Technical Package Cover Page

This file contains the following documents:

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

Portada de Paquete Técnico

Este archivo contiene los siguientes documentos:

1. Resumen de la solicitud (en lenguaje sencillo)
   - Inglés
   - Idioma alternativo (español)
2. Primer aviso (NORI, Aviso de Recepción de Solicitud e Intención de Obtener un Permiso)
   - Inglés
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3. Segundo aviso (NAPD, Aviso de Decisión Preliminar)
   - Inglés
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TEXAS COMMISSION ON ENVIRONMENTAL QUALITY

SUMMARY OF APPLICATION IN PLAIN LANGUAGE FOR TPDES OR TLAP PERMIT APPLICATIONS

Summary of Application (in plain language) Template and Instructions for Texas Pollutant Discharge Elimination System (TPDES) and Texas Land Application (TLAP) Permit Applications

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

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

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

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

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

City Public Service of San Antonio (CN603174244) operates Calaveras Power Plant (RN100217975), a power generating facility. The facility is located at 12940 U.S. Highway 181 S, in San Antonio, Bexar County, Texas 78233. City Public Service of San Antonio has applied to renew and amend water quality permit WQ0001514000. Amendment requests include the removal of internal Outfalls 103 and 109; reduced frequency of monitoring of pH at internal Outfalls 111, 112 and 712 to correct an error; the addition of internal Outfalls 112(d) and 112(e); the removal of total suspended solids monitoring at internal Outfall 108; and clarifications to authorized discharges, sample locations, and Other Requirements, including Other Requirement 6 (related to Outfall 006 progress reports), Other Requirement 18 (related to wastes listed for proposed evaporation ponds), and Other Requirement 13.J.iv (related to daily mass loading calculations for total residual chlorine) and 13.J.v (related to periods of chlorination).

Discharges from the facility are expected to contain free available chlorine, total residual chlorine, chemical oxygen demand, biochemical oxygen demand, oil and grease, total suspended solids, arsenic, mercury, selenium, nitrate/nitrite as N, bromide, total dissolved solids, and *E. coli.* Not every outfall is expected to contain the above list; the list is a summary for all permitted outfalls. Once-through cooling water; flue gas desulfurization wastewater; previously monitored effluents; stormwater (including coal pile runoff); construction stormwater; utility wastewater and low-volume wastes (boiler blowdown, ion exchange treatment system wastewater, reverse osmosis reject, and floor and yard drains); equipment wash water; polisher water; fire/lake water; and allowed non-stormwater discharges such as air conditioning condensate and domestic wastewater are treated by several methods depending on the wastewater type. Once-through cooling water and stormwater outside plant drains are not treated. Domestic wastewater is treated in sanitary package plants. Coal pile runoff is treated in a settling pond with a clarifier. Settling ponds are used for plant area stormwater, low-volume wastes, and utility wastewaters. Flue gas desulfurization wastewater is treated in a pond with a clarifier.

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

AGUAS RESIDUALES INUDSTRIALES /AGUAS PLUVIALES

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

City Public Service of San Antonio (CN603174244) opera Calaveras Power Plant (RN100217975), una instalación de generación de energía. La instalación está ubicada en 12940 U.S. Highway 181, en San Antonio, Condado de Bexar, Texas 78233. City Public Service of San Antonio ha solicitado la renovación y enmienda del permiso de calidad del agua WQ0001514000. Las solicitudes de enmienda incluyen la eliminación de los emisarios internos 103 y 109, reducción de la frecuencia de monitorización del pH en los emisarios internos 111, 112 y 712 para corregir un error; la adición de los emisarios internos 112(d) y 112(e); la remoción del monitoreo de sólidos suspendidos totales en emisarios interno 108; aclaraciones sobre las descargas autorizadas, las ubicaciones de muestras y otros requisitos, incluido el Otro requisito 6 (relacionado con los informes de progreso del emisario 006), otro requisito 18 (relacionado con los desechos enumerados para los estanques de evaporación propuestos) y otro requisito 13.J.iv (relacionado con los cálculos de carga másica diaria para el cloro residual total) y 13.J.v (relacionado con periodos de cloración).

Se espera que las descargas de la instalación contengan cloro libre disponible, cloro residual total, demanda química de oxígeno, demanda bioquímica de oxígeno, aceite y grasa, sólidos suspendidos totales, arsénico, mercurio, selenio, nitrato/nitrito como N, bromuro, sólidos disueltos totales y *E. coli*. No se espera que todos los emisarios contengan la lista anterior; La lista es un resumen de todos los emisarios permitidos. Una vez a través del agua de refrigeración, las aguas residuales de desulfuración de gases de combustión, los efluentes previamente monitoreados, las aguas pluviales (incluida la escorrentía de pilas de carbón), las aguas pluviales de la construcción, las aguas residuales de los servicios públicos y los desechos de bajo volumen (purga de calderas, aguas residuales del sistema de tratamiento de agua de intercambio iónico, rechazo de ósmosis inversa, desagües de pisos y exterior), agua de lavado de equipos, agua de pulidor, agua de incendio / lago, descargas permitidas de aguas no pluviales como condensado de aire acondicionado y aguas residuales domésticas, están tratadas por varios métodos dependiendo del tipo de aguas residuales. Una vez a través del agua de refrigeración y fuera de la planta desagües de aguas pluviales no se tratan. Las aguas residuales domésticas se tratan en plantas de paquetes sanitarios. La escorrentía de las pilas de carbón se trata en un estanque de sedimentación con un clarificador. Los estanques de sedimentación se utilizan para aguas pluviales del área de la planta, desechos de bajo volumen y aguas residuales de servicios públicos. Las aguas residuales de desulfuración de gases de combustión se tratan en un estanque con un clarificador.

TEXAS COMMISSION ON ENVIRONMENTAL QUALITY

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

PERMIT NO. WQ0001514000

APPLICATION. City Public Service Of San Antonio, P.O. Box 1771, San Antonio, Texas 78296, which owns a steam electric power generating facility, has applied to the Texas Commission on Environmental Quality (TCEQ) to amend Texas Pollutant Discharge Elimination System (TPDES) Permit No. WQ0001514000 (EPA I.D. No. TX0063681) to authorize the removal of internal Outfalls 103 and 109; reduced frequency of pH monitoring at internal Outfalls 111, 112, and 712; the addition of internal Outfalls 112(d) and 112(e); the removal of total suspended solids monitoring from internal Outfall 108; clarifications to authorized discharges, sample locations and Other Requirements, including Other Requirement 6 (related to Outfall 006 progress reports), Other Requirement 18 (related to wastes listed for proposed evaporation ponds), and Other Requirement 13.J.iv (related to daily mass loading calculations for total residual chlorine) and 13.J.v (related to periods of chlorination). The facility is located at 12940 South U.S. Highway 181, near the city of San Antonio, in Bexar County, Texas 78223. The discharge route is from the plant site to via Outfalls 001, 002, 006, 007, 014, 015, 016, 017, and 018 to Calaveras Lake, thence to Calaveras Creek, thence to Upper San Antonio River. TCEQ received this application on May 8, 2025. The permit application will be available for viewing and copying at CPS Energy Headquarters, First Floor Reception, 500 McCullough Avenue, San Antonio, in Bexar County, Texas prior to the date this notice is published in the newspaper. The application, including any updates, and associated notices are available electronically at the following webpage: https://www.tceq.texas.gov/permitting/wastewater/pending-permits/tpdes-applications. This link to an electronic map of the site or facility's general location is provided as a public courtesy and not part of the application or notice. For the exact location, refer to the application. https://gisweb.tceq.texas.gov/LocationMapper/?marker=-98.321944,29.308611&level=18

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

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

wide mailing list and to those who are on the mailing list for this application. That notice will contain the deadline for submitting public comments.

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

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

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

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

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

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 City Public Service Of San Antonio at the address stated above or by calling Ms. Emily Speed, Environmental Analyst, at 210-353-5010.

Issuance Date: May 20, 2025

Comisión de Calidad Ambiental del Estado de Texas

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

PERMISO NO. WQ0001514000

SOLICITUD. City Public Service of San Antonio, P.O. Box 1771, San Antonio, Texas, 78296, que posee una instalación de generación de energía eléctrica de vapor ha solicitado a la Comisión de Calidad Ambiental de Texas (TCEQ) para modificar el Permiso No. WQ0001514000 (EPA I.D. No. TX0063681) del Sistema de Eliminación de Descargas de Contaminantes de Texas (TPDES) para autorizar la eliminación de los emisarios internos 103 y 109; reducción de la frecuencia de monitoreo del pH en los emisarios internos 111, 112 y 712; la adición de los emisarios internos 112(d) y 112(e); la eliminación del monitoreo de sólidos totales en suspensión del emisario interno 108; aclaraciones sobre las descargas autorizadas, lugares de muestreo y Otros Requisitos, incluidos el Otro Requisito 6 (relacionado con los informes de progreso del emisario 006), el Otro Requisito 18 (relacionado con los residuos listados para los estanques de evaporación propuestos), y el Otro Requisito 13.J.iv (relacionado con los cálculos de carga masiva diaria para el cloro residual total) y 13.J.v (relacionado con los períodos de cloración). La planta está ubicada 12940 South U.S. Highway 181, cerca de la ciudad de San Antonio en el Condado de Bexar, Texas 78223. La ruta de descarga es del sitio de la planta a emisarios 001, 002, 006, 007, 014, 015, 016, 017, y 018 al Lago Calaveras, del allí al Arroyo Calaveras, del allí al Río San Antonio Superior. La TCEQ recibió esta solicitud el 8 de mayo de 2025. La solicitud para el permiso estará disponible para leerla y copiarla en CPS Energy Sede, recepción del primer piso, 500 McCullough Avenue, San Antonio en el Condado de Bexar, Texas antes de la fecha de publicación de este aviso en el periódico. La solicitud (cualquier actualización y aviso inclusive) está disponible electrónicamente en la siguiente página web: https://www.tceq.texas.gov/permitting/wastewater/pending-permits/tpdes-applications. Este enlace a un mapa electrónico de la ubicación general del sitio o de la instalación es proporcionado como una cortesía y no es parte de la solicitud o del aviso. Para la ubicación exacta, consulte la solicitud. https://gisweb.tceq.texas.gov/LocationMapper/?marker=-98.321944,29.308611&level=18

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.

AVISO ADICIONAL. El Director Ejecutivo de la TCEQ ha determinado que la solicitud es administrativamente completa y conducirá una revisión técnica de la solicitud. Después de completar la revisión técnica, el Director Ejecutivo puede preparar un borrador del permiso y emitirá una Decisión Preliminar sobre la solicitud. **El aviso de la solicitud y la decisión preliminar serán publicados y enviado a los que están en la lista de correo de las personas**

a lo largo del condado que desean recibir los avisos y los que están en la lista de correo que desean recibir avisos de esta solicitud. El aviso dará la fecha límite para someter comentarios públicos.

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

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

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

Después del cierre de todos los períodos de comentarios y de petición que aplican, el Director Ejecutivo enviará la solicitud y cualquier petición para reconsideración o para una audiencia de caso impugnado a los Comisionados de la TCEQ para su consideración durante una reunión programada de la Comisión.

La Comisión sólo puede conceder una solicitud de una audiencia de caso impugnado sobre los temas que el solicitante haya presentado en sus comentarios oportunos que no fueron retirados posteriormente. **Si se concede una audiencia, el tema de la audiencia estará limitado a cuestiones de hecho en disputa o cuestiones mixtas de hecho y de derecho**

relacionadas a intereses pertinentes y materiales de calidad del agua que se hayan presentado durante el período de comentarios.

LISTA DE CORREO. Si somete comentarios públicos, un pedido para una audiencia administrativa de lo contencioso o una reconsideración de la decisión del Director Ejecutivo, la Oficina del Secretario Principal enviará por correo los avisos públicos en relación con la solicitud. 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 del 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.

INFORMACIÓN DISPONIBLE EN LÍNEA. Para detalles sobre el estado de la solicitud, favor de visitar la Base de Datos Integrada de los Comisionados en www.tceq.texas.gov/goto/cid. Para buscar en la base de datos, utilizar el número de permiso para esta solicitud que aparece en la parte superior de este aviso.

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 City Public Service of San Antonio a la dirección indicada arriba o llamando a Sra. Emily Speed, Analista Ambiental, al 210-353-5010.

