is a significant degree of public

interest in the application or if requested by a local legislator. A public meeting is not a contested case hearing.

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

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

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

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

TCEQ may act on an application to renew a permit for discharge of wastewater without providing an opportunity for a contested case hearing if certain criteria are met.

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

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

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

Further information may also be obtained from Air Liquide Large Industries U.S. LP at the address stated above or by calling Mr. Aswath Kalappa at 832-236-0523.

Issuance Date: May 20, 2024

Comisión de Calidad Ambiental del Estado de Texas

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

PERMISO NO. WQ00001954000

SOLICITUD. Air Liquide Large Industries U.S. LP, 9811 Katy Freeway, Suite 100, Houston, Texas 77024, ha solicitado a la Comisión de Calidad Ambiental del Estado de Texas (TCEQ) para renovar el Permiso No. WQ001954000 (EPA I.D. No. TX 0065021) 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 460,000 galones por día. La planta está ubicada 1711 Farm to Market Road 523, Freeport en el Condado de Brazoria, Texas 77541. La ruta de descarga es del sitio de la planta a Outfall 001 a Flag Lake Drainage Canal; luego a East Union Bayou (Tidal); luego al Intracoastal Waterway; luego a Old Brazos River Channel Tidal. La TCEQ recibió esta solicitud el 29 de Abril del 2024. La solicitud para el permiso estará disponible para leerla y copiarla en la oficina del secretario del tribunal del condado de Brazoria antes de la fecha de publicación de este aviso en el periódico. Este enlace a un mapa electrónico de la ubicación general del sitio o de la instalación es proporcionado como una cortesía y no es parte de la solicitud o del aviso. Para la ubicación exacta, consulte la solicitud.
https://gisweb.tceq.texas.gov/LocationMapper/?marker=-95.337327,28.987342&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 todos 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. Sí ciertos criterios se cumplen, la TCEQ puede actuar sobre una solicitud para renovar un permiso sin proveer una oportunidad de una audiencia administrativa de lo contencioso.

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

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

También se puede obtener información adicional del Air Liquide Large Industries U.S. LP a la dirección indicada arriba o llamando al Sr. Aswath Kalappa al (832) 236-0523.

Fecha de emisión: 20 de mayo de 2024

TEXAS COMMISSION ON ENVIRONMENTAL QUALITY

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

RENEWAL

Permit No. WQ0001954000

APPLICATION AND PRELIMINARY DECISION. Air Liquide Large Industries U.S. LP, 9811 Katy Freeway, Suite 100, Houston, Texas 77024, which operates Air Liquide - Freeport ASU, a cryogenic air separation plant that produces oxygen, nitrogen, and argon, has applied to the Texas Commission on Environmental Quality (TCEQ) for a renewal of Texas Pollutant Discharge Elimination System (TPDES) Permit No. WQ0001954000, which authorizes the discharge of cooling tower blowdown, air compressor condensate, and miscellaneous wash water at a daily average flow not to exceed 460,000 gallons per day via Outfall 001. The TCEQ received this application on April 29, 2024.

The facility is located at 1711 Farm to Market Road 523, near the City of Freeport, Brazoria County, Texas 77541. 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=-95.337327,28.987342&level=18

The effluent is discharged to Flag Lake Drainage Canal, thence to East Union Bayou (Tidal), thence to the Intracoastal Waterway; thence to Old Brazos River Channel Tidal in Segment 1111 of the San Jacinto-Brazos Coastal Basin. The unclassified receiving water uses are high aquatic life use for Flag Lake Drainage Canal and high aquatic life use for East Union Bayou (Tidal). The designated uses for Segment No. 1111 are primary contact recreation and high aquatic life use. 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 the Brazoria County Courthouse, County Clerk's Office, 111 East Locust Street, Angleton, Texas.

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.

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 written or oral comment or to ask questions about the application. Generally, the 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 public comments, the Executive Director will consider the comments and prepare a response to all relevant and material, or significant public comments. **The response to comments, along with the Executive Director's decision on the application, will be mailed to everyone who submitted public comments or who requested to be on a mailing list for this application. If comments are received, the mailing will also provide instructions for requesting a contested case hearing or reconsideration of the Executive Director's decision.** A contested case hearing is a legal proceeding similar to a civil trial in a state district court.

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

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

EXECUTIVE DIRECTOR ACTION. The Executive Director may issue final approval of the application unless a timely contested case hearing request or a timely 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 requests 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 added to: (1) the permanent list for a specific applicant name and permit number; and (2) the mailing list for a specific county. If you wish to be placed on the permanent and 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, TCEQ, P.O. Box 13087, Austin, TX 78711-3087 or electronically at https://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 https://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 https://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. 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 https://www.tceq.texas.gov/agency/decisions/participation/permitting-participation. Si desea información en Español, puede llamar al 1-800-687-4040.

Further information may also be obtained from Air Liquide Large Industries U.S. LP at the address stated above or by calling Mr. Aswath Kalappa, Sr. Environmental Specialist, at 832-236-0523.

Issued: October 30, 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 INDUSTRIALES

RENOVACIÓN

Permit No. WQ0001954000

SOLICITUD Y DECISIÓN PRELIMINAR. Air Liquide Large Industries U.S. LP, 9811 Katy Freeway, Suite 100, Houston, Texas 77024, operadora de Air Liquide - Freeport ASU, una planta criogénica de separación de aire que produce oxigeno, nitrogeno y argon, ha solicitado a la Comisión de Calidad Ambiental de Texas (TCEQ) la renovación del Permiso No. WQ0001954000, del Sistema de Eliminación de Descargas de Contaminantes de Texas (TPDES), que autoriza la descarga de agua de purga de torres de enfriamiento, condensado de compresores de aire y agua de lavado diversa a un caudal promedio diario que no exceda los 460,000 galones por día a través del emisario submarino 001. El TCEQ recibió esta solicitud el 29 de Abril de 2024.

La instalación se encuentra en 1711 Farm to Market Road 523, cerca de la Ciudad de Freeport, condado de Brazoria County, Texas 77541. Este enlace a un maps electronico de la ubicacion general del sitio o instalacion se proporciona como cortesia publica y no forma parte de la solicitud ni del aviso. Para conocer la ubicación exacta, consulte la solicitud: https://gisweb.tceq.texas.gov/LocationMapper/?marker=-95.337327,28.987342&level=18

El efluente se descarga al Canal de Drenaje de Flag Lake, de allí al East Union Bayou (con mareas), luego al Canal Intracostero y finalmente al antiguo Canal del Río Brazos (con mareas) en el Segmento 1111 de la Cuenca Costera de San Jacinto-Brazos. Los usos no clasificados de agua receptora corresponden a un alto uso para la vida acuática en el Canal de Drenaje de Flag Lake y en el East Union Bayou (con mareas). Los usos designados para el Segmento No. 1111 son recreación de contacto directo y alto uso para la vida acuática.

El Director Ejecutivo de la TCEQ ha completado la revisión técnica de la solicitud y ha preparado un borrador del permiso. De aprobarse, este borrador establece las condiciones bajo las cuales la instalación deberá operar. El Director Ejecutivo ha determinado preliminarmente que este permiso, de ser emitido, cumple con todos los requisitos legales y reglamentarios. La solicitud de permiso, la decisión preliminar del Director Ejecutivo y el borrador del permiso están disponibles para su consulta y copia en el Tribunal del Condado de Brazoria, Oficina del Secretario del Condado, 111 East Locust Street, Angelton, Texas.

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.

COMENTARIOS PÚBLICOS/REUNION PUBLICA. Puede enviar comentarios públicos o solicitar una reunión pública sobre esta solicitud. El propósito de una reunión pública es de brindar la oportunidad de presentar comentarios por escrito u orales o de hacer preguntas sobre la solicitud. Generalmente, la TCEQ celebrara una reunión pública si el Director Ejecutivo determina que existe un interés público significativo en la solicitud o si lo solicita un legislador local. Una reunión pública no es una audiencia contenciosa.

OPORTUNIDAD PARA UNA AUDIENCIA CONTENCIOSA. Tras el plazo para la recepción de comentarios públicos, el Director Ejecutivo los considerará y preparará una respuesta a todos los comentarios pertinentes y significativos. La respuesta a los comentarios, junto con la decisión del Director Ejecutivo sobre la solicitud, se enviará por correo a todas las personas que presentaron comentarios públicos o que solicitaron estar incluidas en la lista de correo para esta solicitud. Si se reciben comentarios, el envío también incluirá instrucciones para solicitar una audiencia contenciosa o la reconsideración de la decisión del Director Ejecutivo. Una audiencia contenciosa es un procedimiento legal similar a un juicio civil en un tribunal estatal de distrito.

PARA SOLICITAR UNA AUDIENCIA CONTENCIOSA, DEBE INCLUIR EN SU SOLICITUD LO SIGUIENTE: su nombre, dirección y número de teléfono; el nombre del solicitante y el número de permiso propuesto; la ubicación y distancia de su propiedad/actividades con respecto a la instalación propuesta; una descripción específica de cómo la instalación le afectará negativamente de una manera que no sea común para el público en general; una lista de todos los hechos controvertidos que presente durante el periodo de comentarios; y la declaracion "[Yo/Nosotros] solicitamos una audiencia contenciosa". Si la solicitud de audiencia contenciosa se presenta en nombre de un grupo o asociación, la solicitud debe designar al representante del grupo para recibir correspondencia futura; identificar por nombre y dirección física a un miembro del grupo que se vería afectado negativamente por la instalación o actividad propuesta; proporcionar la información mencionada anteriormente sobre la ubicación y distancia del miembro afectado con respecto a la instalación o actividad; explicar como y por que se vería afectado el miembro; y explicar cómo los intereses que el grupo busca proteger son relevantes para el propósito del grupo.

Una vez finalizados todos los periodos aplicables para comentarios y solicitudes, el Director Ejecutivo remitirá la solicitud y cualquier solicitud de reconsideración o de audiencia de caso contencioso a los Comisionados de la TCEQ para su consideración en una reunión programada de la Comisión.