Fecha de emisión: el 20 de mayo de 2025

TEXAS COMMISSION ON ENVIRONMENTAL QUALITY

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

AMENDMENT

PERMIT NO. WQ0001514000

APPLICATION AND PRELIMINARY DECISION. City Public Service of San Antonio, P.O. Box 1711, San Antonio, Texas 78296, which operates Calaveras Power Station, a steam electric power generating facility, has applied to the Texas Commission on Environmental Quality (TCEQ) for a major amendment of Texas Pollutant Discharge Elimination System (TPDES) Permit No. WQ0001514000 to authorize the removal of internal Outfalls 103 and 109; reduced frequency of pH monitoring at internal Outfalls 111, 112, and 712; the addition of internal Outfalls 112(d) and 112(e); the removal of total suspended solids monitoring from internal Outfall 108; clarifications to authorized discharges, sample locations and Other Requirements, including Other Requirement 6 (related to Outfall 006 progress reports), Other Requirement 18 (related to wastes listed for proposed evaporation ponds), and Other Requirement 13.J. (related to daily mass loading calculations for total residual chlorine) and 13.J. (related to periods of chlorination). The draft permit authorizes the discharge of once-through cooling water, and previously monitored effluents (PMEs, low-volume waste sources, water treatment waste, and water treatment bulk chemical secondary containments via internal Outfall 101; low-volume waste sources, water treatment waste, polisher wastewater, and water treatment bulk chemical secondary containments via internal Outfall 102; coal pile runoff, PME (treated domestic effluent from the rail car maintenance and coal handling facility sewage package treatment plants via internal Outfall 110), low volume waste sources, stormwater, utility wastewater, and uncontaminated stormwater from secondary containments via internal Outfall 104; boiler blowdown via internal Outfall 108; stormwater, washdown from plant yard drains, stormwater associated with construction activities, low volume waste sources, utility wastewater, and uncontaminated stormwater from secondary containments via internal Outfall 111; low volume waste sources, car and equipment wash water, stormwater, utility wastewater, and uncontaminated stormwater from secondary containments via internal Outfall 112), stormwater, and stormwater associated with construction activity via Outfall 001 at a daily average flow not to exceed 1,440,000 gallons per day; low volume waste sources, utility wastewater, water treatment wastes, stormwater, and uncontaminated stormwater from secondary containments on an intermittent and flow-variable basis via Outfall 002; stormwater on an intermittent and flow-variable basis via Outfall 006; once-through cooling water from the Spruce Units 1 & 2, PMEs (stormwater runoff from plant areas, stormwater associated with construction activity, steam condensate tank overflow, fire water/lake water, stormwater, wash water, utility wastewater, and uncontaminated stormwater from secondary containments via internal Outfall 712; stormwater collected in the Sludge and Fly Ash Disposal Landfill, the Class 1 Landfill and Retention Pond and stormwater from the Sludge and Fly Ash Disposal Landfill and the Class 1 Landfill via internal Outfall 713; and flue gas desulphurization wastewater, low volume waste sources, auxiliary cooling water area drains, quench water, wash down water, stormwater, Sludge Recycle Holding pond dewatering, and utility wastewater via internal Outfall 714), stormwater, and stormwater associated with construction activity via Outfall 007 at a

daily average flow not to exceed 1,440,000 gallons per day; stormwater and stormwater associated with construction activities on and intermittent and flow-variable basis via Outfalls 014, 015, 016, 017, and 018; and low volume waste sources, and metal cleaning waste via evaporation. The TCEQ received this application on May 8, 2025.

The facility is located at 12940 U.S. Highway 181 South, near the City of San Antonio, Bexar County, Texas 78223. 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=-98.321944,29.308611&level=18

The effluent is discharged via Outfalls 001, 002, 006, 007, 014, 015, 016, 017, and 018 to Calaveras Lake, thence to Calaveras Creek, thence to Upper San Antonio River in Segment No. 1911 of the San Antonio River Basin. The unclassified receiving water uses are high aquatic life use for Calaveras Lake and minimal aquatic life use for Calaveras Creek. The designated uses for Segment No. 1911 are primary contact recreation and high aquatic life use.

In accordance with Title 30 Texas Administrative Code Section 307.5 and TCEQ's *Procedures to Implement the Texas Surface Water Quality Standards* (June 2010), an antidegradation review of the receiving waters was performed. A Tier 1 antidegradation review has preliminarily determined that existing water quality uses will not be impaired by this permit action. Numerical and narrative criteria to protect existing uses will be maintained. A Tier 2 review has preliminarily determined that no significant degradation of water quality is expected in
Calaveras Lake, which has been identified as having high aquatic life use. Existing uses will be maintained and protected. The preliminary determination can be reexamined and may be modified if new information is received.

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 CPS Energy Headquarters, First Floor Reception, 500 McCullough Avenue, San Antonio, in Bexar County, Texas. The application, including any updates, and associated notices are available electronically at the following webpage: https://www.tceq.texas.gov/permitting/wastewater/pending-permits/tpdes-applications

ALTERNATIVE LANGUAGE NOTICE. Alternative language notice in Spanish is available at https://www.tceq.texas.gov/permitting/wastewater/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.**

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 City Public Service of San Antonio at the address stated above or by calling Ms. Emily Speed, Environmental Analyst, at 210-353-5010.

Issued: October 7, 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

MODIFICACIÓN

PERMISO NO. WQ0001514000

SOLICITUD Y DECISIÓN PRELIMINAR. City Public Service of San Antonio, P.O. Box 1711, San Antonio, Texas 78296, ha solicitado a la Comisión de Calidad Ambiental del Estado de Texas (TCEQ) una modificación principal autorizar la eliminación de los emisarios internos 103 y 109; reducción de la frecuencia de monitoreo de pH en los emisarios internos 111, 112 y 712; la adición de los emisarios internos 112(d) y 112(e); la eliminación del monitoreo de sólidos totales suspendidos del emisario interno 108; aclaraciones sobre descargas autorizadas, ubicaciones de muestreo y Otros Requisitos, incluyendo el Otro Requisito 6 (relacionado con los informes de progreso del emisario 006), el Otro Requisito 18 (relacionado con los desechos listados para los estanques de evaporación propuestos) y Otro Requisito 13.J. (relacionado con los cálculos diarios de carga para el cloro residual total) y 13.J. (relacionado con los períodos de cloración). El borrador del permiso autoriza la descarga de agua de enfriamiento de paso único y efluentes previamente monitoreados (PMEs, fuentes de desechos de bajo volumen, desechos del tratamiento de agua y contenciones secundarias de productos químicos a granel del tratamiento de agua a través del emisario interno 101; fuentes de desechos de bajo volumen, desechos del tratamiento de agua, aguas residuales del pulidor y contenciones secundarias de productos químicos a granel del tratamiento de agua a través del emisario interno 102; escorrentía de montones de carbón, PME (efluente doméstico tratado de plantas de tratamiento de aguas residuales para el mantenimiento de vagones de ferrocarril y las instalaciones de manejo de carbón a través del emisario interno 110), fuentes de desechos de bajo volumen, aguas pluviales, aguas residuales de servicios públicos y aguas pluviales no contaminadas de contenciones secundarias a través del emisario interno 104; purga de calderas a través del emisario interno 108; aguas pluviales, lavar agua de los desagües del patio de la planta, aguas pluviales asociadas con actividades de construcción, fuentes de desechos de bajo volumen, aguas residuales de servicios públicos y aguas pluviales no contaminadas de contenciones secundarias a través del emisario interno 111; y fuentes de desechos de bajo volumen, agua de lavado de autos y equipos, aguas pluviales, aguas residuales de servicios públicos y aguas pluviales no contaminadas de contenciones secundarias a través del emisario interno 112), aguas pluviales y aguas pluviales asociadas con actividades de construcción a través del emisario 001 con un caudal promedio diario que no exceda 1,440,000 galones por día; fuentes de desechos de bajo volumen, aguas residuales de servicios públicos, residuos de tratamiento de agua, aguas pluviales y aguas pluviales no contaminadas de contenciones secundarias de manera intermitente y con caudal variable a través del emisario 002; aguas pluviales de manera intermitente y variable a través del emisario 006; agua de enfriamiento de paso único de las Unidades 1 y 2 de Spruce, PMEs (escorrentía pluvial de las áreas de la planta, aguas pluviales asociadas con actividades de construcción, desbordamiento del tanque de condensado de vapor, agua contra incendios/agua del

lago, aguas pluviales, agua de lavado, aguas residuales de servicios públicos y aguas pluviales no contaminadas de contenciones secundarias a través del emisario interno 712; aguas pluviales recolectadas en el Vertedero de Lodos y Cenizas Volantes, el Vertedero de Clase 1 y el Estanque de Retención, y aguas pluviales del Vertedero de Lodos y Cenizas Volantes y del Vertedero de Clase 1 a través del emisario interno 713; y aguas residuales de desulfuración de gases de combustión, fuentes de residuos de bajo volumen, desagües del área de agua de enfriamiento auxiliar, agua de enfriamiento rápido, agua de lavado, aguas pluviales, deshidratación del estanque de retención de reciclaje de lodos y aguas residuales de servicios públicos a través del emisario interno 714), aguas pluviales, y aguas pluviales asociadas con actividades de construcción a través del emisario 007 con un flujo promedio diario que no exceda 1,440,000 galones por día; aguas pluviales y aguas pluviales asociadas con actividades de construcción de manera intermitente y con caudal variable a través de los emisarios 014, 015, 016, 017 y 018; y fuentes de desechos de bajo volumen, así como desechos de limpieza de metales mediante evaporación. La TCEQ recibió esta solicitud el 8 de mayo de 2025.

La planta está ubicada en 12940 U.S. 181 Sur, cerca de la ciudad de San Antonio, en el Condado de Bexar, Texas. Este enlace a un mapa electrónico de la ubicación general del sitio o instalación se proporciona como una cortesía pública y no forma parte de la solicitud o del aviso.

El efluente tratado se descarga a través de los emisarios 001, 002, 006, 007, 014, 015, 016, 017 y 018 hasta el Lago Calaveras, luego hasta el Arroyo Calaveras, luego hasta el Río San Antonio Superior en el Segmento No. 1911 de la Cuenca del Río San Antonio. Los usos no clasificados de las aguas receptoras son elevados usos de la vida acuática para Lago Calaveras y limitados usos de la vida acuática para Arroyo Calaveras. Los usos designados para el Segmento No. 1911 son elevados usos de la vida acuática; y recreación sin contacto.

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

El Director Ejecutivo de la TCEQ ha completado la revisión técnica de la solicitud y ha preparado un borrador del permiso. El borrador del permiso, si es aprobado, establecería las condiciones bajo las cuales la instalación debe operar. El Director Ejecutivo ha tomado una decisión preliminar que si este permiso es emitido, cumple con todos los requisitos normativos y legales. La solicitud del permiso, la decisión preliminar del Director Ejecutivo y el borrador del permiso están disponibles para leer y copiar en Sede de CPS Energy, Recepción de la Primera Planta, 500 McCullough Avenue, San Antonio, en el Condado de Bexar, Texas. La solicitud (cualquier actualización y aviso inclusive) está disponible electrónicamente en la siguiente página web: https://www.tceq.texas.gov/permitting/wastewater/pending-permits/tpdes-applications. 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=-98.321944,29.308611&level=18

AVISO DE IDIOMA ALTERNATIVO. El aviso de idioma alternativo en español está disponible en https://www.tceq.texas.gov/permitting/wastewater/pending-permits/tpdes-applications.

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

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

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

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

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

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

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

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

También se puede obtener información adicional del City Public Service of San Antonio a la dirección indicada arriba o llamando a Sra. Emily Speed, Analista Ambiental al 210-353-5010.

Fecha de emisión el 7 de octubrede 2025

Weston Solutions, Inc.
5301 Southwest Parkway, Suite 450
Austin, TX 78735
512-651-7100
WestonSolutions.com

7 May 2025

Executive Director
Application Review and Processing Team MC-148
Texas Commission on Environmental Quality
12100 Park 35 Circle
Austin, Texas 78753

Via Email: wqdecopy@tceq.texas.gov

RE: Transmittal of TPDES Permit Renewal Application WQ0001514000
RN 100217975 Calaveras Power Station
CN 603174244 City Public Service of San Antonio

Dear Sir or Madam:

Weston Solutions, Inc. (WESTON®) is pleased to submit this Texas Pollutant Discharge Elimination System (TPDES) permit renewal application for the above-referenced facility on behalf of CPS Energy. One original copy of the application will be transmitted separately to the address above.

Payment for the permit application fee has been made via check; documentation is included in the application.

CPS Energy respectfully requests that Thomas Starr be assigned to this permit, as he is currently the permit writer for CPS Energy's Braunig facility and consistency between the permits is a key objective.

Please contact me at 512-651-7104 or at nancy.koch@westonsolutions.com should you have any questions regarding this application.

Very truly yours,
Weston Solutions, Inc.

N. L. Koch

Nancy L. Koch, P.E.
Project Manager

cc: Emily Speed, CPS Energy

Attachment: WQ0001514000 TPDES Renewal Application

TEXAS COMMISSION ON ENVIRONMENTAL QUALITY

INDUSTRIAL WASTEWATER PERMIT APPLICATION CHECKLIST

Complete and submit this checklist with the industrial wastewater permit application.

APPLICANT NAME: City Public Service of San Antonio

PERMIT NUMBER (If new, leave blank): WQ00 01514000

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

	Y	N			Y	N	
Administrative Report 1.0	☒	☐		Worksheet 8.0	☐	☒	
Administrative Report 1.1	☒	☐		Worksheet 9.0	☐	☒	
SPIF	☒	☐	H	Worksheet 10.0	☐	☒	
Core Data Form	☒	☐	B	Worksheet 11.0	☐	☒	
Summary of Application (PLS)	☒	☐	C	Worksheet 11.1	☐	☒	
Public Involvement Plan Form	☒	☐	D	Worksheet 11.2	☐	☒	
Technical Report 1.0	☒	☐		Worksheet 11.3	☐	☒	
Worksheet 1.0	☒	☐		Original USGS Map	☒	☐	E
Worksheet 2.0	☒	☐		Affected Landowners Map	☒	☐	F
Worksheet 3.0	☐	☒		Landowner Disk or Labels	☒	☐	F
Worksheet 3.1	☐	☒		Flow Diagram	☒	☐	K
Worksheet 3.2	☐	☒		Site Drawing	☒	☐	J
Worksheet 3.3	☐	☒		Original Photographs	☒	☐	G
Worksheet 4.0	☒	☐		Design Calculations	☐	☒	
Worksheet 4.1	☐	☒		Solids Management Plan	☐	☒	
Worksheet 5.0	☐	☒		Water Balance	☐	☒	
Worksheet 6.0	☐	☒					
Worksheet 7.0	☒	☐					

For TCEQ Use Only

Segment Number _____County _____
Expiration Date _____Region _____
Permit Number _____

TEXAS COMMISSION ON ENVIRONMENTAL QUALITY

INDUSTRIAL WASTEWATER PERMIT APPLICATION ADMINISTRATIVE REPORT 1.0

This report is required for all applications for TPDES permits and TLAPs, except applications for oil and gas extraction operations subject to 40 CFR Part 435. Contact the Applications Review and Processing Team at 512-239-4671 with any questions about completing this report.

Applications for oil and gas extraction operations subject to 40 CFR Part 435 must use Oil and Gas Exploration and Production Administrative Report (TCEQ Form-20893 and 20893-inst[1]).

Item 1. Application Information and Fees (Instructions, Page 26)

a. Complete each field with the requested information, if applicable.

Applicant Name: City Public Service of San Antonio

Permit No.: WQ0001514000

EPA ID No.: TX0063681

Expiration Date: 11/6/2025

b. Check the box next to the appropriate authorization type.

☒ Industrial Wastewater (wastewater and stormwater)

☐ Industrial Stormwater (stormwater only)

☐ Reverse Osmosis Water Treatment (reverse osmosis water treatment wastewaters only)

c. Check the box next to the appropriate facility status.

☒ Active ☐ Inactive

d. Check the box next to the appropriate permit type.

☒ TPDES Permit ☐ TLAP ☐ TPDES with TLAP component

e. Check the box next to the appropriate application type.

☐ New

☐ Renewal with changes ☐ Renewal without changes

☒ Major amendment with renewal ☐ Major amendment without renewal

☐ Minor amendment without renewal

☐ Minor modification without renewal

f. If applying for an amendment or modification, describe the request: The permittee is requesting: the removal of internal Outfalls 103 and 109; reduced frequency of pH monitoring at internal Outfalls 111, 112, and 712; the addition of internal Outfalls 112(d) and 112(e); the removal of total suspended solids monitoring from internal Outfall 108; clarifications to authorized discharges, sample locations and Other Requirements, including Other Requirement 6 (related to Outfall 006 progress reports), Other Requirement 18

[1] https://www.tceq.texas.gov/publications/search_forms.html

(related to wastes listed for proposed evaporation ponds), and Other Requirement 13.J.iv (related to daily mass loading calculations for total residual chlorine) and 13.J.v (related to periods of chlorination).

For TCEQ Use Only

Segment Number _____County _____
Expiration Date _____Region _____
Permit Number _____

g. Application Fee

EPA Classification	New	Major Amend. (with or without renewal)	Renewal (with or without changes)	Minor Amend. / Minor Mod. (without renewal)
Minor facility not subject to EPA categorical effluent guidelines (40 CFR Parts 400-471)	☐ $350	☐ $350	☐ $315	☐ $150
Minor facility subject to EPA categorical effluent guidelines (40 CFR Parts 400-471)	☐ $1,250	☐ $1,250	☐ $1,215	☐ $150
Major facility	N/A [2]	☒ $2,050	☐ $2,015	☐ $450

h. Payment Information

Mailed

Check or money order No.: Click to enter text.

Check or money order amt.: Click to enter text.

Named printed on check or money order: Click to enter text.

Epay

Voucher number: 762324, 762325

Copy of voucher attachment: A

Item 2. Applicant Information (Instructions, Pages 26)

a. Customer Number, if applicant is an existing customer: CN603174244

Note: Locate the customer number using the TCEQ's Central Registry Customer Search[3].

b. Legal name of the entity (applicant) applying for this permit: City Public Service of San Antonio *** Doing Business as CPS Energy. CPS Energy is the trademark of City Public Service of San Antonio.

Note: The owner of the facility must apply for the permit. The legal name must be spelled exactly as filed with the TX SOS, Texas Comptroller of Public Accounts, County, or in the legal documents forming the entity.

c. Name and title of the person signing the application. (**Note:** The person must be an executive official that meets signatory requirements in 30 TAC § 305.44.)

Prefix: Mr. Full Name (Last/First Name): Tieken, Gregg

Title: Director of Environmental Compliance and Planning Credential: Click to enter text.

d. Will the applicant have overall financial responsibility for the facility?

[2] All facilities are designated as minors until formally classified as a major by EPA.

[3] https://www15.tceq.texas.gov/crpub/index.cfm?fuseaction=cust.CustSearch

☒ Yes ☐ No

Note: The entity with overall financial responsibility for the facility must apply as a co-applicant, if not the facility owner.

Item 3. Co-applicant Information (Instructions, Page 27)

☒ Check this box if there is no co-applicant.; otherwise, complete the below questions.

a. Legal name of the entity (co-applicant) applying for this permit: Click to enter text.

Note: The legal name must be spelled exactly as filed with the TX SOS, Texas Comptroller of Public Accounts, County, or in the legal documents forming the entity.

b. Customer Number (if applicant is an existing customer): CNClick to enter text.

Note: Locate the customer number using the TCEQ's Central Registry Customer Search.

c. Name and title of the person signing the application. (**Note:** The person must be an executive official that meets signatory requirements in 30 TAC § 305.44.)

Prefix: Click to enter text. Full Name (Last/First Name): Click to enter text.

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

d. Will the co-applicant have overall financial responsibility for the facility?

☐ Yes ☐ No

Note: The entity with overall financial responsibility for the facility must apply as a co-applicant, if not the facility owner.

Item 4. Core Data Form (Instructions, Pages 27)

a. Complete and attach one Core Data Form (TCEQ Form 10400) for each customer (applicant and co-applicant(s)). If the customer type selected on the Core Data Form is Individual, complete Attachment 1 of the Administrative Report. Attachment: B

Item 5. Application Contact Information (Instructions, Page 27)

Provide names of two individuals who can be contacted about this application. Indicate if the individual can be contacted about administrative or technical information, or both.

a. ☒ Administrative Contact . ☒ Technical Contact

Prefix: Ms. Full Name (Last/First Name): Koch, Nancy L.

Title: Project Manager Credential: P.E.

Organization Name: Weston Solutions, Inc.

Mailing Address: 5301 Southwest Parkway, Suite 450 City/State/Zip: Austin, TX 78735

Phone No: 512.651.7104 Email: nancy.koch@westonsolutions.com

b. ☒ Administrative Contact ☒ Technical Contact

Prefix: Ms. Full Name (Last/First Name): Speed, Emily

Title: Environmental Analyst Credential: Click to enter text.

Organization Name: CPS Energy

Mailing Address: P.O. Box 1771 MD: RT0601 City/State/Zip: San Antonio, TX 78296

Phone No: 210.353.5010 Email: elspeed@cpsenergy.com

Attachment: Click to enter text.

Item 6. Permit Contact Information (Instructions, Page 28)

Provide two names of individuals that can be contacted throughout the permit term.

a. Prefix: Mr. Full Name (Last/First Name): Tieken, Gregg

Title: Director of Environmental Compliance and Planning Credential: Click to enter text.

Organization Name: CPS Energy

Mailing Address: P.O. Box 1771 MD: RT0601 City/State/Zip: San Antonio, TX 78296

Phone No: 210.353.2339 Email: grtieken@cpsenergy.com

b. Prefix: Mr. Full Name (Last/First Name): Urrutia, Rick

Title: VP Generation Operations Credential: Click to enter text.

Organization Name: CPS Energy

Mailing Address: P.O. Box 1771 MD: RT0601 City/State/Zip: San Antonio, TX, 78296

Phone No: 210.353.3604 Email: rjurrutia@cpsenergy.com

Attachment: Click to enter text.

Item 7. Billing Contact Information (Instructions, Page 28)

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

Provide the complete mailing address where the annual fee invoice should be mailed and the name and phone number of the permittee's representative responsible for payment of the invoice.

Prefix: Ms. Full Name (Last/First Name): Speed, Emily

Title: Environmental Analyst Credential: Click to enter text.

Organization Name: CPS Energy

Mailing Address: P.O. Box 1771 MD:RT0601 City/State/Zip: San Antonio, TX, 78296

Phone No: 210.353.5010 Email: elspeed@cpsenergy.com

Item 8. DMR/MER Contact Information (Instructions, Page 28)

Provide the name and mailing address of the person delegated to receive and submit DMRs or MERs. **Note:** DMR data must be submitted through the NetDMR system. An electronic reporting account can be established once the facility has obtained the permit number.

Prefix: Ms. Full Name (Last/First Name): Speed, Emily

Title: Environmental Analyst Credential: Click to enter text.

Organization Name: CPS Energy

Mailing Address: P.O. Box 1771 MD:RT0601 City/State/Zip: San Antonio, TX, 78296

Phone No: 210.353.5010 Email: elspeed@cpsenergy.com

Item 9. Notice Information (Instructions, Pages 28)

a. Individual Publishing the Notices

Prefix: Ms. Full Name (Last/First Name): Speed, Emily

Title: Environmental Analyst Credential: Click to enter text.

Organization Name: CPS Energy

Mailing Address: P.O. Box 1771 MD:RT0601 City/State/Zip: San Antonio, TX 7296

Phone No: 210.353.5010 Email: elspeed@cpsenergy.com

b. Method for Receiving Notice of Receipt and Intent to Obtain a Water Quality Permit Package (only for NORI, NAPD will be sent via regular mail)

☒ E-mail: nancy.koch@westonsolutions.com

☐ Fax: Click to enter text.

☐ Regular Mail (USPS)

Mailing Address: Click to enter text.

City/State/Zip Code: Click to enter text.

c. Contact in the Notice

Prefix: Ms. Full Name (Last/First Name): Speed, Emily

Title: Environmental Analyst Credential: Click to enter text.

Organization Name: CPS Energy

Phone No: 210.353.5010 Email: elspeed@cpsenergy.com

d. Public Viewing Location Information

Note: If the facility or outfall is located in more than one county, provide a public viewing place for each county.

Public building name: CPS Energy Location within the building: 1st Floor Reception

Physical Address of Building: 500 McCullough Ave

City: San Antonio County: Bexar

e. Bilingual Notice Requirements

This information is required for new, major amendment, minor amendment or minor modification, and renewal applications.

This section of the application is only used to determine if alternative language notices will be needed. Complete instructions on publishing the alternative language notices will be in your public notice package.

Call the bilingual/ESL coordinator at the nearest elementary and middle schools and obtain the following information to determine if an alternative language notice(s) is required.

1. Is a bilingual education program required by the Texas Education Code at the elementary or middle school nearest to the facility or proposed facility?

   ☒ Yes ☐ No

   If no, publication of an alternative language notice is not required; skip to Item 8 (Regulated Entity and Permitted Site Information.)

2. Are the students who attend either the elementary school or the middle school enrolled in a bilingual education program at that school?

   ☒ Yes ☐ No

3. Do the students at these schools attend a bilingual education program at another location?

   ☐ Yes ☒ No

4. Would the school be required to provide a bilingual education program, but the school has waived out of this requirement under 19 TAC §89.1205(g)?

   ☐ Yes ☒ No ☐ N/A

5. If the answer is yes to question 1, 2, 3, or 4, public notices in an alternative language are required. Which language is required by the bilingual program? Spanish

f. Summary of Application in Plain Language Template – Complete and attach the Summary of Application in Plain Language Template (TCEQ Form 20972), also known as the plain language summary or PLS. Attachment: C

g. Complete and attach one Public Involvement Plan (PIP) Form (TCEQ Form 20960) for each application for a new permit or major amendment. Attachment: D

Item 10. Regulated Entity and Permitted Site Information (Instructions Page 29)

a. TCEQ issued Regulated Entity Number (RN), if available: RN100217975

Note: If your business site is part of a larger business site, a Regulated Entity Number (RN) may already be assigned for the larger site. Use the RN assigned for the larger site. Search the TCEQ's Central Registry to determine the RN or to see if the larger site may already be registered as a Regulated Entity. If the site is found, provide the assigned RN.

b. Name of project or site (name known by the community where located): Calaveras Power Station (also known as Calaveras Plant Site)

c. Is the location address of the facility in the existing permit the same?

☒ Yes ☐ No ☐ N/A (new permit)

Note: If the facility is located in Bexar, Comal, Hays, Kinney, Medina, Travis, Uvalde, or Williamson County, additional information concerning protection of the Edwards Aquifer may be required.

d. Owner of treatment facility:

Prefix: Click to enter text. Full Name (Last/First Name): Click to enter text.

or Organization Name: City Public Service of San Antonio

Mailing Address: P.O. Box 1771 City/State/Zip: San Antonio, TX 78296

Phone No: 210.343.5010 Email: elspeed@cpsenergy.com

e. Ownership of facility: ☒ Public ☐ Private ☐ Both ☐ Federal

f. Owner of land where treatment facility is or will be: Click to enter text.

Prefix: Click to enter text. Full Name (Last/First Name): Click to enter text.

or Organization Name: City Public Service of San Antonio

Mailing Address: P.O. Box 1771 City/State/Zip: San Antonio, TX 78296

Phone No: 210.353.5010 Email: elspeed@cpsenergy.com

Note: If not the same as the facility owner, attach a long-term lease agreement in effect for at least six years (In some cases, a lease may not suffice - see instructions). Attachment: Click to enter text.

g. Owner of effluent TLAP disposal site (if applicable): Not applicable

Prefix: Click to enter text. Full Name (Last/First Name): Click to enter text.

or Organization Name: Click to enter text.

Mailing Address: Click to enter text. City/State/Zip: Click to enter text.

Phone No: Click to enter text. Email: Click to enter text.

Note: If not the same as the facility owner, attach a long-term lease agreement in effect for at least six years. Attachment: Click to enter text.

h. Owner of sewage sludge disposal site (if applicable):

Prefix: Not applicable Full Name (Last/First Name): Click to enter text.

or Organization Name: Click to enter text.

Mailing Address: Click to enter text. City/State/Zip: Click to enter text.

Phone No: Click to enter text. Email: Click to enter text.

Note: If not the same as the facility owner, attach a long-term lease agreement in effect for at least six years. Attachment: Click to enter text.

Item 11. TDPES Discharge/TLAP Disposal Information (Instructions, Page 31)

a. Is the facility located on or does the treated effluent cross Native American Land?

☐ Yes ☒ No

b. Attach an original full size USGS Topographic Map (or an 8.5"×11" reproduced portion for renewal or amendment applications) with all required information. Check the box next to each item below to confirm it has been included on the map.

☒ One-mile radius
☒ Applicant's property boundaries
☒ Labeled point(s) of discharge
☒ Effluent disposal site boundaries
☐ Sewage sludge disposal site
☒ Three-miles downstream information
☒ Treatment facility boundaries
☒ Highlighted discharge route(s)
☒ All wastewater ponds
☒ New and future construction

Attachment: E

c. Is the location of the sewage sludge disposal site in the existing permit accurate?