La Comisión sólo podrá conceder una solicitud de audiencia contenciosa sobre cuestiones que el solicitante haya planteado en sus comentarios oportunos y que no hayan sido retiradas posteriormente. **Si se concede la audiencia, el tema de la misma se limitará a cuestiones de hecho controvertidas o cuestiones mixtas de hecho y de derecho relacionadas con problemas relevantes y sustanciales de calidad del agua, planteados durante el periodo de comentarios. La TCEQ podrá resolver una solicitud de renovación de un permiso de descarga de aguas residuales sin ofrecer la oportunidad de una audiencia contenciosa si se cumplen ciertos criterios.**

ACCIÓN DEL DIRECTOR EJECUTIVO. El Director Ejecutivo podrá emitir la aprobación final de la solicitud, salvo que se presente una solicitud de audiencia contenciosa o una solicitud de reconsideración dentro del plazo establecido. Si se presenta una solicitud de audiencia o una solicitud de reconsideración dentro del plazo establecido, el Director Ejecutivo no emitirá la aprobación final del permiso y remitirá la solicitud y las peticiones a los Comisionados de la TCEQ para su consideración en una reunión programada de la Comisión.

LISTA DE CORREO. Si envía comentarios públicos, una solicitud de audiencia contenciosa o una solicitud de reconsideración de la decisión del Director Ejecutivo, se le añadirá a la lista de correo de esta solicitud específica para recibir futuros avisos públicos enviados por la Oficina del Secretario Principal. Además, puede solicitar su inclusión en: (1) la lista permanente con el nombre y número de permiso de un solicitante especifica; y (2) la lista de correo de un condado especifico. Si desea figurar en la lista permanente y en la lista de correo del condado, especifique claramente a qué lista (s) desea incluir y envíe su solicitud a la Oficina del Secretario Principal de la TCEQ a la dirección que figura a continuación.

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

INFORMACION DISPONIBLE EN LINEA. Para obtener detalles sobre el estado de la solicitud, visite la Base de Datos Integrada de los Comisionados en https://www.tceq.texas.gov/goto/cid/. Busque en la base de datos utilizando el número de permiso de esta solicitud, que se proporciona al inicio de este aviso.

CONTACTOS E INFORMACIÓN DE LA AGENCIA. Los comentarios del público deben enviarse electrónicamente a traves de https://www.tceq.texas.gov/goto/comment, o por escrito a la Comisión de Calidad Ambiental de Texas (TCEQ), Oficina del Secretario Principal, MC-105, P.O. Box 13087, Austin, Texas 78711-3087. Tenga en cuenta que la información de contacto que proporcione, incluyendo su nombre, número de teléfono, correo electrónico y dirección postal, pasará a formar parte del registro público de la agencia. Para obtener mas informacion sobre esta solicitud de permiso o el proceso de permisos, llame al Programa de Educacion Publica de la TCEQ, sin costo, al 1-800-687-4040 o visite su sitio weg en https://www.tceq.texas.gov/agency/decisions/participation/permitting-participation. Si desea información en Español puede llamar al 1-800-687-4040

También se puede obtener información adicional de Air Liquide Large Industries U.S. LP en la direccion indicada anteriormente o llamando al Sr. Aswath Kalappa, Sr. Especialista Ambiental Senior, al 832-236-0523.

Fecha de emisión: 30 de octubre de 2025

TPDES PERMIT NO.
WQ0001954000
[For TCEQ office use only -
EPA I.D. No. TX0065021]

This renewal replaces TPDES Permit No. WQ0001954000, issued on October 29, 2019.

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
and 40 CFR Part 415, Subpart AW

Air Liquide Large Industries U.S. LP

whose mailing address is

9811 Katy Freeway, Suite 100
Houston, Texas, 77024

is authorized to treat and discharge wastes from Air Liquide - Freeport ASU, a cryogenic air separation plant that produces oxygen, nitrogen, and argon (SIC 2813)

located at 1711 Farm to Market Road 523, near the City of Freeport, Brazoria County, Texas 77541

via Outfall 001 to Flag Lake Drainage Canal, thence to East Union Bayou (Tidal), thence to the Intracoastal Waterway; thence to Old Brazos River Channel Tidal in Segment 1111 of the San Jacinto-Brazos Coastal 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 permit issuance.

ISSUED DATE:

_____
For the Commission

EFFLUENT LIMITATIONS AND MONITORING REQUIREMENTS — Outfall Number 001

1. During the period beginning upon the date of permit issuance and lasting through the date of permit expiration, the permittee is authorized to discharge cooling tower blowdown, air compressor condensate, and miscellaneous wash water subject to the following effluent limitations:

   The daily average flow of effluent shall not exceed 0.460 million gallons per day (MGD). The daily maximum flow shall not exceed 0.580 MGD.

Effluent Characteristics	Discharge Limitations					Minimum Self-Monitoring Requirements	
	Daily Average		Daily Maximum		Single Grab	Report Daily Average and Daily Maximum	
	lbs/day	mg/L	lbs/day	mg/L	mg/L	Measurement Frequency	Sample Type
Flow	0.460 MGD		0.580 MGD		N/A	Continuous	Record
Total Suspended Solids	115	Report	192	Report	55	1/week	Composite
Chemical Oxygen Demand	230	Report	361	Report	90	1/week	Composite
Oil and Grease	15.7	Report	21.0	Report	15	1/week	Grab
Temperature	95°F		100°F		100°F	1/shift	In situ
Total Aluminum	1.87	0.486	3.95	1.03	1.4	1/week	Composite
Total Copper	0.214	0.0557	0.449	0.117	0.167	1/week	Composite
Free Cyanide [1]	0.084	0.022	0.180	0.047	0.072	1/week	Composite
Total Zinc	3.65	0.951	7.72	2.01	2.853	1/week	Composite

2. The pH must not be less than 6.0 standard units nor greater than 9.0 standard units and must be monitored 1/day by grab sample.

3. There must be no discharge of floating solids or visible foam in other than trace amounts and no discharge of visible oil.

4. Effluent monitoring samples must be taken at the following location: At Outfall 001, at a point in the discharge line after treatment and prior to the flow meter.

[1] See Other Requirement No. 8.

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 Texas Water Code §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 a one million gallons per day or greater permitted flow.

    b. Daily average flow - the arithmetic average of all determinations of the daily flow within a period of one calendar month. The daily average flow determination shall consist of determinations made on at least four separate days. If instantaneous measurements are used to determine the daily flow, the determination shall be the arithmetic average of all instantaneous measurements taken during that month. Daily average flow determination for intermittent discharges shall consist of a minimum of three flow determinations on days of discharge.

    c. Daily maximum flow - the highest total flow for any 24-hour period in a calendar month.

    d. Instantaneous flow - the measured flow during the minimum time required to interpret the flow measuring device.

    e. 2-hour peak flow (domestic wastewater treatment plants) - the maximum flow sustained for a two-hour period during the period of daily discharge. The average of multiple measurements of instantaneous maximum flow within a two-hour period may be used to calculate the 2-hour peak flow.

    f. Maximum 2-hour peak flow (domestic wastewater treatment plants) - the highest 2-hour peak flow for any 24-hour period in a calendar month.

2. Concentration Measurements

    a. Daily average concentration - the arithmetic average of all effluent samples, composite or grab as required by this permit, within a period of one calendar month, consisting of at least four separate representative measurements.

        i. For domestic wastewater treatment plants - When four samples are not available in a calendar month, the arithmetic average (weighted by flow) of all values in the previous four consecutive month period consisting of at least four measurements shall be utilized as the daily average concentration.

        ii. For all other wastewater treatment plants - When four samples are not available in a calendar month, the arithmetic average (weighted by flow) of all values taken during the month shall be utilized as the daily average concentration.

    b. 7-day average concentration - the arithmetic average of all effluent samples, composite or grab as required by this permit, within a period of one calendar week, Sunday through Saturday.

    c. Daily maximum concentration - the maximum concentration measured on a single day, by the sample type specified in the permit, within a period of one calendar month.

    d. Daily discharge - the discharge of a pollutant measured during a calendar day or any 24-hour period that reasonably represents the calendar day for purposes of sampling. For pollutants with limitations expressed in terms of mass, the “daily discharge” is calculated as the total

mass of the pollutant discharged over the sampling day. For pollutants with limitations expressed in other units of measurement, the "daily discharge" is calculated as the average measurement of the pollutant over the sampling day.

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

e. Bacteria concentration (Fecal coliform, *E. coli*, or Enterococci) – the number of colonies 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 substitute 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 × Concentration, mg/L × 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(c).

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 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. 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 that 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; TWC Chapters 26, 27, and 28; and THSC Chapter 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 Chapter 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 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 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 that may endanger human health or safety, or the environment shall be reported by the permittee to the TCEQ. 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 September 1, 2020, the permittee must submit the written report for unauthorized discharges and unanticipated bypasses that exceed any effluent limit in the permit using the online electronic reporting system available through the TCEQ website unless the permittee requests and obtains an electronic reporting waiver. The written submission shall contain a description of the noncompliance and its cause; the potential danger to human health or safety, or the environment; the period of noncompliance, including exact dates and times; if the noncompliance has not been corrected, the time it is expected to continue; and steps taken or planned to reduce, eliminate, and prevent recurrence of the noncompliance, and to mitigate its adverse effects.

   b. The following violations shall be reported under Monitoring and Reporting Requirement 7.a.:
      i. unauthorized discharges as defined in Permit Condition 2(g).
      ii. any unanticipated bypass that exceeds any effluent limitation in the permit.
      iii. violation of a permitted maximum daily discharge limitation for pollutants listed specifically in the Other Requirements section of an Industrial TPDES permit.

   c. In addition to the above, any effluent violation that 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.

1. 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 that 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) that is not limited in the permit, if that discharge will exceed the highest of the following “notification levels”:
      i. one hundred micrograms per liter (100 µg/L);
      ii. two hundred micrograms per liter (200 µg/L) for acrolein and acrylonitrile; five hundred micrograms per liter (500 µg/L) for 2,4-dinitrophenol and for 2-methyl-4,6-dinitrophenol; and one milligram per liter (1 mg/L) for antimony;
      iii. five (5) times the maximum concentration value reported for that pollutant in the permit application; or
      iv. the level established by the TCEQ.

b. That any activity has occurred or will occur that would result in any discharge, on a nonroutine or infrequent basis, of a toxic pollutant that is not limited in the permit, if that discharge will exceed the highest of the following "notification levels":

i. five hundred micrograms per liter (500 μg/L);
ii. one milligram per liter (1 mg/L) for antimony;
iii. ten (10) times the maximum concentration value reported for that pollutant in the permit application; or
iv. the level established by the TCEQ.