☐ Yes ☐ No or New Permit

If no, or a new application, provide an accurate location description: not applicable

d. Are the point(s) of discharge in the existing permit correct?

☒ Yes ☐ No or New Permit

If no, or a new application, provide an accurate location description: Click to enter text.

e. Are the discharge route(s) in the existing permit correct?

☒ Yes ☐ No or New Permit

If no, or a new permit, provide an accurate description of the discharge route: Click to enter text.

f. City nearest the outfall(s): San Antonio

g. County in which the outfalls(s) is/are located: Bexar

h. Is or will the treated wastewater discharge to a city, county, or state highway right-of-way, or a flood control district drainage ditch?

☐ Yes ☒ No

If yes, indicate by a check mark if: ☐ Authorization granted ☐ Authorization pending

For new and amendment applications, attach copies of letters that show proof of contact and provide the approval letter upon receipt. Attachment: Click to enter text.

For all applications involving an average daily discharge of 5 MGD or more, provide the names of all counties located within 100 statute miles downstream of the point(s) of discharge: Bexar, Wilson, Karnes, Goliad -

i. For TLAPs, is the location of the effluent disposal site in the existing permit accurate?

☐ Yes No or New Permit ☒ Not applicable

If no, or a new application, provide an accurate location description: Click to enter text.

j. City nearest the disposal site: San Antonio

k. County in which the disposal site is located: Bexar

l. For TLAPs, describe how effluent is/will be routed from the treatment facility to the disposal site: Not applicable

m. For TLAPs, identify the nearest watercourse to the disposal site to which rainfall runoff might flow if not contained: Not applicable

Item 12. Miscellaneous Information (Instructions, Page 33)

a. Did any person formerly employed by the TCEQ represent your company and get paid for service regarding this application?

☐ Yes ☒ No

If yes, list each person: Click to enter text.

b. Do you owe any fees to the TCEQ?

☐ Yes ☒ No

If yes, provide the following information:

Account no.: Click to enter text.

Total amount due: Click to enter text.

c. Do you owe any penalties to the TCEQ?

☐ Yes ☒ No

If yes, provide the following information:

Enforcement order no.: Click to enter text.

Amount due: Click to enter text.

Item 13. Signature Page (Instructions, Page 33)

Permit No: WQ0001514000

Applicant Name: City Public Service of San Antonio

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

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

Signatory name (typed or printed): Gregg Tieken

Signatory title: Director of Environmental Compliance and Planning

Signature: _____ Date: 4/30/2025
(Use blue ink)

Subscribed and Sworn to before me by the said GREG TIEKEN

on this 30TH day of APRIL, 20 25.

My commission expires on the 2ND day of DECEMBER, 20 28.

_____
Notary Public

JEFF L RATLIFF
Notary Public, State of Texas
Comm. Expires 12-02-2028
Notary ID 1200316-4

[SEAL]

BEXAR
County, Texas

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

June 24, 2024

VIA MAIL

Texas Commission on Environmental Quality
Water Quality Division
MC 145
P.O. Box 13087
Austin, Texas 78711-3087

Re: Designation of Signatory Authority for Purposes of TPDES Permit No. WQ0001514000
City Public Service of San Antonio ("CPS Energy"), CN 603174244
Calaveras Power Station, RN 100217975

To Whom It May Concern:

I am writing to authorize the positions of Director Environmental Planning and Compliance and Sr. Manager Environmental & Sustainability Services at CPS Energy, and any individuals holding those positions both now and in the future, as duly authorized representatives to sign reports, permit applications, and other documentation related to Texas Pollutant Discharge Elimination System Permit No. WQ0001514000 held by CPS Energy. As required by 30 Texas Administrative Code ("TAC") § 305.128(a)(2), these positions have responsibility for the environmental matters of the above-referenced facility. The current contact information for these positions is as follows:

- Director Environmental Planning and Compliance
  - Phone: (210) 353-2158
  - Email: Grtieken@cpsenergy.com
  - Mailing: 500 McCullough Avenue, San Antonio, Texas 78215

- Sr. Manager Environmental & Sustainability Services
  - Phone: (210) 353-2077
  - Email: dmcooksey@cpsenergy.com
  - Mailing: 500 McCullough Avenue, San Antonio, Texas 78215

I certify that I am a responsible officer of the above-referenced facility, as described in 30 TAC § 305.44, and I therefore have authority under 30 TAC § 305.128(a)(1) to delegate signatory authority to these duly authorized representatives.

If you have any questions, please feel free to contact me at (210) 353-2339 or Blethridge@cpsenergy.com.

Respectfully,



Benjamin L. Ethridge, Jr.

CPS Energy
Chief Energy Supply Officer

INDUSTRIAL WASTEWATER PERMIT APPLICATION ADMINISTRATIVE REPORT 1.1

The following information is required for new and amendment applications.

Item 1. Affected Landowner Information (Instructions, Page 35)

a. Attach a landowner map or drawing, with scale, as applicable. Check the box next to each item to confirm it has been provided.

☒ The applicant's property boundaries.

☒ The facility site boundaries within the applicant's property boundaries.

☐ The distance the buffer zone falls into adjacent properties and the property boundaries of the landowners located within the buffer zone.

☒ The property boundaries of all landowners surrounding the applicant's property. (Note: if the application is a major amendment for a lignite mine, the map must include the property boundaries of all landowners adjacent to the new facility (ponds).)

☒ The point(s) of discharge and highlighted discharge route(s) clearly shown for one mile downstream.

☐ The property boundaries of the landowners located on both sides of the discharge route for one full stream mile downstream of the point of discharge.

☒ The property boundaries of the landowners along the watercourse for a one-half mile radius from the point of discharge if the point of discharge is into a lake, bay, estuary, or affected by tides.

☒ The boundaries of the effluent disposal site (e.g., irrigation area or subsurface drainfield site) and all evaporation/holding ponds within the applicant's property.

☒ The property boundaries of all landowners surrounding the applicant's property boundaries where the effluent disposal site is located.

☐ The boundaries of the sludge land application site (for land application of sewage sludge for beneficial use) and the property boundaries of landowners within one-quarter mile of the applicant's property boundaries where the sewage sludge land application site is located.

☐ The property boundaries of landowners within one-half mile in all directions from the applicant's property boundaries where the sewage sludge disposal site (e.g., sludge surface disposal site or sludge monofil) is located.

Attachment: F

b. ☒ that the landowners list has also been provided as mailing labels in electronic format (Avery 5160).

c. Check this box to confirm a separate list with the landowners' names and mailing addresses cross-referenced to the landowner's map has been provided.Provide the source of the landowners' names and mailing addresses: Bexar County Appraisal District

e. As required by Texas Water Code § 5.115, is any permanent school fund land affected by this application?

☐ Yes ☒ No

If yes, provide the location and foreseeable impacts and effects this application has on the land(s): Click to enter text.

Item 2. Original Photographs (Instructions, Page 37)

Provide original ground level photographs. Check the box next to each of the following items to indicate it is included.

☐ At least one original photograph of the new or expanded treatment unit location.

☒ At least two photographs of the existing/proposed point of discharge and as much area downstream (photo 1) and upstream (photo 2) as can be captured. If the discharge is to an open water body (e.g., lake, bay), the point of discharge should be in the right or left edge of each photograph showing the open water and with as much area on each respective side of the discharge as can be captured.

☐ At least one photograph of the existing/proposed effluent disposal site.

☐ A plot plan or map showing the location and direction of each photograph.

Attachment: G

INDUSTRIAL WASTEWATER PERMIT APPLICATION

SUPPLEMENTAL PERMIT INFORMATION FORM (SPIF)

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

Attachment: H

TEXAS COMMISSION ON ENVIRONMENTAL QUALITY

INDUSTRIAL WASTEWATER PERMIT APPLICATION TECHNICAL REPORT 1.0

The following information **is required** for all applications for a TLAP or an individual TPDES discharge permit.

For **additional information** or clarification on the requested information, please refer to the Instructions for Completing the Industrial Wastewater Permit Application[1] available on the TCEQ website. Please contact the Industrial Permits Team at 512-239-4671 with any questions about this form.

If more than one outfall is included in the application, provide applicable information for each individual outfall. **If an item does not apply to the facility, enter N/A** to indicate that the item has been considered. Include separate reports or additional sheets as **clearly cross-referenced attachments** and provide the attachment number in the space provided for the item the attachment addresses.

NOTE: This application is for an industrial wastewater permit only. Additional authorizations from the TCEQ Waste Permits Division or the TCEQ Air Permits Division may be needed.

Item 1. Facility/Site Information (Instructions, Page 39)

a. Describe the general nature of the business and type(s) of industrial and commercial activities. Include all applicable SIC codes (up to 4).

The Calaveras Power Station (formerly Sommers/Deely/Spruce Steam Electric Station) generates electricity for the City of San Antonio and surrounding areas. The facility consists of two gas-fired units (Sommers 1 and 2) and two coal-fired units (Spruce 1 and 2) for a total of 2,190 megawatts (MW) of generating capacity. The Deely coal-fired units were closed in December 2018.

b. Describe all wastewater-generating processes at the facility.

1. Once-through cooling water is discharged from Discharge Canal #1 through the Hot Pond to Outfall 001 and from Discharge Canal #2 to Outfall 007; Outfalls 001 and 007 are located in Calaveras Lake, and the lake water is recirculated back into the plant via the intake canal. 2. Coal pile runoff (from the coal yard, rail car maintenance area, coal handling facility and transfer conveyor) flows to Pond #2 and is pumped to a clarifier for treatment, then discharged via Outfall 104 in the intake canal. 3. Boiler blowdown-from four boilers (Sommers units and Spruce 1 unit) discharges into the intake canal; Spruce 2 unit-discharges into Pond #13, then to Outfall 714 (Discharge Canal #2). 4. Water treatment and neutralization basin wastes-demineralizer regenerant wastewater is discharged into the intake canal; reverse osmosis reject water is discharged into the lake (001, 002 & 007). 5. Treated sewage effluent-from four sewage package treatment plants discharge via 110 (b)/intake canal, via 110(a)/ Discharge Canal #1 and coal yard runoff basin via 110(c) and (d), thence 104 (a) and (b)/intake canal. 6. Floor and yard drains-into collection boxes or oil/water separators for treatment, then into the intake canal and the lake; Spruce unit's floor and yard drains and flue gas desulfurization (FGD) scrubber water go to Pond #13, then to Outfall 714; 7. Runoff from

[1] https://www.tceq.texas.gov/permitting/wastewater/industrial/TPDES_industrial_wastewater_steps.html

landfill area-into Pond #9, then to Outfall 713/ Discharge Canal #2. 8. Stormwater runoff from various areas of the power station-go to various outfalls. See also Attachment I.

c. Provide a list of raw materials, major intermediates, and final products handled at the facility.

Materials List

Raw Materials	Intermediate Products	Final Products
Natural Gas	Steam	Electricity
Fuel Oil		
Coal		

Attachment: Click to enter text.

d. Attach a facility map (drawn to scale) with the following information:

- Production areas, maintenance areas, materials-handling areas, waste-disposal areas, and water intake structures.
- The location of each unit of the WWTP including the location of wastewater collection sumps, impoundments, outfalls, and sampling points, if significantly different from outfall locations.

Attachment: J

e. Is this a new permit application for an existing facility?

☐ Yes ☒ No

If **yes**, provide background discussion: Click to enter text.

f. Is/will the treatment facility/disposal site be located above the 100-year frequency flood level.

☒ Yes ☐ No

List source(s) used to determine 100-year frequency flood plain: FEMA FIRM Map #48029CO615F

If **no**, provide the elevation of the 100-year frequency flood plain and describe what protective measures are used/proposed to prevent flooding (including tail water and rainfall run-on controls) of the treatment facility and disposal area: Click to enter text.

Attachment: Click to enter text.

g. For **new** or **major amendment** permit applications, will any construction operations result in a discharge of fill material into a water in the state?

☐ Yes ☒ No ☐ N/A (renewal only)

h. If **yes** to Item 1.g, has the applicant applied for a USACE CWA Chapter 404 Dredge and Fill permit?

☐ Yes ☐ No

If **yes**, provide the permit number: Click to enter text.

If **no**, provide an approximate date of application submittal to the USACE: Click to enter text.

Item 2. Treatment System (Instructions, Page 40)

a. List any physical, chemical, or biological treatment process(es) used/proposed to treat wastewater at this facility. Include a description of each treatment process, starting with initial treatment and finishing with the outfall/point of disposal.

1. Once-through cooling water – hot pond, discharge canal, and cooling lake. Calaveras Lake acts as a thermal sink, providing thermal cooling through evaporation, conduction, convection, and radiation. 2. Coal pile runoff – settling, sedimentation, and clarification (Outfall 104 into intake canal). 3. FGD scrubber waste streams – setline/sedimentation (Plant Drains Pond [PDP, Pond #13]) and clarification (Discharge Canal #2). To meet ELG compliance, new evaporation ponds will be installed and implemented by the end of 2028. Additionally, a spray dryer absorbent system will be installed as supplementary treatment for flue gas pollutants and FGD waste streams. 4. Water treatment wastes – aeration and pH adjustment (neutralization). No treatment is provided for reverse osmosis reject water. 5. Domestic wastewater – package treatment plants provide aeration, clarification, and disinfection. 6. Floor and yard drains – oil/water separators; settling/sedimentation via surface impoundments. 7. Landfill runoff and landfill leachate – settling/sedimentation and clarification. 8. Stormwater runoff – some stormwater with industrial activity does not receive treatment prior to discharge. Some stormwater is routed through runoff retention basins for settling/sedimentation prior to discharge. See also Attachment I.

b. Attach a flow schematic **with a water balance** showing all sources of water and wastewater flow into the facility, wastewater flow into and from each treatment unit, and wastewater flow to each outfall/point of disposal.

Attachment: K

Item 3. Impoundments (Instructions, Page 40)

Does the facility use or plan to use any wastewater impoundments (e.g., lagoons or ponds?)

☒ Yes ☐ No

If **no**, proceed to Item 4. If **yes**, complete **Item 3.a** for **existing** impoundments and **Items 3.a - 3.e** for **new or proposed** impoundments. **NOTE:** See instructions, Pages 40-42, for additional information on the attachments required by Items 3.a – 3.e.

a. Complete the table with the following information for each existing, new, or proposed impoundment. Attach additional copies of the Impoundment Information table, if needed.

Use Designation: Indicate the use designation for each impoundment as Treatment (**T**), Disposal (**D**), Containment (**C**), or Evaporation (**E**).

Associated Outfall Number: Provide an outfall number if a discharge occurs or will occur.

Liner Type: Indicate the liner type as Compacted clay liner (**C**), In-situ clay liner (**I**), Synthetic/plastic/rubber liner (**S**), or Alternate liner (**A**). **NOTE:** See instructions for further detail on liner specifications. If an alternate liner (A) is selected, include an attachment that provides a description of the alternate liner and any additional technical information necessary for an evaluation.

Leak Detection System: If any leak detection systems are in place/planned, enter **Y** for yes. Otherwise, enter **N** for no.

Groundwater Monitoring Wells and Data: If groundwater monitoring wells are in place/planned, enter **Y** for yes. Otherwise, enter **N** for no. Attach any existing groundwater monitoring data.

Dimensions: Provide the dimensions, freeboard, surface area, storage capacity of the impoundments, and the maximum depth (not including freeboard). For impoundments with irregular shapes, submit surface area instead of length and width.

Compliance with 40 CFR Part 257, Subpart D: If the impoundment is required to be in compliance with 40 CFR Part 257, Subpart D, enter **Y** for yes. Otherwise, enter **N** for no.

Date of Construction: Enter the date construction of the impoundment commenced (mm/dd/yy).

Impoundment Information

Parameter	**Pond #**	**Pond #**	**Pond #**	**Pond #**
Use Designation: (T) (D) (C) or (E)				
Associated Outfall Number				
Liner Type (C) (I) (S) or (A)				
Alt. Liner Attachment Reference				
Leak Detection System, Y/N				
Groundwater Monitoring Wells, Y/N				
Groundwater Monitoring Data Attachment				
Pond Bottom Located Above The Seasonal High-Water Table, Y/N				
Length (ft)				
Width (ft)				
Max Depth From Water Surface (ft), Not Including Freeboard				
Freeboard (ft)				
Surface Area (acres)				
Storage Capacity (gallons)				

Parameter	Pond #	Pond #	Pond #	Pond #
40 CFR Part 257, Subpart D, Y/N				
Date of Construction				

Attachment: See Attachment L for all Pond information

The following information (**Items 3.b – 3.e**) is required only for **new or proposed** impoundments.

b. For new or proposed impoundments, attach any available information on the following items. If attached, check **yes** in the appropriate box. Otherwise, check **no** or **not yet designed**.

1. Liner data

☐ Yes ☐ No ☒ Not yet designed

2. Leak detection system or groundwater monitoring data

☐ Yes ☐ No ☒ Not yet designed

3. Groundwater impacts

☐ Yes ☐ No ☒ Not yet designed

NOTE: Item b.3 is required if the bottom of the pond is not above the seasonal high-water table in the shallowest water-bearing zone.

Attachment: Click to enter text.

For TLAP applications: Items 3.c – 3.e are **not required**, continue to Item 4.

c. Attach a USGS map or a color copy of original quality and scale which accurately locates and identifies all known water supply wells and monitor wells within ½-mile of the impoundments.

Attachment: E

d. Attach copies of State Water Well Reports (e.g., driller's logs, completion data, etc.), and data on depths to groundwater for all known water supply wells including a description of how the depths to groundwater were obtained.

Attachment: E

e. Attach information pertaining to the groundwater, soils, geology, pond liner, etc. used to assess the potential for migration of wastes from the impoundments or the potential for contamination of groundwater or surface water.

Attachment: To be determined and submitted later pending final location of the proposed impoundments.

Item 4. Outfall/Disposal Method Information (Instructions, Page 42)

Complete the following tables to describe the location and wastewater discharge or disposal operations for each outfall for discharge, and for each point of disposal for TLAP operations.

If there are more outfalls/points of disposal at the facility than the spaces provided, copies of pages 6 and/0r numbered accordingly (i.e., page 6a, 6b, etc.) may be used to provide information on the additional outfalls.

For TLAP applications: Indicate the disposal method and each individual irrigation area **I**, evaporation pond **E**, or subsurface drainage system **S** by providing the appropriate letter designation for the disposal method followed by a numerical designation for each disposal area in the space provided for **Outfall** number (e.g. **E1** for evaporation pond 1, **I2** for irrigation area No. 2, etc.).

Outfall Longitude and Latitude

Outfall No.	Latitude (Decimal Degrees)	Longitude (Decimal Degrees)
001	29.312903	-98.334303
101	29.306408	-98.324756
102	29.309017	-98.321681
104(a)	29.293658	-98.314164
104(b)	29.293056	-98.263889
108	29.306622	-98.320706
110(a)	29.308986	-98.324886
110(b)	29.306617	-98.321956
110(c)	29.315628	-98.320656
110(d)	29.311847	-98.332647
111	29.306625	-98.320842
112(a)	29.309003	-98.325172
112(b)	29.306647	-98.323717
112(c)	29.306625	-98.325172
112(d)	29.308056	-98.324167
112(e)	29.308056	-98.324167
002	29.305492	-98.327069
006	29.303475	-98.3257
007	29.333728	-98.297903
712(a)	29.313122	-98.315136
712(b)	29.306617	-98.317606
713	29.315542	-98.307481
714	29.31333	-98.316944
014	29.302469	-98.3249
015	29.301078	-98.324089
016	29.298636	-98.322997
017	29.296128	-98.321889

Outfall No.	Latitude (Decimal Degrees)	Longitude (Decimal Degrees)
018	29.309311	-98.314361

Outfall Location Description

Outfall No.	Location Description
001	At the hot pond discharge area, where once-through cooling water, PMEs and stormwater are discharged prior to entering the main body of Calaveras Lake.
101	At the sample port of the neutralization basin discharge pipe, prior to discharge behind the Sommer/Deely intake screen and prior to mixing with once-through cooling water.
102	At the sample port of the neutralization basin discharge pipe, prior to discharge behind the Spruce intake screen and prior to mixing with once-through cooling water.
104(a)	At the discharge pipe, prior to discharge entering the intake canal.
104(b)	At the discharge pipe, prior to discharge entering the intake canal.
108	At the end of pipe prior to entering the intake canal.
110(a)	At end of pipe, where treated domestic wastewater from the Sommers/Deely package treatment plant is discharged into Discharge Canal #1.
110(b)	At end of pipe, where treated domestic wastewater from the Spruce package treatment plant is discharged into the intake canal.
110(c)	At end of pipe, where treated domestic wastewater from the rail car maintenance facility is discharged into a drainage ditch before entering the coal pile runoff pond (Pond 2).
110(d)	At end of pipe, where treated domestic wastewater from the coal handling facility is discharged into the coal pile runoff pond (Pond 2).
111	At the weir of the stormwater runoff pond (Pond 5), prior to discharge entering the intake canal.
112(a)	End of pipe at discharge into Discharge Canal #1.
112(b)	At weir prior to discharge entering the intake canal.
112(c)	At weir prior to discharge entering the intake canal.
112(d)	At sample tap in boiler chemical room.
112(e)	At sample tap in boiler chemical room.
002	At the weir in the concrete drainage ditch prior to entering Calaveras Lake.
006	At end of pipe where stormwater is discharged into Calaveras Lake.
007	At Outfall 007 sample platform where wastewater is discharged into Calaveras Lake from the discharge canal.
712(a)	At the weir of Pond No. 8, prior to discharge entering Discharge Canal #2.
712(b)	At the weir of pump discharge outlet from Pond No. 6, prior to discharge entering the intake canal.
713	At Outfall 713, Pond No. 9 (Fly Ash Runoff Pond), from the weir prior to entering Discharge Canal #2.

Outfall No.	Location Description
714	At Outfall 714, at the outlet of the pond clarifier (Pond 13), prior to discharge entering Discharge Canal #2.
014	At Outfall 014 at the end of pipe, prior to discharge entering Calaveras Lake.
015	At the drainage culvert located west of the railroad tracks, prior to discharge entering Calaveras Lake.
016	At the drainage culvert located west of the railroad tracks, south of Outfall 015, prior to discharge entering Calaveras Lake.
017	At the drainage culvert located west of the railroad tracks, south of Outfall 016, prior to discharge entering Calaveras Lake.
018	At Outfall 018, at the end of pipe, prior to discharge entering Calaveras Lake.

Description of Sampling Point(s) (if different from Outfall location)

Outfall No.	Description of sampling point
001	At the sample platform of the hot pond discharge area, prior to discharge to Calaveras Lake.
101	At the sample port of the neutralization basin discharge pipe.
102	At the sample port of the neutralization basin discharge pipe.
104(a)	Same as outfall location.
104(b)	At the discharge pipe, prior to discharge entering the intake canal.
108	Same as outfall location.
110(a)	Same as outfall location.
110(b)	At sampling port at lift station prior to discharge into intake canal.
110(c)	Same as outfall location.
110(d)	Same as outfall location.
111	Same as outfall location.
112(a)	Where effluent is discharged into floor and yard box and sample utilizing stational submerged pump and tubing/piping prior to mixing with any other waters.
112(b)	Same as outfall location.
112(c)	Same as outfall location.
112(d)	Same as outfall location.
112(e)	Same as outfall location.
002	Same as outfall location.
006	Same as outfall location.
007	Same as outfall location
712(a)	Same as outfall location.
712(b)	Same as outfall location.

Outfall No.	Description of sampling point
713	Same as outfall location.
714	Same as outfall location.
014	Same as outfall location.
015	Same as outfall location.
016	Same as outfall location.
017	Same as outfall location.
018	Same as outfall location.

Outfall Flow Information – Permitted and Proposed

Outfall No.	Permitted Daily Avg Flow (MGD)	Permitted Daily Max Flow (MGD)	Proposed Daily Avg Flow (MGD)	Proposed Daily Max Flow (MGD)	Anticipated Discharge Date (mm/dd/yy)
001	1440	1800	1440	1800	
101	Report	Report	Same	Same	
102	Report	Report	Same	Same	
104(a)	Report	Report	Same	Same	
104(b)	Report	Report	Same	Same	
108	Report	Report	Same	Same	
110	0.04	0.08	0.04	0.08	
111	Report	Report	Same	Same	
112(a), (b), (c), (d), (e)	Report	Report	Same	Same	
002	Report	Report	Same	Same	
006	Report	Report	Same	Same	
007	1440	1800	1440	1800	
712(a)	Report	Report	Same	Same	
712(b)	Report	Report	Same	Same	
713	Report	Report	Same	Same	
714	Report	Report	Same	Same	
014	Report	Report	Same	Same	
015	Report	Report	Same	Same	
016	Report	Report	Same	Same	
017	Report	Report	Same	Same	
018	Report	Report	Same	Same	

Outfall Discharge – Method and Measurement

Outfall No.	Pumped Discharge? Y/N	Gravity Discharge? Y/N	Type of Flow Measurement Device Used
001	Y	N	Pump records
101	Y	N	Basin volume (estimated)
102	Y	N	Basin volume (estimated)
104(a)	Y (to clarifier, thence gravity)	Y	California pipe method
104(b)	N	Y	California pipe method
108	Y	N	California pipe method
110	Y (110(b))	Y (110(a), (c), (d))	Flow meter for (b); Cal pipe method –for (a), (c) and (d)
111	N	Y	v-notch weir
112(a), (b), (c)	N	Y	Estimated using field data and Manning's equation (a); v-notch weir (b), (c)
112(d)	N	Y	Estimate
112(e)	N	Y	Estimate
002	N	Y	Estimated using field data and Manning's equation
006	N	Y	California pipe method
007	Y	N	Pump records
712(a)	N	Y	v-notch weir
712(b)	Y	N	v-notch weir
713	Y	N	v-notch weir
714	Y	N	Pump curve
014	N	Y	California pipe method
015	N	Y	Estimated using field data and Manning's equation
016	N	Y	Estimated using field data and Manning's equation
017	N	Y	Estimated using field data and Manning's equation
018	N	Y	California pipe method

Outfall Discharge – Flow Characteristics

Outfall No.	Intermittent Discharge? Y/N	Continuous Discharge? Y/N	Seasonal Discharge? Y/N	Discharge Duration (hrs/day)	Discharge Duration (days/mo)	Discharge Duration (mo/yr)
001	Y	N	N	Variable	Variable	Variable
101	Y	N	N	Variable	Variable	Variable
102	Y	N	N	Variable	Variable	Variable
104(a)	Y	N	N	Variable	Variable	Variable
104(b)	Y	N	N	Variable	Variable	Variable
108	Y	N	N	Variable	Variable	Variable
110	Y	N	N	Variable	Variable	Variable
111	Y	N	N	Variable	Variable	Variable
112(a),(b),(c)	Y	N	N	Variable	Variable	Variable
002	Y	N	N	Variable	Variable	Variable
006	Y	N	N	Variable	Variable	Variable
007	Y	N	N	Variable	Variable	Variable
712(a),(b)	Y	N	N	Variable	Variable	Variable
713	Y	N	N	Variable	Variable	Variable
714	Y	N	N	Variable	Variable	Variable
014	Y	N	N	Variable	Variable	Variable
015	Y	N	N	Variable	Variable	Variable
016	Y	N	N	Variable	Variable	Variable
017	Y	N	N	Variable	Variable	Variable
018	Y	N	N	Variable	Variable	Variable

Outfall Wastestream Contributions

Outfall No. See Attachment M

Contributing Wastestream	Volume (MGD)	Percent (%) of Total Flow

Outfall No. Click to enter text.