10. Signatories to Reports

All reports and other information requested by the Executive Director shall be signed by the person and in the manner required by 30 TAC §305.128 (relating to Signatories to Reports).

11. All POTWs must provide adequate notice to the Executive Director of the following:

a. any new introduction of pollutants into the POTW from an indirect discharger that 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 that 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 Texas Water Code §§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 Chapter 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 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 that are not described in the permit application or that 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 that 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 Texas Water Code 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(15)) 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 use and disposal and 30 TAC §§319.21 - 319.29 concerning the discharge of certain hazardous metals.

3. Domestic wastewater treatment facilities shall comply with the following provisions:

   a. The permittee shall notify the Municipal Permits Team, Wastewater Permitting Section (MC 148) of the Water Quality Division, in writing, of any facility expansion at least 90 days prior to conducting such activity.

   b. The permittee shall submit a closure plan for review and approval to the Municipal Permits Team, Wastewater Permitting Section (MC 148) of the Water Quality Division, for any closure activity at least 90 days prior to conducting such activity. Closure is the act of permanently taking a waste management unit or treatment facility out of service and includes the permanent removal from service of any pit, tank, pond, lagoon, surface impoundment 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, 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 or upgrading of the domestic wastewater treatment 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 or collection facilities. In the case of a domestic wastewater treatment facility that 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 Remediation 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 Chapter 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 Chapter 335 do not apply, sludge and solid wastes, including tank cleaning and contaminated solids for disposal, shall be disposed of in accordance with THSC Code Chapter 361.

TCEQ Revision 05/2021

OTHER REQUIREMENTS

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

POLLUTANT	MAL (mg/L)
Aluminum (Total)	0.0025
Copper (Total)	0.002
Cyanide (Free)*	0.010
Zinc (Total)	0.005

* Compliance will be determined using the analytical method for available cyanide. See Other Requirement No. 8.

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

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

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

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

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

2. The Executive Director reviewed this action for consistency with the goals and policies of the Texas Coastal Management Program (CMP) in accordance with the regulations of the General Land Office and determined that the action is consistent with the applicable CMP goals and policies.

3. POND REQUIREMENTS

A wastewater pond (or lagoon) is an earthen structure used to evaporate, hold, store, or treat water that contains a *waste* or *pollutant* or that would cause *pollution* upon *discharge* as those terms are defined in Texas Water Code § 26.001, but does not include a pond that contains only stormwater.

A. This section is intentionally left blank.

B. An **existing** wastewater pond must be maintained to meet or exceed the original approved design and liner requirements; or, in the absence of original approved requirements, must be maintained to prevent unauthorized discharges of wastewater into or adjacent to water in the

state. The permittee shall maintain copies of all liner construction and testing documents at the facility or in a reasonably accessible location and make the information available to the executive director upon request.

C. A **new** wastewater pond constructed after the issuance date of this permit must be lined in compliance with one of the following requirements if it will contain process wastewater as defined in 40 CFR § 122.2. The executive director will review ponds that will contain only non-process wastewater on a case-by-case basis to determine whether the pond must be lined. If a pond will contain only non-process wastewater, the owner shall notify the Industrial Permits Team (MC 148) to obtain a written determination at least 90 days before the pond is placed into service and copy the TCEQ Compliance Monitoring Team (MC 224) and regional office. The permittee must submit all information about the proposed pond contents that is reasonably necessary for the executive director to make a determination. If the executive director determines that a pond does not need to be lined, then the pond is exempt from C(1) through C(3) and D through G of POND REQUIREMENTS.

A wastewater pond that only contains domestic wastewater must comply with the design requirements in 30 TAC Chapter 217 and 30 TAC § 309.13(d) in lieu of items C(1) through C(3) of this subparagraph.

(1) Soil liner: The soil liner must contain clay-rich soil material (at least 30% of the liner material passing through a #200 mesh sieve, liquid limit greater than or equal to 30, and plasticity index greater than or equal to 15) that completely covers the sides and bottom of the pond. The liner must be at least 3.0 feet thick. The liner material must be compacted in lifts of no more than 8 inches to 95% standard proctor density at the optimum moisture content in accordance with ASTM D698 to achieve a permeability less than or equal to 1×10^{-7} (≤ 0.0000001) cm/sec. For in-situ soil material that meets the permeability requirement, the material must be scarified at least 8 inches deep and then re-compacted to finished grade.

(2) Synthetic membrane: The liner must be a synthetic membrane liner at least 40 mils in thickness that completely covers the sides and the bottom of the pond. The liner material used must be compatible with the wastewater and be resistant to degradation (e.g., from ultraviolet light, chemical reactions, wave action, erosion, etc.). The liner material must be installed and maintained in accordance with the manufacturer's guidelines. A wastewater pond with a synthetic membrane liner must include an underdrain with a leak detection and collection system.

(3) Alternate liner: The permittee shall submit plans signed and sealed by a Texas-licensed professional engineer for any other equivalently protective pond lining method to the TCEQ Industrial Permits Team (MC 148) and copy the regional office.

D. For a pond that must be lined according to subparagraph C (including ponds with in-situ soil liners), the permittee shall provide certification, signed and sealed by a Texas-licensed professional engineer, stating that the completed pond lining and any required underdrain with leak detection and collection system for the pond meet the requirements in subparagraph C(1) – C(3) before using the pond. The certification shall include the following minimum details about the pond lining system: (1) pond liner type (in-situ soil, amended in-situ soil, imported soil, synthetic membrane, or alternative), (2) materials used, (3) thickness of materials, and (4) either permeability test results or a leak detection and collection system description, as applicable.

The certification must be provided to the TCEQ Water Quality Assessment Team (MC 150), Industrial Permits Team (MC 148), and regional office. A copy of the liner certification and construction details (i.e., as-built drawings, construction QA/QC documentation, and post

construction testing) must be kept on-site or in a reasonably accessible location (in either hardcopy or digital format) until the pond is closed.

E. Protection and maintenance requirements for a pond subject to subparagraph B or C (including ponds with in-situ soil liners).

(1) The permittee shall maintain a liner to prevent the unauthorized discharge of wastewater into or adjacent to water in the state.

(2) A liner must be protected from damage caused by animals. Fences or other protective devices or measures may be used to satisfy this requirement.

(3) The permittee shall maintain the structural integrity of the liner and shall keep the liner and embankment free of woody vegetation, animal burrows, and excessive erosion.

(4) The permittee shall inspect each pond liner and each leak detection system at least once per month. Evidence of damage or unauthorized discharge must be evaluated by a Texas-licensed professional engineer or Texas-licensed professional geoscientist within 30 days. The permittee is not required to drain an operating pond or to inspect below the waterline during these routine inspections.

a. A Texas-licensed professional engineer or Texas-licensed professional geoscientist must evaluate damage to a pond liner, including evidence of an unauthorized discharge without visible damage.

b. Pond liner damage must be repaired at the recommendation of a Texas-licensed professional engineer or Texas-licensed professional geoscientist. If the damage is significant or could result in an unauthorized discharge, then the repair must be documented and certified by a Texas-licensed professional engineer. Within 60 days after a repair is completed, the liner certification must be provided to the TCEQ Water Quality Assessments Team (MC 150) and regional office. A copy of the liner certification must be maintained at the facility or in a reasonably accessible location and made available to the executive director upon request.

c. A release determination and subsequent corrective action will be based on 40 CFR Part 257 or the Texas Risk Reduction Program (30 TAC Chapter 350), as applicable. If evidence indicates that an unauthorized discharge occurred, including evidence that the actual permeability exceeds the design permeability, the matter may also be referred to the TCEQ Enforcement Division to ensure the protection of the public and the environment.

F. For a pond subject to subparagraph B or C (including ponds with in-situ soil liners), the permittee shall have a Texas-licensed professional engineer perform an evaluation of each pond that requires a liner at least once every five years. The evaluation must include: (1) a physical inspection of the pond liner to check for structural integrity, damage, and evidence of leaking; (2) a review of the liner documentation for the pond; and (3) a review of all documentation related to liner repair and maintenance performed since the last evaluation. For the purposes of this evaluation, evidence of leaking also includes evidence that the actual permeability exceeds the design permeability. The permittee is not required to drain an operating pond or to inspect below the waterline during the evaluation. A copy of the engineer's evaluation report must be maintained at the facility or in a reasonably accessible location and made available to the executive director upon request.

G. For a pond subject to subparagraph B or C (including ponds with in-situ soil liners), the permittee shall maintain at least 2.0 feet of freeboard in the pond except when:

(1) the freeboard requirement temporarily cannot be maintained due to a large storm event that requires the additional retention capacity to be used for a limited period of time;

(2) the freeboard requirement temporarily cannot be maintained due to upset plant conditions that require the additional retention capacity to be used for treatment for a limited period of time; or

(3) the pond was not required to have at least 2.0 feet of freeboard according to the requirements at the time of construction.

4. There shall be no discharge from the onsite settling pond that receives filter backwash (water treatment waste) directly to Outfall 001.

5. The chronic aquatic life mixing zone for Outfall 001 is defined as a volume within a radius of 65 feet from the point of discharge. Chronic toxic criteria apply at the edge of the chronic aquatic life mixing zone.

6. The zone of initial dilution (ZID) for Outfall 001 is defined as a volume within a radius of 16.25 feet from the point of discharge. The human health mixing zone is defined as a volume within a radius of 130 feet from the point of discharge.

7. This permit does not authorize the discharge of domestic wastewater. All domestic wastewater must be disposed of in an approved manner, such as routing to an approved on-site septic tank and drainfield system or to an authorized third party for treatment and disposal.

8. The permittee may use any approved method for available cyanide, free cyanide, or total cyanide listed in 40 CFR § 136.3, Table IB.

9. The permittee shall provide written notification to the TCEQ Industrial Permits Team (MC 148), Compliance Monitoring Team (MC-224), and Region 12 Office of any change in procedure or facility modification which alters the method by which the facility obtains water for cooling purposes. This notification must be submitted 30 days prior to any such change and must include a description of the planned changes. The TCEQ may, upon review of the notification, reopen the permit to include additional terms and conditions as necessary.

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

DESCRIPTION OF APPLICATION

Applicant:	Air Liquide Large Industries U.S. LP; Texas Pollutant Discharge Elimination System (TPDES) Permit No. WQ0001954000 (EPA I.D. No. TX0065021)
Regulated activity:	Industrial wastewater permit
Type of application:	Renewal
Request:	Renewal without changes
Authority:	Federal Clean Water Act (CWA) §402; Texas Water Code (TWC) §26.027; 30 Texas Administrative Code (TAC) Chapter 305, Subchapters C-F, and Chapters 307 and 319; commission policies; and 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 will expire at midnight, five years from the date of permit issuance according to the requirements of 30 TAC §305.127(1)(C)(i).

REASON FOR PROJECT PROPOSED

The applicant applied to the Texas Commission on Environmental Quality (TCEQ) for a renewal of its existing permit.

PROJECT DESCRIPTION AND LOCATION

The applicant currently operates Air Liquide - Freeport ASU, a cryogenic air separation plant that produces oxygen, nitrogen, and argon.

The facility separates atmospheric air into its pure components of nitrogen, oxygen, and argon by liquification. Canal water and water from the City of Oyster Creek are used for the facility's production operations. The canal water is treated prior to being used for industrial operations. The filter backwash water generated from the onsite canal water treatment system is collected separately in an onsite settling pond. Water is not discharged from the settling pond. The clear water in the onsite settling pond is recirculated back to the canal water treatment system for further treatment. The treated water and air compressor condensate are then routed to the cooling towers and become part of the make-up water for the cooling tower operations. Solids deposited in the settling pond are removed and hauled offsite for disposal. The City water is primarily used for domestic purposes and a miscellaneous amount is used as wash water. Domestic wastewater is routed to the City of Oyster Creek wastewater treatment plant. The wash water is collected in a pit prior to being routed through an oil/water separator before joining other industrial wastewater in an on-site effluent pond. The wastewater collected in the effluent pond is further treated through an on-site wastewater treatment system utilizing chemical precipitation, clarification, filtration, sludge thickening, and dewatering prior to discharge via Outfall 001.

The facility is located at 1711 Farm to Market Road 523, near the City of Freeport, Brazoria County, Texas 77541.

Discharge Route and Designated Uses
The effluent is discharged to Flag Lake Drainage Canal, thence to East Union Bayou (Tidal), thence to the Intracoastal Waterway; thence to Old Brazos River Channel Tidal in Segment 1111 of the San Jacinto-Brazos Coastal Basin. The unclassified receiving water uses are high aquatic life use for Flag Lake Drainage Canal and high aquatic life use for East Union Bayou (Tidal). The designated uses for Segment No. 1111 are primary contact recreation and high aquatic life use. The effluent limits in the draft permit will maintain and protect the existing instream uses. All determinations are preliminary and subject to additional review and revisions.

Endangered Species Review
The discharge from this permit 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 the 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's 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.

Impaired Water Bodies
Segment No. 1111 is not currently listed on the state's inventory of impaired and threatened waters, the 2022 CWA §303(d) list.

Completed Total Maximum Daily Loads (TMDLs)
There are no completed TMDLs for Segment No. 1111.

Dissolved Oxygen
Due to the low levels of oxygen-demanding constituents expected in the wastewater, no significant dissolved oxygen depletion is anticipated in the receiving waters as a result of this discharge.

SUMMARY OF EFFLUENT DATA

The following is a quantitative description of the discharge described in the monthly effluent report data for the period of October 2019 through July 2025. The "Avg of Daily Avg" values presented in the following table are the average of all daily average values for the reporting period for each pollutant. The "Max of Daily Max" values presented in the following table are the individual maximum values for the reporting period for each pollutant. Flows are expressed in million gallons per day (MGD). All pH values are expressed in standard units (SU).

Flow

Outfall	Frequency	Avg of Daily Avg, MGD	Max of Daily Max, MGD
001	Continuous	0.081	0.616

Temperature

Outfall	Temperature	Daily Average, °F	Daily Maximum, °F
001		75.266	95.900

Effluent Characteristics

Outfall	Pollutant	Avg of Daily Avg		Max of Daily Max	
		lbs/day	mg/L	lbs/day	mg/L
001	Total Suspended Solids	20	25	763	655
	Chemical Oxygen Demand	37	50	308	675
	Oil and Grease	1.9	2.5	18.9	16.6
	Total Aluminum	0.11	0.16	8.94	16.10
	Total Copper	0.019	0.031	2.394	4.310
	Free Cyanide	0.002	0.003	0.014	0.018
	Total Zinc	0.17	0.234	17.72	31.900
	pH	4.7 SU (minimum)		9.5 SU (maximum)	

Effluent limit violations documented in the monthly effluent reports are summarized in the following table.

Effluent Limitation Violations

Outfall	Pollutant	Report Date	Daily Average				Daily Maximum			
			Limit (lbs/day)	Limit (mg/L)	Reported (lbs/day)	Reported (mg/L)	Limit (lbs/day)	Limit (mg/L)	Reported (lbs/day)	Reported (mg/L)
001	Flow	3/31/2024	-		-		0.580 MGD		0.616 MGD	
	Total Suspended Solids	4/30/2023	115	-	233	-	192	-	763	-
	Total Aluminum	3/31/2021	-	0.486	-	0.533	-	1.03	-	1.3
	Total Aluminum	7/31/2024	1.87	0.486	3.00	5.386	3.95	1.03	8.94	16.1
	Total Copper	1/31/2024	-	0.057	-	0.079	-	0.120	-	0.26
	Total Copper	7/31/2024	0.219	0.057	0.801	1.439	0.461	0.120	2.394	4.31
	Total Zinc	6/30/2020	-	0.951	-	1.37	-	2.01	-	5.13
	Total Zinc	12/31/2020	-	-	-	-	-	2.01	-	2.03
	Total Zinc	7/31/2024	3.65	0.951	5.92	10.64	7.72	2.01	17.72	31.9
	pH	3/31/2021	6.0 SU (minimum)		4.7 SU (minimum)		-		-	
	pH	12/31/2022	-		-		9.0 SU (maximum)		9.5 SU (maximum)	

The draft permit was not changed to address these effluent limit violations because the violations were isolated over the length of the permit term and do not demonstrate a pattern of noncompliance.

DRAFT PERMIT CONDITIONS

The draft permit authorizes the discharge of cooling tower blowdown, air compressor condensate, and miscellaneous wash water at a daily average flow not to exceed 0.460 MGD via Outfall 001.

Effluent limitations are established in the draft permit as follows:

Outfall	Pollutant	Daily Average (lbs/day)	Daily Average (mg/L)	Daily Maximum (lbs/day)	Daily Maximum (mg/L)
001	Flow	0.460 MGD		0.580 MGD	
	Total Suspended Solids	115	Report	192	Report
	Chemical Oxygen Demand	230	Report	361	Report

Outfall	Pollutant	Daily Average (lbs/day)	Daily Average (mg/L)	Daily Maximum (lbs/day)	Daily Maximum (mg/L)
	Oil and Grease	15.7	Report	21.0	Report
	Temperature	95° F (average)		100° F (average)	
	Total Aluminum	1.87	0.486	3.95	1.03
	Total Copper	0.214	0.0557	0.449	0.117
	Free Cyanide	0.084	0.022	0.180	0.047
	Total Zinc	3.65	0.951	7.72	2.01
	pH	6.0 SU (minimum)		9.0 SU (maximum)	

OUTFALL LOCATIONS

Outfall	Latitude	Longitude
001	28.988611N	95.338889W

Technology-Based Effluent Limitations
Regulations in Title 40 of the Code of Federal Regulations (40 CFR) require that technology-based limitations be placed in wastewater discharge permits based on effluent limitations guidelines, where applicable, or on best professional judgment (BPJ) in the absence of guidelines. Technology-based effluent limitations from 40 CFR Part 415.490 apply to the discharge from this facility. Development of technology-based effluent limitations is presented in Appendix A.

Existing effluent limitations for TSS, COD, and temperature at Outfall 001 based on BPJ are carried forward in the draft permit based on EPA anti-backsliding regulations at 40 CFR 122.44(l).

The Oil and Grease loading limits calculated in Appendix A differ from the existing permit due to an error with the production data unit reported in the previous application (was reported as standard cubic feet per day but the values listed were instead in standard cubic feet per hour). Per TCEQ procedures, to make permit limits less stringent, a major amendment application must be filed. Because this application is for a renewal without changes, the existing loading limits are continued in the draft permit as they are more stringent than the calculated technology-based effluent limits.

Water Quality-Based Effluent Limitations
Calculations of water quality-based effluent limitations for the protection of aquatic life and human health are presented in Appendix B. Aquatic life criteria established in Table 1 and human health criteria established in Table 2 of 30 TAC Chapter 307 are incorporated into the calculations, as are recommendations in the Water Quality Assessment Team's memorandum dated October 20, 2025. TCEQ practice for determining significant potential is to compare the reported analytical data from the facility against percentages of the calculated daily average water quality-based effluent limitation. Permit limitations are required when analytical data reported in the application exceeds 85 percent of the calculated daily average water quality-based effluent limitation. Monitoring and reporting is required when analytical data reported in the application exceeds 70 percent of the calculated daily average water quality-based effluent limitation. To evaluate the freshwater portion of the receiving waters, surrogate freshwater Segment 1202 values for pH, TSS, hardness and chloride are used for the screening.

Data reported in the application was screened against the calculated water quality-based effluent limitations. No additional monitoring and reporting requirements or effluent limitations are included

in the draft permit because none of the analytical data provided with the application exceeded 70 or 85 percent of the calculated water quality-based effluent limitations presented in Appendix B.

The limits in the existing permit were compared to the calculated water quality-based effluent limits to determine whether the existing limits are still protective. The existing limits for Total Aluminum, Free Cyanide and Total Zinc are more stringent than the calculated water quality-based limits; therefore, the existing water quality-based limits for these parameters are continued in the existing permit in accordance with federal anti-backsliding regulations in 40 CFR § 122.44(l). The existing limits for Total Copper are less stringent than the calculated water quality-based limits; therefore, the limits for Total Copper have been revised to reflect the current calculated water quality-based limits as presented in Appendix B. No compliance period is warranted as the limits were just slightly lowered.