Contributing Wastestream	Volume (MGD)	Percent (%) of Total Flow

Outfall No. Click to enter text.

Contributing Wastestream	Volume (MGD)	Percent (%) of Total Flow

Attachment: M

Item 5. Blowdown and Once-Through Cooling Water Discharges (Instructions, Page 43)

a. Indicate if the facility currently or proposes to:

☐ Yes ☒ No Use cooling towers that discharge blowdown or other wastestreams

☒ Yes ☐ No Use boilers that discharge blowdown or other wastestreams

☒ Yes ☐ No Discharge once-through cooling water

NOTE: If the facility uses or plans to use cooling towers or once-through cooling water, Item 12 **is required**.

b. If **yes** to any of the above, attach an SDS with the following information for each chemical additive.

- Manufacturers Product Identification Number
- Product use (e.g., biocide, fungicide, corrosion inhibitor, etc.)
- Chemical composition including CASRN for each ingredient

- Classify product as non-persistent, persistent, or bioaccumulative
- Product or active ingredient half-life
- Frequency of product use (e.g., 2 hours/day once every two weeks)
- Product toxicity data specific to fish and aquatic invertebrate organisms
- Concentration of whole product or active ingredient, as appropriate, in wastestream.

In addition to each SDS, attach a summary of the above information for each specific wastestream and the associated chemical additives. Specify which outfalls are affected.

Attachment: N

c. Cooling Towers and Boilers

If the facility currently or proposes to use cooling towers or boilers that discharge blowdown or other wastestreams to the outfall(s), complete the following table.

Cooling Towers and Boilers

Type of Unit	Number of Units	Daily Avg Blowdown (gallons/day)	Daily Max Blowdown (gallons/day)
Cooling Towers			
Boilers	4	127,124	1,344,944

Item 6. Stormwater Management (Instructions, Page 44)

Will any existing/proposed outfalls discharge stormwater associated with industrial activities, as defined at *40 CFR § 122.26(b)(14)*, commingled with any other wastestream?

☒ Yes ☐ No

If **yes**, briefly describe the industrial processes and activities that occur outdoors or in a manner which may result in exposure of the activities or materials to stormwater: Attachment O

Item 7. Domestic Sewage, Sewage Sludge, and Septage Management and Disposal (Instructions, Page 44)

Domestic Sewage - Waste and wastewater from humans or household operations that is discharged to a wastewater collection system or otherwise enters a treatment works.

a. Check the box next to the appropriate method of domestic sewage and domestic sewage sludge treatment or disposal. Complete Worksheet 5.0 or Item 7.b if directed to do so.

☐ Domestic sewage is routed (i.e., connected to or transported to) to a WWTP permitted to receive domestic sewage for treatment, disposal, or both. Complete Item 7.b.

☐ Domestic sewage disposed of by an on-site septic tank and drainfield system. Complete Item 7.b.

☐ Domestic and industrial treatment sludge ARE commingled prior to use or disposal.

☐ Industrial wastewater and domestic sewage are treated separately, and the respective sludge IS NOT commingled prior to sludge use or disposal. Complete Worksheet 5.0.

☐ Facility is a POTW. Complete Worksheet 5.0.

☐ Domestic sewage is not generated on-site.

☒ Other (e.g., portable toilets), specify and Complete Item 7.b: Domestic sewage is treated in one of four sewage package treatment plants to secondary standards. Sewage sludge is transported and disposed off-site by a TCEQ licensed provider.

b. Provide the name and TCEQ, NPDES, or TPDES Permit No. of the waste-disposal facility which receives the domestic sewage/septage. If hauled by motorized vehicle, provide the name and TCEQ Registration No. of the hauler.

Domestic Sewage Plant/Hauler Name

Plant/Hauler Name	Permit/Registration No.
Hauler - United Professional Services	Sludge (Transporter) Registration 26216
Plant - San Antonio Water System Steven M Clouse Water Recycling Center	Sludge Registration 21372

Item 8. Improvements or Compliance/Enforcement Requirements (Instructions, Page 45)

a. Is the permittee currently required to meet any implementation schedule for compliance or enforcement?

☐ Yes ☒ No

b. Has the permittee completed or planned for any improvements or construction projects?

☐ Yes ☒ No

c. If **yes** to either 8.a **or** 8.b, provide a brief summary of the requirements and a status update: Click to enter text.

Item 9. Toxicity Testing (Instructions, Page 45)

Have any biological tests for acute or chronic toxicity been made on any of the discharges or on a receiving water in relation to the discharge within the last three years?

☒ Yes ☐ No

If **yes**, identify the tests and describe their purposes: Biomonitoring conducted in compliance with permit requirements. All reports have been submitted to TCEQ.

Additionally, attach a copy of all tests performed which **have not** been submitted to the TCEQ or EPA. **Attachment:** N/A

Item 10. Off-Site/Third Party Wastes (Instructions, Page 45)

a. Does or will the facility receive wastes from off-site sources for treatment at the facility, disposal on-site via land application, or discharge via a permitted outfall?

☐ Yes ☒ No

If **yes**, provide responses to Items 10.b through 10.d below.

If **no**, proceed to Item 11.

b. Attach the following information to the application:

- List of wastes received (including volumes, characterization, and capability with on-site wastes).
- Identify the sources of wastes received (including the legal name and addresses of the generators).
- Description of the relationship of waste source(s) with the facility's activities.

Attachment: Click to enter text.

c. Is or will wastewater from another TCEQ, NPDES, or TPDES permitted facility commingled with this facility's wastewater after final treatment and prior to discharge via the final outfall/point of disposal?

☐ Yes ☐ No

If **yes**, provide the name, address, and TCEQ, NPDES, or TPDES permit number of the contributing facility and a copy of any agreements or contracts relating to this activity.

Attachment: Click to enter text.

d. Is this facility a POTW that accepts/will accept process wastewater from any SIU and has/is required to have an approved pretreatment program under the NPDES/TPDES program?

☐ Yes ☐ No

If **yes**, **Worksheet 6.0** of this application **is required**.

Item 11. Radioactive Materials (Instructions, Page 46)

a. Are/will radioactive materials be mined, used, stored, or processed at this facility?

☒ Yes ☐ No

If **yes**, use the following table to provide the results of one analysis of the effluent for all radioactive materials that may be present. Provide results in pCi/L.

Radioactive Materials Mined, Used, Stored, or Processed

Radioactive Material Name	Concentration (pCi/L)
The coal pile may contain naturally occurring radioactive material	No analysis conducted
The detected gamma radiation dosage rate for the coal pile runoff was 2 microrem per hour.	
This is consistent with the background radiation dosage rate around the coal pile site, which varies between 2–3 microrem per hour; the maximum dosage rate for the general public is 2,000 microrem per hour. Consequently, the discharge is not expected to contain radioactive material above background concentrations.	

b. Does the applicant or anyone at the facility have any knowledge or reason to believe that radioactive materials may be present in the discharge, including naturally occurring radioactive materials in the source waters or on the facility property?

☐ Yes ☒ No

If **yes**, use the following table to provide the results of one analysis of the effluent for all radioactive materials that may be present. Provide results in pCi/L. Do not include information provided in response to Item 11.a.

Radioactive Materials Present in the Discharge

Radioactive Material Name	Concentration (pCi/L)
See response to 11.a. above	

Item 12. Cooling Water (Instructions, Page 46)

a. Does the facility use or propose to use water for cooling purposes?

- ☒ Yes
- ☐ No
- ☐ Decommissioned: Click to enter text.
- ☐ To Be Decommissioned: Click to enter text.

If **yes**, complete Items 12.b thru 12.f. If **no**, stop here.

If **decommissioned**, provide the date operation ceased and stop here.

If to **be decommissioned**, provide the date operation is anticipated to cease and stop here.

b. Cooling water is/will be obtained from a groundwater source (e.g., on-site well).

☐ Yes ☒ No

If **yes**, stop here. If **no**, continue.

c. Cooling Water Supplier

1. Provide the name of the owner(s) and operator(s) for the CWIS that supplies or will supply water for cooling purposes to the facility.

Cooling Water Intake Structure(s) Owner(s) and Operator(s)

CWIS ID	Sommers	Deely	Spruce	
Owner	CPS Energy	CPS Energy	CPS Energy	
Operator	CPS Energy	CPS Energy	CPS Energy	

2. Cooling water is/will be obtained from a Public Water Supplier (PWS)

☒ No ☐ Yes; PWS No.: Over 98% of the water supply to the Calaveras Power Plant is reclaimed water as reported to the Texas Water Development Board annually. 40 CFR 125.91(c) states "...using reclaimed water from wastewater treatment facilities...does not constitute use of a cooling water intake structure for the purposes of this subpart." As a result, 40 CFR 125 Subpart I and J do not apply to the Calaveras Power Plant and the remainder of this section of the application is not required to be completed.

If **no**, continue. If **yes**, provide the PWS Registration No. and stop here.

3. Cooling water is/will be obtained from a reclaimed water source?

   ☐ No ☐ Yes; Auth No.: Click to enter text.

   If **no**, continue. If **yes**, provide the Reuse Authorization No. and stop here.

4. Cooling water is/will be obtained from an Independent Supplier

   ☐ No ☐ Yes; AIF: Click to enter text.

   If **no**, proceed to Item 12.d. If **yes**, provide the actual intake flow of the Independent Supplier's CWIS that is/will be used to provide water for cooling purposes and proceed.

d. 316(b) General Criteria

1. The CWIS(s) used to provide water for cooling purposes to the facility has or will have a cumulative design intake flow of 2 MGD or greater.

   ☐ Yes ☐ No

2. At least 25% of the total water withdrawn by the CWIS(s) is/will be used at the facility exclusively for cooling purposes on an annual average basis.

   ☐ Yes ☐ No

3. The CWIS(s) withdraw(s)/propose(s) to withdraw water for cooling purposes from surface waters that meet the definition of Waters of the United States in *40 CFR § 122.2*.

   ☐ Yes ☐ No. Explanation: Click to enter text.

   If **no**, provide an explanation of how the waterbody does not meet the definition of Waters of the United States in *40 CFR § 122.2*.

If **yes** to all three questions in Item 12.d, the facility **meets** the minimum criteria to be subject to the full requirements of Section 316(b) of the CWA. Proceed to **Item 12.f**.

If **no** to any of the questions in Item 12.d, the facility **does not meet** the minimum criteria to be subject to the full requirements of Section 316(b) of the CWA; however, a determination is required based upon BPJ. Proceed to **Item 12.e**.

e. The facility does not meet the minimum requirements to be subject to the fill requirements of Section 316(b) **and uses**/proposes **to use cooling towers**.

   ☐ Yes ☐ No

   If **yes**, stop here. If **no**, complete Worksheet 11.0, Items 1.a, 1.b.1-3 and 6, 2.b.1, and 3.a to allow for a determination based upon BPJ.

f. Oil and Gas Exploration and Production

1. The facility is subject to requirements at 40 CFR Part 435, Subparts A or D.

   ☐ Yes ☐ No

   If **yes**, continue. If **no**, skip to Item 12.g.

2. The facility is an existing facility as defined at 40 CFR § 125.92(k) or a new unit at an existing facility as defined at 40 CFR § 125.92(u).

   ☐ Yes ☐ No

If **yes**, complete Worksheet 11.0, Items 1.a, 1.b.1-3 and 6, 2.b.1, and 3.a to allow for a determination based upon BPJ. If **no**, skip to Item 12.g.3.

g. Compliance Phase and Track Selection

1. Phase I – New facility subject to 40 CFR Part 125, Subpart I

☐ Yes ☐ No

If **yes**, check the box next to the compliance track selection, attach the requested information, and complete Worksheet 11.0, Items 2 and 3, and Worksheet 11.2.

☐ Track I – AIF greater than 2 MGD, but less than 10 MGD

- Attach information required by *40 CFR §§ 125.86(b)(2)-(4)*.

☐ Track I – AIF greater than 10 MGD

- Attach information required by *40 CFR § 125.86(b)*.

☐ Track II

- Attach information required by *40 CFR § 125.86(c)*.

Attachment: Click to enter text.

2. Phase II – Existing facility subject to 40 CFR Part 125, Subpart J

☐ Yes ☐ No

If **yes**, complete Worksheets 11.0 through 11.3, as applicable.

3. Phase III – New facility subject to 40 CFR Part 125, Subpart N

☐ Yes ☐ No

If **yes**, check the box next to the compliance track selection and provide the requested information.

☐ Track I – Fixed facility

- Attach information required by 40 CFR § 125.136(b) and complete Worksheet 11.0, Items 2 and 3, and Worksheet 11.2.

☐ Track I – Not a fixed facility

- Attach information required by 40 CFR § 125.136(b) and complete Worksheet 11.0, Item 2 (except CWIS latitude/longitude under Item 2.a).

☐ Track II – Fixed facility

- Attach information required by 40 CFR § 125.136(c) and complete Worksheet 11.0, Items 2 and 3.

Attachment: Click to enter text.

Item 13. Permit Change Requests (Instructions, Page 48)

This item is only applicable to existing permitted facilities.

a. Is the facility requesting a **major amendment** of an existing permit?

☒ Yes ☐ No

If **yes**, list each request individually and provide the following information: 1) detailed information regarding the scope of each request and 2) a justification for each request. Attach any supplemental information or additional data to support each request.

See Attachment P

b. Is the facility requesting any **minor amendments** to the permit?

☒ Yes ☐ No

If **yes**, list and describe each change individually.

See Attachment P

c. Is the facility requesting any **minor modifications** to the permit?

☒ Yes ☐ No

If **yes**, list and describe each change individually.

See Attachment P

Item 14. Laboratory Accreditation (Instructions, Page 49)

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

- The laboratory is an in-house laboratory and is:
  - periodically inspected by the TCEQ; or
  - located in another state and is accredited or inspected by that state; or
  - performing work for another company with a unit located in the same site; or
  - performing pro bono work for a governmental agency or charitable organization.