Total Dissolved Solids (TDS), Chloride, and Sulfate Screening
The average concentration of TDS, chloride, and sulfate in the effluent is greater than the segment criterion. Screening procedures and effluent limitations for TDS, chloride, and sulfate are calculated using the methodology in the *Procedures to Implement the Texas Surface Water Quality Standards*, June 2010, and criteria in the *Texas Surface Water Quality Standards* (30 TAC Chapter 307). Detailed calculations are presented in Appendix C. Based on the screening, no effluent limitations are needed for TDS, chloride, and sulfate.

pH Screening
The existing permit includes pH limits of 6.0 – 9.0 SU at Outfall 001, which discharges into an unclassified water body. Consistent with the procedures for pH screening that were submitted to EPA with a letter dated May 28, 2014, and approved by EPA in a letter dated June 2, 2014, requiring a discharge to an unclassified water body to meet pH limits of 6.0 – 9.0 standard units reasonably ensures instream compliance with *Texas Surface Water Quality Standards* pH criteria. These limits have been carried forward in the draft permit.

316(b) Cooling Water Intake Structures
Air Liquide Large Industries U.S. LP operates the cooling water intake structure (CWIS) located on the Flag Lake Drainage Canal in Brazoria County, to obtain water from cooling purposes. The CWIS is considered below the threshold for applicability under Section 316(b) of the CWA because the facility withdraws less than 2 MGD of water; however, the facility is subject on the basis of BPJ, per the requirements of 40 CFR § 125.90(b).

Cooling water withdrawn via the CWIS supplies cooling towers, a form of closed-cycle cooling. The CWIS is operated in a manner consistent with closed-cycle recirculating system (CCRS) as defined at 40 CFR 125.92(c), minimizing surface water withdrawals for make-up purposes only.

Rulemaking for Section 316(b) of the CWA considered cooling towers to be the most effective impingement mortality and entrainment technology available because the use of cooling towers dramatically reduces surface water withdrawals. Additionally, the EPA could not identify any other technology which more effectively reduced rates of impingement mortality or rates of entrainment. Therefore, when a cooling water system exclusively uses cooling towers, all factors required for the executive director to review under 40 CFR § 125.98(f)(2) are given a weight of zero because the information collected by the requirements would not provide the executive director with any additional information of value.

The operation of a CCRS (i.e., cooling towers) reduces withdrawals from surface waters effectively, thereby reducing the impingement and entrainment of aquatic organisms. The facility meets Best Technology Available standards based upon BPJ. The executive director will review this determination

upon receipt of additional information in accordance with 40 CFR § 122.21(r); 40 CFR Part 125, Subpart J; or both; as applicable.

Other Requirement No. 7 in the existing permit (now Other Requirement No. 9) has been carried forward and requires the permittee to notify the TCEQ of any changes in the operation and maintenance of the cooling water system or in the method by which cooling water is obtained. Upon receipt of such notification, the TCEQ may reopen the permit to include additional terms and conditions as necessary.

Whole Effluent Toxicity Testing (Biomonitoring)
The existing permit did not establish biomonitoring requirements and discharges authorized by this permit do not meet the threshold established in the *Procedures to Implement the Texas Surface Water Quality Standards* (RG-194) to impose biomonitoring requirements.

Thermal Standards Protection
No temperature screening is required as the temperature limit is equal to segment criteria.

SUMMARY OF CHANGES FROM APPLICATION

The following changes have been made from the application, which make the draft permit more stringent. The Total Copper daily average limits have been changed from 0.219 lbs/day to 0.214 lbs/day; and from 0.057 mg/L to 0.0557 mg/L per updated TEXTOX screening. The Total Copper daily maximum limits have also been revised from 0.461 lbs/day to 0.449 lbs/day; and from 0.120 mg/L to 0.117 mg/L per updated TEXTOX screening.

SUMMARY OF CHANGES FROM EXISTING PERMIT

The following additional changes have been made to the draft permit.

1. Pages 3-13 were updated (May 2021 version).
2. The facility location information was changed to only include the street address instead of the street address and detailed location description as found in the existing permit.
3. Changed the flow measurement frequency to "continuous" and sample type to "record" because Item 4 of the Technical Report indicates that the facility uses a flow meter.
4. Other Requirement No. 4 has been added prohibiting discharge from the onsite settling pond that receives filter backwash (water treatment waste) directly to Outfall 001.
5. The MAL for Total Aluminum was changed from 0.030 mg/L to 0.025 mg/L to reflect current TCEQ requirements.
6. The MAL for Total Copper was changed from 0.010 mg/L to 0.002 mg/L to reflect current TCEQ requirements.
7. Coastal Management Program language has been added to the permit as Other Requirement No. 2.
8. Other Requirement No. 6 has been added defining the zone of initial dilution (ZID).
9. Previous Other Requirement No. 8 which referred to a thermal plume characterization study submitted to the TCEQ for review has been removed from the draft permit as it is no longer relevant.

BASIS FOR DRAFT PERMIT

The following items were considered in developing the draft permit:

1. Application received on April 29, 2024, and additional information received on June 26, 2024, March 12, 2025, March 13,2025, and August 8, 2025.
2. Existing permits: TPDES Permit No. WQ0001954000 issued on October 29, 2019.
3. TCEQ Rules.
4. *Texas Surface Water Quality Standards* – 30 TAC §§307.1-307.10, effective March 1, 2018, as approved by EPA Region 6.
5. *Texas Surface Water Quality Standards* – 30 TAC §§307.1-307.10, effective March 6, 2014, as approved by EPA Region 6, for portions of the 2018 standards not approved by EPA Region 6.
6. *Texas Surface Water Quality Standards* – 30 TAC §§307.1-307.10, effective July 22, 2010, as approved by EPA Region 6, for portions of the 2014 standards not approved by EPA Region 6.
7. *Texas Surface Water Quality Standards* – 30 TAC §§307.1-307.10, effective August 17, 2000, and Appendix E, effective February 27, 2002, for portions of the 2010 standards not approved by EPA Region 6.
8. *Procedures to Implement the Texas Surface Water Quality Standards* (IPs), Texas Commission on Environmental Quality, June 2010, as approved by EPA Region 6.
9. *Procedures to Implement the Texas Surface Water Quality Standards*, Texas Commission on Environmental Quality, January 2003, for portions of the 2010 IPs not approved by EPA Region 6.
10. Memos from the Standards Implementation Team and Water Quality Assessment Team of the Water Quality Assessment Section of the TCEQ.
11. *Guidance Document for Establishing Monitoring Frequencies for Domestic and Industrial Wastewater Discharge Permits*, TCEQ Document No. 98-001.000-OWR-WQ, May 1998.
12. EPA Effluent Guidelines: 40 CFR Part 415, Subpart AW (BPT). A new source determination was performed and the discharge of cooling tower blowdown, air compressor condensate and miscellaneous wash water is not a new source as defined at 40 CFR §122.2.
13. Consistency with the Coastal Management Plan: The executive director has reviewed this action for consistency with the goals and policies of the Texas Coastal Management Program (CMP) in accordance with the regulations of the General Land Office and has determined that the action is consistent with the applicable CMP goals and policies.
14. Letter dated May 28, 2014, from L'Oreal W. Stepney, P.E., Deputy Director, Office of Water, TCEQ, to Bill Honker, Director, Water Quality Protection Division, EPA (TCEQ proposed development strategy for pH evaluation procedures).
15. Letter dated June 2, 2014, from William K. Honker, P.E., Director, Water Quality Protection Division, EPA, to L'Oreal W. Stepney, P.E., Deputy Director, Office of Water, TCEQ (Approval of TCEQ proposed development strategy for pH evaluation procedures).
16. Letter dated April 29, 2014, from L'Oreal W. Stepney, P.E., Deputy Director, Office of Water, TCEQ, to Bill Honker, Director, Water Quality Protection Division, EPA (TCEQ proposed development strategy for thermal evaluation procedures)
17. Letter dated May 12, 2014, from William K. Honker, P.E., Director, Water Quality Protection Division, EPA, to L'Oreal W. Stepney, P.E., Deputy Director, Office of Water, TCEQ (Approval of TCEQ proposed development strategy for thermal evaluation procedures).

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 reviewing 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 to the Chief Clerk, along with the Executive Director's preliminary decision contained in the technical summary or fact sheet. 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 hearing.

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 Nikita Hardy at (512) 239-3045.

Nikita Hardy
Nikita Hardy

October 20, 2025
Date

Appendix A
Calculated Technology-Based Effluent Limits
40 CFR Part 415—Inorganic Chemicals Manufacturing Point Source Category
Subpart AW—Oxygen and Nitrogen Production Subcategory

Best Practicable Control Technology Currently Available (BPT) limitations in 40 CFR §415.492 apply for oil and grease and pH.

Oil and Grease:

Daily average = 0.0010 lbs per day/1,000 pounds of product
Daily maximum = 0.0020 lbs per day/1,000 pounds of product

According to the permit application, the facility produces 30,305,422 ft^3/day of oxygen and 61,506,368 ft^3/day of nitrogen. These values are converted to lbs/day as follows:

Oxygen: 30,305,422 ft^3/day, or 2,509,558 lbs of oxygen (gas) per day.*
Nitrogen: 61,506,368 ft^3/day, or 4,456,014 lbs of nitrogen (gas) per day.**

for a total of 6,965,572 lbs/day of product. Therefore, according to guidelines in 40 CFR §415.492, effluent limitations are calculated as follows:

Daily Average = 0.0010 lbs per day/1000 lbs product × 6,965,572 lbs/1000 lbs product = 6.9656 lbs/day
Daily Maximum = 0.0020 lbs per day/1000 lbs product × 6,965,572 lbs/1000 lbs product = 13.9311 lbs/day

According to the permit application, cooling tower blowdown comprises the majority of the discharge. The average discharge amount was 0.102 MGD. Using oil and grease limitations of 15 mg/L (daily average) and 20 mg/L (daily maximum) for low volume waste from 40 CFR Part 423, the following additional loadings apply:

Daily Average = 15 mg/L × 0.102 MGD × 8.345 = 12.8 lbs/day
Daily Maximum = 20 mg/L × 0.102 MGD × 8.345 = 17.0 lbs/day

The total loading limitations for oil and grease are the sum of the loadings for the wash water (process wastewater) and the cooling tower blowdown:

Daily Average = 6.9656 lbs/day + 12.8 lbs/day = 19.8 lbs/day
Daily Maximum = 13.9311 lbs/day + 17.0 lbs/day = 30.9 lbs/day

pH:

The current pH limits of 6.0 to 9.0 S.U. are consistent with the limitations in 40 CFR §415.492.

*Converted to pounds (12.076 ft^3 of oxygen gas is equivalent to 1.0 lb), calculated as follows:
30,305,422 ft^3 per day/12.076 ft^3 per pound = 2,509,558 lbs/day
**Converted to pounds (13.803 ft^3 of nitrogen gas is equivalent to 1.0 lb), calculated as follows:
61,506,368 ft^3 per day/13.803 ft^3 per pound = 4,456,014 lbs/day

TSS:

The current TSS mass limits are based on BPJ. The equivalent concentrations are calculated below.
Daily Average Concentration: concentration in mg/L x 0.46 MGD x 8.345 = 115 lbs/day
Daily Average Concentration = 30.0 mg/L
Daily Maximum Concentration: concentration in mg/L x 0.46 MGD x 8.345 = 192 lbs/day
Daily Maximum Concentration = 50 mg/L
Based upon these calculations, the existing mass limitations are appropriate and are continued in the draft permit.

COD:

The current COD mass limits are based on BPJ. The equivalent concentrations are calculated below.
Daily Average Concentration: concentration in mg/L x 0.46 MGD x 8.345 = 230 lbs/day
Daily Average Concentration = 60.0 mg/L
Daily Maximum Concentration: concentration in mg/L x 0.46 MGD x 8.345 = 361 lbs/day
Daily Maximum Concentration = 94.0 mg/L
Based upon these calculations, the existing mass limitations are appropriate and are continued in the draft permit.

Appendix B
Calculated Water Quality-Based Effluent Limits

TEXTOX MENU #4 - LAKE OR RESERVOIR

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

Table 1, 2014 Texas Surface Water Quality Standards (30 TAC 307) for Freshwater Aquatic Life
Table 2, 2018 Texas Surface Water Quality Standards for Human Health
"Procedures to Implement the Texas Surface Water Quality Standards," TCEQ, June 2010

PERMIT INFORMATION

Permittee Name:	Air Liquide Large Industries U.S. LP
TPDES Permit No:	WQ0001954000
Outfall No:	001
Prepared by:	Nikita Hardy
Date:	October 16, 2025

DISCHARGE INFORMATION

Receiving Waterbody:	Flag Lake Drainage Canal
Segment No.:	1202
TSS (mg/L):	32
pH (Standard Units):	7.7
Hardness (mg/L as $CaCO_3$):	160
Chloride (mg/L):	86
Effluent Flow for Aquatic Life (MGD):	0.15
% Effluent for Chronic Aquatic Life (Mixing Zone):	23
% Effluent for Acute Aquatic Life (ZID):	93
Effluent Flow for Human Health (MGD):	0.08
% Effluent for Human Health:	12
Human Health Criterion (select: PWS, FISH, or INC)	**FISH**

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

Lake/Reservoir Metal	*Intercept (b)*	*Slope (m)*	*Partition Coefficient (Kp)*	*Dissolved Fraction (Cd/Ct)*	*Source*	*Water Effect Ratio (WER)*	*Source*
Aluminum	N/A	N/A	N/A	1.00	Assumed	1.00	Assumed
Arsenic	5.68	-0.73	38127.69	0.450		1.00	Assumed
Cadmium	6.55	-0.92	146305.96	0.176		1.00	Assumed
Chromium (total)	6.34	-0.27	858241.49	0.035		1.00	Assumed
Chromium (trivalent)	6.34	-0.27	858241.49	0.035		1.00	Assumed
Chromium (hexavalent)	N/A	N/A	N/A	1.00	Assumed	1.00	Assumed
Copper	6.45	-0.90	124556.11	0.201		1.00	Assumed
Lead	6.31	-0.53	325289.85	0.088		1.00	Assumed
Mercury	N/A	N/A	N/A	1.00	Assumed	1.00	Assumed
Nickel	6.34	-0.76	157067.39	0.166		1.00	Assumed
Selenium	N/A	N/A	N/A	1.00	Assumed	1.00	Assumed
Silver	6.38	-1.03	67560.91	0.316		1.00	Assumed
Zinc	6.52	-0.68	313688.08	0.091		1.00	Assumed

AQUATIC LIFE

CALCULATE DAILY AVERAGE AND DAILY MAXIMUM EFFLUENT LIMITATIONS:

Parameter	*FW Acute Criterion (µg/L)*	*FW Chronic Criterion (µg/L)*	*WLAa (µg/L)*	*WLAc (µg/L)*	*LTAa (µg/L)*	*LTAc (µg/L)*	*Daily Avg. (µg/L)*	*Daily Max. (µg/L)*
Aldrin	3.0	N/A	3.23	N/A	1.03	N/A	1.51	3.21
Aluminum	991	N/A	1066	N/A	341	N/A	501	1060
Arsenic	340	150	812	1448	260	883	381	807
Cadmium	13.55	0.341	82.8	8.42	26.5	5.14	7.55	15.9
Carbaryl	2.0	N/A	2.15	N/A	0.688	N/A	1.01	2.14
Chlordane	2.4	0.004	2.58	0.0174	0.826	0.0106	0.0155	0.0329
Chlorpyrifos	0.083	0.041	0.0892	0.178	0.0286	0.109	0.0419	0.0888
Chromium (trivalent)	837	108.9	25626	13478	8200	8222	12054	25502
Chromium (hexavalent)	15.7	10.6	16.9	46.1	5.40	28.1	7.94	16.8
Copper	22.11	14.15	119	307	37.9	187	55.7	117
Cyanide (free)	45.8	10.7	49.2	46.5	15.8	28.4	23.1	49.0
4,4'-DDT	1.1	0.001	1.18	0.00435	0.378	0.00265	0.00389	0.00824
Demeton	N/A	0.1	N/A	0.435	N/A	0.265	0.389	0.824
Diazinon	0.17	0.17	0.183	0.739	0.0585	0.451	0.0859	0.181
Dicofol [Kelthane]	59.3	19.8	63.8	86.1	20.4	52.5	29.9	63.4
Dieldrin	0.24	0.002	0.258	0.00870	0.0826	0.00530	0.00779	0.0164
Diuron	210	70	226	304	72.3	186	106	224
Endosulfan I (*alpha*)	0.22	0.056	0.237	0.243	0.0757	0.149	0.111	0.235
Endosulfan II (*beta*)	0.22	0.056	0.237	0.243	0.0757	0.149	0.111	0.235
Endosulfan sulfate	0.22	0.056	0.237	0.243	0.0757	0.149	0.111	0.235
Endrin	0.086	0.002	0.0925	0.00870	0.0296	0.00530	0.00779	0.0164
Guthion [Azinphos Methyl]	N/A	0.01	N/A	0.0435	N/A	0.0265	0.0389	0.0824
Heptachlor	0.52	0.004	0.559	0.0174	0.179	0.0106	0.0155	0.0329
Hexachlorocyclohexane (*gamma*) [Lindane]	1.126	0.08	1.21	0.348	0.387	0.212	0.311	0.659
Lead	107.3	4.18	1316	207	421	127	186	393
Malathion	N/A	0.01	N/A	0.0435	N/A	0.0265	0.0389	0.0824
Mercury	2.4	1.3	2.58	5.65	0.826	3.45	1.21	2.56
Methoxychlor	N/A	0.03	N/A	0.130	N/A	0.0796	0.116	0.247
Mirex	N/A	0.001	N/A	0.00435	N/A	0.00265	0.00389	0.00824
Nickel	697	77.4	4516	2028	1445	1237	1818	3847
Nonylphenol	28	6.6	30.1	28.7	9.63	17.5	14.1	29.9
Parathion (ethyl)	0.065	0.013	0.0699	0.0565	0.0224	0.0345	0.0328	0.0695
Pentachlorophenol	17.6	13.52	19.0	58.8	6.07	35.9	8.91	18.8
Phenanthrene	30	30	32.3	130	10.3	79.6	15.1	32.1

Polychlorinated Biphenyls [PCBs]	2.0	0.014	2.15	0.0609	0.688	0.0371	0.0545	0.115
Selenium	20	5	21.5	21.7	6.88	13.3	10.1	21.4
Silver	0.8	N/A	#NAME?	N/A	#NAME?	N/A	#NAME?	#NAME?
Toxaphene	0.78	0.0002	0.839	0.000870	0.268	0.000530	0.000779	0.00164
Tributyltin [TBT]	0.13	0.024	0.140	0.104	0.0447	0.0637	0.0657	0.139
2,4,5 Trichlorophenol	136	64	146	278	46.8	170	68.7	145
Zinc	174.5	175.9	2071	8443	663	5150	974	2061

HUMAN HEALTH

CALCULATE DAILY AVERAGE AND DAILY MAXIMUM EFFLUENT LIMITATIONS:

Parameter	*Water and Fish Criterion (µg/L)*	*Fish Only Criterion (µg/L)*	*Incidental Fish Criterion (µg/L)*	*WLAh (µg/L)*	*LTAh (µg/L)*	*Daily Avg. (µg/L)*	*Daily Max. (µg/L)*
Acrylonitrile	1.0	115	1150	958	891	1310	2771
Aldrin	1.146E-05	1.147E-05	1.147E-04	0.0000956	0.0000889	0.000130	0.000276
Anthracene	1109	1317	13170	10975	10207	15003	31742
Antimony	6	1071	10710	8925	8300	12201	25813
Arsenic	10	N/A	N/A	N/A	N/A	N/A	N/A
Barium	2000	N/A	N/A	N/A	N/A	N/A	N/A
Benzene	5	581	5810	4842	4503	6619	14003
Benzidine	0.0015	0.107	1.07	0.892	0.829	1.21	2.57
Benzo(*a*)anthracene	0.024	0.025	0.25	0.208	0.194	0.284	0.602
Benzo(*a*)pyrene	0.0025	0.0025	0.025	0.0208	0.0194	0.0284	0.0602
Bis(chloromethyl)ether	0.0024	0.2745	2.745	2.29	2.13	3.12	6.61
Bis(2-chloroethyl)ether	0.60	42.83	428.3	357	332	487	1032
Bis(2-ethylhexyl) phthalate [Di(2-ethylhexyl) phthalate]	6	7.55	75.5	62.9	58.5	86.0	181
Bromodichloromethane [Dichlorobromomethane]	10.2	275	2750	2292	2131	3132	6628
Bromoform [Tribromomethane]	66.9	1060	10600	8833	8215	12076	25548
Cadmium	5	N/A	N/A	N/A	N/A	N/A	N/A
Carbon Tetrachloride	4.5	46	460	383	357	524	1108
Chlordane	0.0025	0.0025	0.025	0.0208	0.0194	0.0284	0.0602
Chlorobenzene	100	2737	27370	22808	21212	31181	65968
Chlorodibromomethane [Dibromochloromethane]	7.5	183	1830	1525	1418	2084	4410
Chloroform [Trichloromethane]	70	7697	76970	64142	59652	87688	185516
Chromium (hexavalent)	62	502	5020	4183	3891	5719	12099
Chrysene	2.45	2.52	25.2	21.0	19.5	28.7	60.7
Cresols [Methylphenols]	1041	9301	93010	77508	72083	105961	224177