- The laboratory is accredited under federal law.
- The data are needed for emergency-response activities, and a laboratory accredited under the Texas Laboratory Accreditation Program is not available.
- The laboratory supplies data for which the TCEQ does not offer accreditation.

The applicant should review *30 TAC Chapter 25* for specific requirements.

The following certification statement shall be signed and submitted with every application. See the *Signature Page* section in the Instructions, for a list of designated representatives who may sign the certification.

CERTIFICATION:

I certify that all laboratory tests submitted with this application meet the requirements of *30 TAC Chapter 25, Environmental Testing Laboratory Accreditation and Certification.*

Printed Name: Gregg Tieken

Title: Director of Environmental Compliance and Planning

Signature: _____

Date: 5/6/2025

INDUSTRIAL WASTEWATER PERMIT APPLICATION WORKSHEET 1.0: EPA CATEGORICAL EFFLUENT GUIDELINES

This worksheet **is required** for all applications for TPDES permits for discharges of wastewaters subject to EPA categorical effluent limitation guidelines (ELGs).

Item 1. Categorical Industries (Instructions, Page 53)

Is this facility subject to any 40 CFR categorical ELGs outlined on page 53 of the instructions?

☒ Yes ☐ No

If **no**, this worksheet is not required. If **yes**, provide the appropriate information below.

40 CFR Effluent Guideline

Industry	40 CFR Part
Steam Electric Power Generation	40 CFR 423

Item 2. Production/Process Data (Instructions, Page 54)

NOTE: For all TPDES permit applications requesting individual permit coverage for discharges of oil and gas exploration and production wastewater (discharges into or adjacent to water in the state, falling under the Oil and Gas Extraction Effluent Guidelines – 40 CFR Part 435), see Worksheet 12.0, Item 2 instead.

a. Production Data

Provide appropriate data for effluent guidelines with production-based effluent limitations.

Production Data

Subcategory	Actual Quantity/Day	Design Quantity/Day	Units
N/A			

b. Organic Chemicals, Plastics, and Synthetic Fibers Manufacturing Data (40 CFR Part 414)

Provide each applicable subpart and the percent of total production. Provide data for metal-bearing and cyanide-bearing wastestreams, as required by *40 CFR Part 414, Appendices A and B*.

Percentage of Total Production

Subcategory	Percent of Total Production	Appendix A and B - Metals	Appendix A - Cyanide
N/A			

c. Refineries (40 CFR Part 419)

Provide the applicable subcategory and a brief justification.

N/A

Item 3. Process/Non-Process Wastewater Flows (Instructions, Page 54)

Provide a breakdown of wastewater flow(s) generated by the facility, including both process and non-process wastewater flow(s). Specify which wastewater flows are to be authorized for discharge under this permit and the disposal practices for wastewater flows, excluding domestic, which are not to be authorized for discharge under this permit.

Once-through cooling water, boiler blowdown, FGD wastewater, water treatment wastes, coal pile runoff, floor and yard drains, and other low-volume waste streams. Ash transport water is not generated. Metal cleaning wastes are not authorized under this permit.

Item 4. New Source Determination (Instructions, Page 54)

Provide a list of all wastewater-generating processes subject to EPA categorical ELGs, identify the appropriate guideline Part and Subpart, and provide the date the process/construction commenced.

Wastewater Generating Processes Subject to Effluent Guidelines

Process	EPA Guideline Part	EPA Guideline Subpart	Date Process/ Construction Commenced
Low-volume waste	40 CFR 423		1972
Coal pile runoff	40 CFR 423		1977
FGD wastewater	40 CFR 423		1992, 2010
Once-through cooling water	40 CFR 423		1972, 1977, 1992, 2010

INDUSTRIAL WASTEWATER PERMIT APPLICATION WORKSHEET 2.0: POLLUTANT ANALYSIS

Worksheet 2.0 **is required** for all applications submitted for a TPDES permit. Worksheet 2.0 is not required for applications for a permit to dispose of all wastewater by land disposal or for discharges solely of stormwater associated with industrial activities.

Item 1. General Testing Requirements (Instructions, Page 55)

a. Provide the date range of all sampling events conducted to obtain the analytical data submitted with this application (e.g., 05/01/2018-05/30/2018): Click to enter text.

b. ☒ Check the box to confirm all samples were collected no more than 12 months prior to the date of application submittal.

c. Read the general testing requirements in the instructions for important information about sampling, test methods, and MALs. If a contact laboratory was used, attach a list which includes the name, contact information, and pollutants analyzed for each laboratory/firm. **Attachment:** Q – This attachment also includes all the tables with analytical results for each external outfall.

Item 2. Specific Testing Requirements (Instructions, Page 56)

Attach correspondence from TCEQ approving submittal of less than the required number of samples, if applicable. **Attachment:** Click to enter text.

TABLE 1 and TABLE 2 (Instructions, Page 58)

Completion of Tables 1 and 2 is required for all external outfalls for all TPDES permit applications.

Table 1 for Outfall No.: See Attachment Q **Samples are (check one):** ☐ **Composite** ☐ **Grab**

Pollutant	**Sample 1 (mg/L)**	**Sample 2 (mg/L)**	**Sample 3 (mg/L)**	**Sample 4 (mg/L)**
BOD (5-day)				
CBOD (5-day)				
Chemical oxygen demand				
Total organic carbon				
Dissolved oxygen				
Ammonia nitrogen				
Total suspended solids				
Nitrate nitrogen				
Total organic nitrogen				
Total phosphorus				
Oil and grease				

Pollutant	Sample 1 (mg/L)	Sample 2 (mg/L)	Sample 3 (mg/L)	Sample 4 (mg/L)
Total residual chlorine				
Total dissolved solids				
Sulfate				
Chloride				
Fluoride				
Total alkalinity (mg/L as CaCO3)				
Temperature (°F)				
pH (standard units)				

Table 2 for Outfall No.: **See Attachment Q** **Samples are (check one):** ☐ **Composite** ☐ **Grab**

Pollutant	Sample 1 (µg/L)	Sample 2 (µg/L)	Sample 3 (µg/L)	Sample 4 (µg/L)	MAL (µg/L)
Aluminum, total					2.5
Antimony, total					5
Arsenic, total					0.5
Barium, total					3
Beryllium, total					0.5
Cadmium, total					1
Chromium, total					3
Chromium, hexavalent					3
Chromium, trivalent					N/A
Copper, total					2
Cyanide, available					2/10
Lead, total					0.5
Mercury, total					0.005/0.0005
Nickel, total					2
Selenium, total					5
Silver, total					0.5
Thallium, total					0.5
Zinc, total					5.0

TABLE 3 (Instructions, Page 58)

Completion of Table 3 **is required** for all **external outfalls** which discharge process wastewater.

Partial completion of Table 3 **is required** for all **external outfalls** which discharge non-process wastewater and stormwater associated with industrial activities commingled with other wastestreams (see instructions for additional guidance).

Table 3 for Outfall No.: **See Attachment Q** **Samples are (check one):** ☐ **Composite** ☐ **Grab**

Pollutant	Sample 1 (µg/L)*	Sample 2 (µg/L)*	Sample 3 (µg/L)*	Sample 4 (µg/L)*	MAL (µg/L)*
Acrylonitrile					50
Anthracene					10
Benzene					10
Benzidine					50
Benzo(a)anthracene					5
Benzo(a)pyrene					5
Bis(2-chloroethyl)ether					10
Bis(2-ethylhexyl)phthalate					10
Bromodichloromethane [Dichlorobromomethane]					10
Bromoform					10
Carbon tetrachloride					2
Chlorobenzene					10
Chlorodibromomethane [Dibromochloromethane]					10
Chloroform					10
Chrysene					5
m-Cresol [3-Methylphenol]					10
o-Cresol [2-Methylphenol]					10
p-Cresol [4-Methylphenol]					10
1,2-Dibromoethane					10
m-Dichlorobenzene [1,3-Dichlorobenzene]					10
o-Dichlorobenzene [1,2-Dichlorobenzene]					10
p-Dichlorobenzene [1,4-Dichlorobenzene]					10
3,3'-Dichlorobenzidine					5
1,2-Dichloroethane					10

Pollutant	Sample 1 (µg/L)*	Sample 2 (µg/L)*	Sample 3 (µg/L)*	Sample 4 (µg/L)*	MAL (µg/L)*
1,1-Dichloroethene [1,1-Dichloroethylene]					10
Dichloromethane [Methylene chloride]					20
1,2-Dichloropropane					10
1,3-Dichloropropene [1,3-Dichloropropylene]					10
2,4-Dimethylphenol					10
Di-n-Butyl phthalate					10
Epichlorohydrin (1-Chloro-2,3-epoxypropane)					---
Ethylbenzene					10
Ethylene Glycol					---
Fluoride					500
Hexachlorobenzene					5
Hexachlorobutadiene					10
Hexachlorocyclopentadiene					10
Hexachloroethane					20
4,4'-Isopropylidenediphenol (bisphenol A)					1
Methyl ethyl ketone					50
Methyl tert-butyl ether (MTBE)					---
Nitrobenzene					10
N-Nitrosodiethylamine					20
N-Nitroso-di-n-butylamine					20
Nonylphenol					333
Pentachlorobenzene					20
Pentachlorophenol					5
Phenanthrene					10
Polychlorinated biphenyls (PCBs) (**)					0.2
Pyridine					20
1,2,4,5-Tetrachlorobenzene					20
1,1,2,2-Tetrachloroethane					10
Tetrachloroethene [Tetrachloroethylene]					10

Pollutant	Sample 1 (µg/L)*	Sample 2 (µg/L)*	Sample 3 (µg/L)*	Sample 4 (µg/L)*	MAL (µg/L)*
Toluene					10
1,1,1-Trichloroethane					10
1,1,2-Trichloroethane					10
Trichloroethene [Trichloroethylene]					10
2,4,5-Trichlorophenol					50
TTHM (Total trihalomethanes)					10
Vinyl chloride					10

(*) Indicate units if different from µg/L.

(**) Total of detects for PCB-1242, PCB-1254, PCB-1221, PCB-1232, PCB-1248, PCB-1260, and PCB-1016. If all non-detects, enter the highest non-detect preceded by a "<".

TABLE 4 (Instructions, Pages 58-59)

Partial completion of Table 4 **is required** for each **external outfall** based on the conditions below.

a. **Tributyltin**

Is this facility an industrial/commercial facility which currently or proposes to directly dispose of wastewater from the types of operations listed below or a domestic facility which currently or proposes to receive wastewater from the types of industrial/commercial operations listed below?

☐ Yes ☒ No

If **yes**, check the box next to each of the following criteria which apply and provide the appropriate testing results in Table 4 below (check all that apply).

☐ Manufacturers and formulators of tributyltin or related compounds.

☐ Painting of ships, boats and marine structures.

☐ Ship and boat building and repairing.

☐ Ship and boat cleaning, salvage, wrecking and scaling.

☐ Operation and maintenance of marine cargo handling facilities and marinas.

☐ Facilities engaged in wood preserving.

☐ Any other industrial/commercial facility for which tributyltin is known to be present, or for which there is any reason to believe that tributyltin may be present in the effluent.

b. **Enterococci (discharge to saltwater)**

This facility discharges/proposes to discharge directly into saltwater receiving waters **and** Enterococci bacteria are expected to be present in the discharge based on facility processes.

☐ Yes ☒ No

Domestic wastewater is/will be discharged.

☒ Yes ☐ No

If **yes to either** question, provide the appropriate testing results in Table 4 below.

c. E. coli (discharge to freshwater)

This facility discharges/proposes to discharge directly into freshwater receiving waters **and** *E. coli* bacteria are expected to be present in the discharge based on facility processes.

☒ Yes ☐ No

Domestic wastewater is/will be discharged.

☒ Yes ☐ No

If **yes to either** question, provide the appropriate testing results in Table 4 below.

Table 4 for Outfall No.: See Attachment Q **Samples are (check one): ☐ Composite ☐ Grab**

Pollutant	Sample 1	Sample 2	Sample 3	Sample 4	MAL
Tributyltin (µg/L)					0.010
Enterococci (cfu or MPN/100 mL)					N/A
E. coli (cfu or MPN/100 mL)					N/A

TABLE 5 (Instructions, Page 59)

Completion of Table 5 **is required** for all **external outfalls** which discharge process wastewater from a facility which manufactures or formulates pesticides or herbicides or other wastewaters which may contain pesticides or herbicides.

If this facility does not/will not manufacture or formulate pesticides or herbicides and does not/will not discharge other wastewaters that may contain pesticides or herbicides, check N/A.

☒ N/A

Table 5 for Outfall No.: Click to enter text. **Samples are (check one): ☐ Composite ☐ Grab**

Pollutant	Sample 1 (µg/L)*	Sample 2 (µg/L)*	Sample 3 (µg/L)*	Sample 4 (µg/L)*	MAL (µg/L)*
Aldrin					0.01
Carbaryl					5
Chlordane					0.2
Chlorpyrifos					0.05
4,4'-DDD					0.1
4,4'-DDE					0.1
4,4'-DDT					0.02
2,4-D					0.7
Danitol [Fenpropathrin]					—
Demeton					0.20
Diazinon					0.5/0.1

Pollutant	**Sample 1 (µg/L)***	**Sample 2 (µg/L)***	**Sample 3 (µg/L)***	**Sample 4 (µg/L)***	**MAL (µg/L)***
Dicofol [Kelthane]					1
Dieldrin					0.02
Diuron					0.090
Endosulfan I (*alpha*)					0.01
Endosulfan II (*beta*)					0.02
Endosulfan sulfate					0.1
Endrin					0.02
Guthion [Azinphos methyl]					0.1
Heptachlor					0.01
Heptachlor epoxide					0.01
Hexachlorocyclohexane (*alpha*)					0.05
Hexachlorocyclohexane (*beta*)					0.05
Hexachlorocyclohexane (*gamma*) [Lindane]					0.05
Hexachlorophene					10
Malathion					0.1
Methoxychlor					2.0
Mirex					0.02
Parathion (ethyl)					0.1
Toxaphene					0.3
2,4,5-TP [Silvex]					0.3

* Indicate units if different from µg/L.