Cyanide (free)	200	N/A	N/A	N/A	N/A	N/A	N/A
4,4'-DDD	0.002	0.002	0.02	0.0167	0.0155	0.0227	0.0482
4,4'-DDE	0.00013	0.00013	0.0013	0.00108	0.00101	0.00148	0.00313
4,4'-DDT	0.0004	0.0004	0.004	0.00333	0.00310	0.00455	0.00964
2,4'-D	70	N/A	N/A	N/A	N/A	N/A	N/A
Danitol [Fenpropathrin]	262	473	4730	3942	3666	5388	11400
1,2-Dibromoethane [Ethylene Dibromide]	0.17	4.24	42.4	35.3	32.9	48.3	102
m-Dichlorobenzene [1,3-Dichlorobenzene]	322	595	5950	4958	4611	6778	14340
o-Dichlorobenzene [1,2-Dichlorobenzene]	600	3299	32990	27492	25567	37583	79514
p-Dichlorobenzene [1,4-Dichlorobenzene]	75	N/A	N/A	N/A	N/A	N/A	N/A
3,3'-Dichlorobenzidine	0.79	2.24	22.4	18.7	17.4	25.5	53.9
1,2-Dichloroethane	5	364	3640	3033	2821	4146	8773
1,1-Dichloroethylene [1,1-Dichloroethene]	7	55114	551140	459283	427134	627886	1328385
Dichloromethane [Methylene Chloride]	5	13333	133330	111108	103331	151896	321358
1,2-Dichloropropane	5	259	2590	2158	2007	2950	6242
1,3-Dichloropropene [1,3-Dichloropropylene]	2.8	119	1190	992	922	1355	2868
Dicofol [Kelthane]	0.30	0.30	3	2.50	2.33	3.41	7.23
Dieldrin	2.0E-05	2.0E-05	2.0E-04	0.000167	0.000155	0.000227	0.000482
2,4-Dimethylphenol	444	8436	84360	70300	65379	96107	203328
Di-*n*-Butyl Phthalate	88.9	92.4	924	770	716	1052	2227
Dioxins/Furans [TCDD Equivalents]	7.80E-08	7.97E-08	7.97E-07	6.64E-07	6.18E-07	9.07E-07	0.0000019
Endrin	0.02	0.02	0.2	0.167	0.155	0.227	0.482
Epichlorohydrin	53.5	2013	20130	16775	15601	22933	48518
Ethylbenzene	700	1867	18670	15558	14469	21269	44999
Ethylene Glycol	46744	1.68E+07	1.68E+08	140000000	130200000	191394000	404922000
Fluoride	4000	N/A	N/A	N/A	N/A	N/A	N/A
Heptachlor	8.0E-05	0.0001	0.001	0.000833	0.000775	0.00113	0.00241
Heptachlor Epoxide	0.00029	0.00029	0.0029	0.00242	0.00225	0.00330	0.00698
Hexachlorobenzene	0.00068	0.00068	0.0068	0.00567	0.00527	0.00774	0.0163
Hexachlorobutadiene	0.21	0.22	2.2	1.83	1.71	2.50	5.30
Hexachlorocyclohexane (*alpha*)	0.0078	0.0084	0.084	0.0700	0.0651	0.0956	0.202
Hexachlorocyclohexane (*beta*)	0.15	0.26	2.6	2.17	2.02	2.96	6.26
Hexachlorocyclohexane (*gamma*) [Lindane]	0.2	0.341	3.41	2.84	2.64	3.88	8.21
Hexachlorocyclopentadiene	10.7	11.6	116	96.7	89.9	132	279
Hexachloroethane	1.84	2.33	23.3	19.4	18.1	26.5	56.1
Hexachlorophene	2.05	2.90	29	24.2	22.5	33.0	69.8
4,4'-Isopropylidenediphenol [Bisphenol A]	1092	15982	159820	133183	123861	182074	385206
Lead	1.15	3.83	38.3	364	339	497	1053
Mercury	0.0122	0.0122	0.122	0.102	0.0946	0.138	0.294

Methoxychlor	2.92	3.0	30	25.0	23.3	34.1	72.3
Methyl Ethyl Ketone	13865	9.92E+05	9.92E+06	8266667	7688000	11301360	23909680
Methyl *tert*-butyl ether [MTBE]	15	10482	104820	87350	81236	119416	252642
Nickel	332	1140	11400	57248	53241	78264	165579
Nitrate-Nitrogen (as Total Nitrogen)	10000	N/A	N/A	N/A	N/A	N/A	N/A
Nitrobenzene	45.7	1873	18730	15608	14516	21338	45143
N-Nitrosodiethylamine	0.0037	2.1	21	17.5	16.3	23.9	50.6
N-Nitroso-di-*n*-Butylamine	0.119	4.2	42	35.0	32.6	47.8	101
Pentachlorobenzene	0.348	0.355	3.55	2.96	2.75	4.04	8.55
Pentachlorophenol	0.22	0.29	2.9	2.42	2.25	3.30	6.98
Polychlorinated Biphenyls [PCBs]	6.4E-04	6.4E-04	6.40E-03	0.00533	0.00496	0.00729	0.0154
Pyridine	23	947	9470	7892	7339	10788	22825
Selenium	50	N/A	N/A	N/A	N/A	N/A	N/A
1,2,4,5-Tetrachlorobenzene	0.23	0.24	2.4	2.00	1.86	2.73	5.78
1,1,2,2-Tetrachloroethane	1.64	26.35	263.5	220	204	300	635
Tetrachloroethylene [Tetrachloroethylene]	5	280	2800	2333	2170	3189	6748
Thallium	0.12	0.23	2.3	1.92	1.78	2.62	5.54
Toluene	1000	N/A	N/A	N/A	N/A	N/A	N/A
Toxaphene	0.011	0.011	0.11	0.0917	0.0853	0.125	0.265
2,4,5-TP [Silvex]	50	369	3690	3075	2860	4203	8893
1,1,1-Trichloroethane	200	784354	7843540	6536283	6078744	8935752	18904892
1,1,2-Trichloroethane	5	166	1660	1383	1287	1891	4001
Trichloroethylene [Trichloroethene]	5	71.9	719	599	557	819	1732
2,4,5-Trichlorophenol	1039	1867	18670	15558	14469	21269	44999
TTHM [Sum of Total Trihalomethanes]	80	N/A	N/A	N/A	N/A	N/A	N/A
Vinyl Chloride	0.23	16.5	165	138	128	187	397

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

Aquatic Life	***70% of Daily Avg.***	***85% of Daily Avg.***
Parameter	***(µg/L)***	***(µg/L)***
Aldrin	1.06	1.28
Aluminum	350	426
Arsenic	267	324
Cadmium	5.28	6.41
Carbaryl	0.708	0.859
Chlordane	0.0109	0.0132
Chlorpyrifos	0.0293	0.0356
Chromium (trivalent)	8438	10246
Chromium (hexavalent)	5.55	6.74
Copper	39.0	47.4
Cyanide (free)	16.2	19.6
4,4'-DDT	0.00272	0.00331
Demeton	0.272	0.331
Diazinon	0.0601	0.0730
Dicofol [Kelthane]	20.9	25.4
Dieldrin	0.00545	0.00662
Diuron	74.3	90.2
Endosulfan I (*alpha*)	0.0778	0.0945
Endosulfan II (*beta*)	0.0778	0.0945
Endosulfan sulfate	0.0778	0.0945
Endrin	0.00545	0.00662
Guthion [Azinphos Methyl]	0.0272	0.0331
Heptachlor	0.0109	0.0132
Hexachlorocyclohexane (*gamma*) [Lindane]	0.218	0.265
Lead	130	158
Malathion	0.0272	0.0331
Mercury	0.849	1.03
Methoxychlor	0.0818	0.0994
Mirex	0.00272	0.00331
Nickel	1272	1545
Nonylphenol	9.91	12.0
Parathion (ethyl)	0.0230	0.0279
Pentachlorophenol	6.24	7.57
Phenanthrene	10.6	12.8
Polychlorinated Biphenyls [PCBs]	0.0382	0.0463
Selenium	7.08	8.59
Silver	#NAME?	#NAME?
Toxaphene	0.000545	0.000662
Tributyltin [TBT]	0.0460	0.0558
2,4,5 Trichlorophenol	48.1	58.4
Zinc	681	828

Human Health	***70% of Daily Avg.***	***85% of Daily Avg.***
Parameter	***(µg/L)***	***(µg/L)***
Acrylonitrile	917	1113
Aldrin	0.0000914	0.000111
Anthracene	10502	12753
Antimony	8540	10371

Arsenic	N/A	N/A
Barium	N/A	N/A
Benzene	4633	5626
Benzidine	0.853	1.03
Benzo(*a*)anthracene	0.199	0.242
Benzo(*a*)pyrene	0.0199	0.0242
Bis(chloromethyl)ether	2.18	2.65
Bis(2-chloroethyl)ether	341	414
Bis(2-ethylhexyl) phthalate [Di(2-ethylhexyl) phthalate]	60.2	73.1
Bromodichloromethane [Dichlorobromomethane]	2193	2662
Bromoform [Tribromomethane]	8453	10264
Cadmium	N/A	N/A
Carbon Tetrachloride	366	445
Chlordane	0.0199	0.0242
Chlorobenzene	21826	26504
Chlorodibromomethane [Dibromochloromethane]	1459	1772
Chloroform [Trichloromethane]	61381	74534
Chromium (hexavalent)	4003	4861
Chrysene	20.0	24.4
Cresols [Methylphenols]	74173	90067
Cyanide (free)	N/A	N/A
4,4'-DDD	0.0159	0.0193
4,4'-DDE	0.00103	0.00125
4,4'-DDT	0.00318	0.00387
2,4'-D	N/A	N/A
Danitol [Fenpropathrin]	3772	4580
1,2-Dibromoethane [Ethylene Dibromide]	33.8	41.0
m-Dichlorobenzene [1,3-Dichlorobenzene]	4744	5761
o-Dichlorobenzene [1,2-Dichlorobenzene]	26308	31946
p-Dichlorobenzene [1,4-Dichlorobenzene]	N/A	N/A
3,3'-Dichlorobenzidine	17.8	21.6
1,2-Dichloroethane	2902	3524
1,1-Dichloroethylene [1,1-Dichloroethene]	439520	533703
Dichloromethane [Methylene Chloride]	106327	129111
1,2-Dichloropropane	2065	2508
1,3-Dichloropropene [1,3-Dichloropropylene]	948	1152
Dicofol [Kelthane]	2.39	2.90
Dieldrin	0.000159	0.000193
2,4-Dimethylphenol	67274	81691
Di-*n*-Butyl Phthalate	736	894
Dioxins/Furans [TCDD Equivalents]	6.35E-07	7.71E-07
Endrin	0.159	0.193
Epichlorohydrin	16053	19493
Ethylbenzene	14888	18079
Ethylene Glycol	133975800	162684900
Fluoride	N/A	N/A
Heptachlor	0.000797	0.000968
Heptachlor Epoxide	0.00231	0.00280
Hexachlorobenzene	0.00542	0.00658
Hexachlorobutadiene	1.75	2.13
Hexachlorocyclohexane (*alpha*)	0.0669	0.0813
Hexachlorocyclohexane (*beta*)	2.07	2.51
Hexachlorocyclohexane (*gamma*) [Lindane]	2.71	3.30
Hexachlorocyclopentadiene	92.5	112

Hexachloroethane	18.5	22.5
Hexachlorophene	23.1	28.0
4,4'-Isopropylidenediphenol [Bisphenol A]	127452	154763
Lead	348	423
Mercury	0.0972	0.118
Methoxychlor	23.9	29.0
Methyl Ethyl Ketone	7910952	9606156
Methyl *tert*-butyl ether [MTBE]	83591	101503
Nickel	54785	66524
Nitrate-Nitrogen (as Total Nitrogen)	N/A	N/A
Nitrobenzene	14936	18137
N-Nitrosodiethylamine	16.7	20.3
N-Nitroso-di-*n*-Butylamine	33.4	40.6
Pentachlorobenzene	2.83	3.43
Pentachlorophenol	2.31	2.80
Polychlorinated Biphenyls [PCBs]	0.00510	0.00619
Pyridine	7552	9170
Selenium	N/A	N/A
1,2,4,5-Tetrachlorobenzene	1.91	2.32
1,1,2,2-Tetrachloroethane	210	255
Tetrachloroethylene [Tetrachloroethylene]	2232	2711
Thallium	1.83	2.22
Toluene	N/A	N/A
Toxaphene	0.0877	0.106
2,4,5-TP [Silvex]	2942	3573
1,1,1-Trichloroethane	6255027	7595390
1,1,2-Trichloroethane	1323	1607
Trichloroethylene [Trichloroethene]	573	696
2,4,5-Trichlorophenol	14888	18079
TTHM [Sum of Total Trihalomethanes]	N/A	N/A
Vinyl Chloride	131	159

Calculated Water Quality-Based Mass Limits

Mass limits for total copper, cyanide, total zinc, and total aluminum have been determined below using the following equation:

Daily Average (lbs/day) = Daily Average (mg/L) × 0.46 MGD × 8.345)

Parameter	Daily Average		Daily Maximum	
	mg/L	lbs/day	mg/L	lbs/day
Total Aluminum	0.501	1.92	1.06	4.06
Total Copper	0.0557	0.214	0.117	0.449
Free Cyanide	0.023	0.088	0.049	0.188
Total Zinc	0.974	3.73	2.06	7.91

Appendix C
TDS, Chloride, and Sulfate Screening Calculations

Screening Calculations for Total Dissolved Solids, Chloride, and Sulfate

Menu 4 - Discharge to a Lake

Applicant Name:	**Air Liquide Large Industries U.S. LP**
Permit Number, Outfall:	**01954-000, 001**
Segment Number:	**1111 - using 1202**

Enter values needed for screening:			**Data Source (edit if different)**
EF - Effluent fraction at edge of human health MZ	**0.08**	decimal fraction	Critical conditions memo
CA - TDS - ambient segment concentration	**438**	mg/L	2010 IP, Appendix D
CA - chloride - ambient segment concentration	**88**	mg/L	2010 IP, Appendix D
CA - sulfate - ambient segment concentration	**60**	mg/L	2010 IP, Appendix D
CC - TDS - segment criterion	**750**	mg/L	2022 TSWQS, Appendix A
CC - chloride - segment criterion	**300**	mg/L	2022 TSWQS, Appendix A
CC - sulfate - segment criterion	**200**	mg/L	2022 TSWQS, Appendix A
CE - TDS - average effluent concentration	**2823**	mg/L	Permit application
CE - chloride - average effluent concentration	**822**	mg/L	Permit application
CE - sulfate - average effluent concentration	**1645**	mg/L	Permit application

Screening Equation

$CC \geq (EF)(CE)+(1-EF)(CA)$

No further screening for TDS needed if:	**628.80**	**≤**	**750**
No further screening for chloride needed if:	**146.72**	**≤**	**300**
No further screening for sulfate needed if:	**186.80**	**≤**	**200**

Permit Limit Calculations

TDS

Calculate the WLA	WLA= [CC - (1-EF)(CA)]/EF	4338.00
Calculate the LTA	LTA = WLA * 0.93	4034.34
Calculate the daily average	Daily Avg. = LTA * 1.47	**5930.48**
Calculate the daily maximum	Daily Max. = LTA * 3.11	**12546.80**

Calculate 70% of the daily average	70% of Daily Avg. =			4151.34	
Calculate 85% of the daily average	85% of Daily Avg. =			5040.91	
No permit limitations needed if:	**2823**	**≤**	**4151.34**		
Reporting needed if:	**2823**	**>**	**4151.34**	**but ≤**	**5040.91**
Permit limits may be needed if:	**2823**	**>**	**5040.91**		

No permit limitations needed for TDS

Chloride

Calculate the WLA	WLA= [CC - (1-EF)(CA)]/EF			2738.00	
Calculate the LTA	LTA = WLA * 0.93			2546.34	
Calculate the daily average	Daily Avg. = LTA * 1.47			**3743.12**	
Calculate the daily maximum	Daily Max. = LTA * 3.11			**7919.12**	
Calculate 70% of the daily average	70% of Daily Avg. =			2620.18	
Calculate 85% of the daily average	85% of Daily Avg. =			3181.65	
No permit limitations needed if:	**822**	**≤**	**2620.18**		
Reporting needed if:	**822**	**>**	**2620.18**	**but ≤**	**3181.65**
Permit limits may be needed if:	**822**	**>**	**3181.65**		

No permit limitations needed for chloride

Sulfate

Calculate the WLA	WLA= [CC - (1-EF)(CA)]/EF			1810.00	
Calculate the LTA	LTA = WLA * 0.93			1683.30	
Calculate the daily average	Daily Avg. = LTA * 1.47			**2474.45**	
Calculate the daily maximum	Daily Max. = LTA * 3.11			**5235.06**	
Calculate 70% of the daily average	70% of Daily Avg. =			1732.12	
Calculate 85% of the daily average	85% of Daily Avg. =			2103.28	
No permit limitations needed if:	**1645**	**≤**	**1732.12**		
Reporting needed if:	**1645**	**>**	**1732.12**	**but ≤**	**2103.28**
Permit limits may be needed if:	**1645**	**>**	**2103.28**		

No permit limitations needed for sulfate

Appendix D
Comparison of Effluent Limits

The following table is a summary of technology-based effluent limitations calculated/assessed in the draft permit (Technology-Based), calculated/ assessed water quality-based effluent limitations (Water Quality-Based), and effluent limitations in the existing permit (Existing Permit). Effluent limitations appearing in bold are the most stringent of the three and are included in the draft permit.

Outfall	*Pollutant*	*Technology-Based*				*Water Quality-Based*				*Existing Permit*			
		Daily Avg		*Daily Max*		*Daily Avg*		*Daily Max*		*Daily Avg*		*Daily Max*	
		lbs/day	*mg/L*	*lbs/day*	*mg/L*	*lbs/day*	*mg/L*	*lbs/day*	*mg/L*	*lbs/day*	*mg/L*	*lbs/day*	*mg/L*
001	Flow	-		-		-		-		**0.460 MGD**		**0.580 MGD**	
	Total Suspended Solids	115	Report	192	Report	-	-	-	-	**115**	**Report**	**192**	**Report**
	Chemical Oxygen Demand	230	Report	361	Report	-	-	-	-	**230**	**Report**	**361**	**Report**
	Oil and Grease	19.8	Report	30.9	Report	-	-	-	-	**15.7**	**Report**	**21.0**	**Report**
	Temperature	95°F		100°F		-		-		**95°F**		**100°F**	
	Total Aluminum	-	-	-	-	1.92	0.501	4.06	1.06	**1.87**	**0.486**	**3.95**	**1.03**
	Total Copper	-	-	-	-	**0.214**	**0.0557**	**0.449**	**0.117**	0.219	0.057	0.461	0.120
	Free Cyanide	-	-	-	-	0.089	0.0231	0.188	0.049	**0.084**	**0.022**	**0.180**	**0.047**
	Total Zinc	-	-	-	-	3.74	0.974	7.91	2.061	**3.65**	**0.951**	**7.72**	**2.01**
	pH	6.0 SU (minimum)		9.0 SU (maximum)		-		-		**6.0 SU (minimum)**		**9.0 SU (maximum)**	