TABLE 6 (Instructions, Page 59)

Completion of Table 6 **is required** for all **external outfalls**.

Table 6 for Outfall No.: See Attachment Q **Samples are (check one): ☐ Composite ☐ Grab**

Pollutants	**Believed Present**	**Believed Absent**	**Sample 1 (mg/L)**	**Sample 2 (mg/L)**	**Sample 3 (mg/L)**	**Sample 4 (mg/L)**	**MAL (µg/L)***
Bromide	☐	☐					400
Color (PCU)	☐	☐					—
Nitrate-Nitrite (as N)	☐	☐					—
Sulfide (as S)	☐	☐					—
Sulfite (as SO3)	☐	☐					—
Surfactants	☐	☐					—
Boron, total	☐	☐					20
Cobalt, total	☐	☐					0.3
Iron, total	☐	☐					7
Magnesium, total	☐	☐					20
Manganese, total	☐	☐					0.5
Molybdenum, total	☐	☐					1
Tin, total	☐	☐					5
Titanium, total	☐	☐					30

TABLE 7 (Instructions, Page 60)

Check the box next to any of the industrial categories applicable to this facility. If no categories are applicable, check N/A. If GC/MS testing is required, check the box provided to confirm the testing results for the appropriate parameters are provided with the application.

☐ N/A

Table 7 for Applicable Industrial Categories

Industrial Category	40 CFR Part	Volatiles Table 8	Acids Table 9	Bases/ Neutrals Table 10	Pesticides Table 11
☐ Adhesives and Sealants		☐ Yes	☐ Yes	☐ Yes	No
☐ Aluminum Forming	467	☐ Yes	☐ Yes	☐ Yes	No
☐ Auto and Other Laundries		☐ Yes	☐ Yes	☐ Yes	☐ Yes
☐ Battery Manufacturing	461	☐ Yes	No	☐ Yes	No
☐ Coal Mining	434	No	No	No	No
☐ Coil Coating	465	☐ Yes	☐ Yes	☐ Yes	No
☐ Copper Forming	468	☐ Yes	☐ Yes	☐ Yes	No
☐ Electric and Electronic Components	469	☐ Yes	☐ Yes	☐ Yes	☐ Yes
☐ Electroplating	413	☐ Yes	☐ Yes	☐ Yes	No
☐ Explosives Manufacturing	457	No	☐ Yes	☐ Yes	No
☐ Foundries		☐ Yes	☐ Yes	☐ Yes	No
☐ Gum and Wood Chemicals - Subparts A,B,C,E	454	☐ Yes	☐ Yes	No	No
☐ Gum and Wood Chemicals - Subparts D,F	454	☐ Yes	☐ Yes	☐ Yes	No
☐ Inorganic Chemicals Manufacturing	415	☐ Yes	☐ Yes	☐ Yes	No
☐ Iron and Steel Manufacturing	420	☐ Yes	☐ Yes	☐ Yes	No
☐ Leather Tanning and Finishing	425	☐ Yes	☐ Yes	☐ Yes	No
☐ Mechanical Products Manufacturing		☐ Yes	☐ Yes	☐ Yes	No
☐ Nonferrous Metals Manufacturing	421,471	☐ Yes	☐ Yes	☐ Yes	☐ Yes
☐ Oil and Gas Extraction - Subparts A, D, E, F, G, H	435	☐ Yes	☐ Yes	☐ Yes	No
☐ Ore Mining - Subpart B	440	No	☐ Yes	No	No
☐ Organic Chemicals Manufacturing	414	☐ Yes	☐ Yes	☐ Yes	☐ Yes
☐ Paint and Ink Formulation	446,447	☐ Yes	☐ Yes	☐ Yes	No
☐ Pesticides	455	☐ Yes	☐ Yes	☐ Yes	☐ Yes
☐ Petroleum Refining	419	☐ Yes	No	No	No
☐ Pharmaceutical Preparations	439	☐ Yes	☐ Yes	☐ Yes	No
☐ Photographic Equipment and Supplies	459	☐ Yes	☐ Yes	☐ Yes	No
☐ Plastic and Synthetic Materials Manufacturing	414	☐ Yes	☐ Yes	☐ Yes	☐ Yes
☐ Plastic Processing	463	☐ Yes	No	No	No
☐ Porcelain Enameling	466	No	No	No	No
☐ Printing and Publishing		☐ Yes	☐ Yes	☐ Yes	☐ Yes
☐ Pulp and Paperboard Mills - Subpart C	430	☐ *	☐ Yes	☐ *	☐ Yes
☐ Pulp and Paperboard Mills - Subparts F, K	430	☐ *	☐ Yes	☐ *	☐ *
☐ Pulp and Paperboard Mills - Subparts A, B, D, G, H	430	☐ Yes	☐ Yes	☐ *	☐ *
☐ Pulp and Paperboard Mills - Subparts I, J, L	430	☐ Yes	☐ Yes	☐ *	☐ Yes
☐ Pulp and Paperboard Mills - Subpart E	430	☐ Yes	☐ Yes	☐ Yes	☐ *
☐ Rubber Processing	428	☐ Yes	☐ Yes	☐ Yes	No
☐ Soap and Detergent Manufacturing	417	☐ Yes	☐ Yes	☐ Yes	No
☒ Steam Electric Power Plants	423	☒ Yes	☒ Yes	No	No
☐ Textile Mills (Not Subpart C)	410	☐ Yes	☐ Yes	☐ Yes	No
☐ Timber Products Processing	429	☐ Yes	☐ Yes	☐ Yes	☐ Yes

* Test if believed present.

TABLES 8, 9, 10, and 11 (Instructions, Page 60)

Completion of Tables 8, 9, 10, and 11 **is required** as specified in Table 7 for all **external outfalls** that contain process wastewater.

Completion of Tables 8, 9, 10, and 11 **may be required** for types of industry not specified in Table 7 for specific parameters that are believed to be present in the wastewater.

Table 8 for Outfall No.: See Attachment Q **Samples are (check one): ☐ Composite ☐ Grab**

Pollutant	Sample 1 (µg/L)*	Sample 2 (µg/L)*	Sample 3 (µg/L)*	Sample 4 (µg/L)*	MAL (µg/L)
Acrolein					50
Acrylonitrile					50
Benzene					10
Bromoform					10
Carbon tetrachloride					2
Chlorobenzene					10
Chlorodibromomethane					10
Chloroethane					50
2-Chloroethylvinyl ether					10
Chloroform					10
Dichlorobromomethane [Bromodichloromethane]					10
1,1-Dichloroethane					10
1,2-Dichloroethane					10
1,1-Dichloroethylene [1,1-Dichloroethene]					10
1,2-Dichloropropane					10
1,3-Dichloropropylene [1,3-Dichloropropene]					10
Ethylbenzene					10
Methyl bromide [Bromomethane]					50
Methyl chloride [Chloromethane]					50
Methylene chloride [Dichloromethane]					20
1,1,2,2-Tetrachloroethane					10
Tetrachloroethylene [Tetrachloroethene]					10
Toluene					10
1,2-Trans-dichloroethylene [1,2-Trans-dichloroethene]					10

Pollutant	Sample 1 (µg/L)*	Sample 2 (µg/L)*	Sample 3 (µg/L)*	Sample 4 (µg/L)*	MAL (µg/L)
1,1,1-Trichloroethane					10
1,1,2-Trichloroethane					10
Trichloroethylene [Trichloroethene]					10
Vinyl chloride					10

* Indicate units if different from µg/L.

Table 9 for Outfall No.: See Attachment Q **Samples are (check one):** ☐ **Composite** ☐ **Grab**

Pollutant	Sample 1 (µg/L)*	Sample 2 (µg/L)*	Sample 3 (µg/L)*	Sample 4 (µg/L)*	MAL (µg/L)
2-Chlorophenol					10
2,4-Dichlorophenol					10
2,4-Dimethylphenol					10
4,6-Dinitro-o-cresol					50
2,4-Dinitrophenol					50
2-Nitrophenol					20
4-Nitrophenol					50
p-Chloro-m-cresol					10
Pentachlorophenol					5
Phenol					10
2,4,6-Trichlorophenol					10

* Indicate units if different from µg/L.

Table 10 for Outfall No.: Not applicable **Samples are (check one):** ☐ **Composite** ☐ **Grab**

Pollutant	Sample 1 (µg/L)*	Sample 2 (µg/L)*	Sample 3 (µg/L)*	Sample 4 (µg/L)*	MAL (µg/L)
Acenaphthene					10
Acenaphthylene					10
Anthracene					10
Benzidine					50
Benzo(a)anthracene					5
Benzo(a)pyrene					5
3,4-Benzofluoranthene [Benzo(b)fluoranthene]					10
Benzo(ghi)perylene					20
Benzo(k)fluoranthene					5
Bis(2-chloroethoxy)methane					10

Pollutant	Sample 1 (µg/L)*	Sample 2 (µg/L)*	Sample 3 (µg/L)*	Sample 4 (µg/L)*	MAL (µg/L)
Bis(2-chloroethyl)ether					10
Bis(2-chloroisopropyl)ether					10
Bis(2-ethylhexyl)phthalate					10
4-Bromophenyl phenyl ether					10
Butylbenzyl phthalate					10
2-Chloronaphthalene					10
4-Chlorophenyl phenyl ether					10
Chrysene					5
Dibenzo(a,h)anthracene					5
1,2-Dichlorobenzene [o-Dichlorobenzene]					10
1,3-Dichlorobenzene [m-Dichlorobenzene]					10
1,4-Dichlorobenzene [p-Dichlorobenzene]					10
3,3'-Dichlorobenzidine					5
Diethyl phthalate					10
Dimethyl phthalate					10
Di-n-butyl phthalate					10
2,4-Dinitrotoluene					10
2,6-Dinitrotoluene					10
Di-n-octyl phthalate					10
1,2-Diphenylhydrazine (as Azobenzene)					20
Fluoranthene					10
Fluorene					10
Hexachlorobenzene					5
Hexachlorobutadiene					10
Hexachlorocyclopentadiene					10
Hexachloroethane					20
Indeno(1,2,3-cd)pyrene					5
Isophorone					10
Naphthalene					10
Nitrobenzene					10
N-Nitrosodimethylamine					50

Pollutant	Sample 1 (µg/L)*	Sample 2 (µg/L)*	Sample 3 (µg/L)*	Sample 4 (µg/L)*	MAL (µg/L)
N-Nitrosodi-n-propylamine					20
N-Nitrosodiphenylamine					20
Phenanthrene					10
Pyrene					10
1,2,4-Trichlorobenzene					10

* Indicate units if different from µg/L.

Table 11 for Outfall No.: Not applicable **Samples are (check one): ☐ Composite ☐ Grab**

Pollutant	Sample 1 (µg/L)*	Sample 2 (µg/L)*	Sample 3 (µg/L)*	Sample 4 (µg/L)*	MAL (µg/L)
Aldrin					0.01
alpha-BHC [alpha-Hexachlorocyclohexane]					0.05
beta-BHC [beta-Hexachlorocyclohexane]					0.05
gamma-BHC [gamma-Hexachlorocyclohexane]					0.05
delta-BHC [delta-Hexachlorocyclohexane]					0.05
Chlordane					0.2
4,4'-DDT					0.02
4,4'-DDE					0.1
4,4'-DDD					0.1
Dieldrin					0.02
Endosulfan I (alpha)					0.01
Endosulfan II (beta)					0.02
Endosulfan sulfate					0.1
Endrin					0.02
Endrin aldehyde					0.1
Heptachlor					0.01
Heptachlor epoxide					0.01
PCB 1242					0.2
PCB 1254					0.2
PCB 1221					0.2
PCB 1232					0.2
PCB 1248					0.2

Pollutant	Sample 1 (µg/L)*	Sample 2 (µg/L)*	Sample 3 (µg/L)*	Sample 4 (µg/L)*	MAL (µg/L)
PCB 1260					0.2
PCB 1016					0.2
Toxaphene					0.3

* Indicate units if different from µg/L.

Attachment: Click to enter text.

TABLE 12 (DIOXINS/FURAN COMPOUNDS)

Complete of Table 12 **is required** for **external outfalls**, as directed below. (Instructions, Pages 59-60)

Indicate which compound(s) are manufactured or used at the facility and provide a brief description of the conditions of its/their presence at the facility (check all that apply).

- ☐ 2,4,5-trichlorophenoxy acetic acid (2,4,5-T) CASRN 93-76-5
- ☐ 2-(2,4,5-trichlorophenoxy) propanoic acid (Silvex, 2,4,5-TP) CASRN 93-72-1
- ☐ 2-(2,4,5-trichlorophenoxy) ethyl 2,2-dichloropropionate (Erbon) CASRN 136-25-4
- ☐ 0,0-dimethyl 0-(2,4,5-trichlorophenyl) phosphorothioate (Ronnel) CASRN 299-84-3
- ☐ 2,4,5-trichlorophenol (TCP) CASRN 95-95-4
- ☐ hexachlorophene (HCP) CASRN 70-30-4
- ☒ None of the above

Description: Click to enter text.

Does the applicant or anyone at the facility know or have any reason to believe that 2,3,7,8-tetrachlorodibenzo-p-dioxin (TCDD) or any congeners of TCDD may be present in the effluent proposed for discharge?

☐ Yes ☒ No

Description: Click to enter text.

If **yes** to either Items a **or** b, complete Table 12 as instructed.

Table 12 for Outfall No.: Not applicable **Samples are (check one):** ☐ **Composite** ☐ **Grab**

Compound	Toxicity Equivalent Factors	Wastewater Concentration (ppq)	Wastewater Toxicity Equivalents (ppq)	Sludge Concentration (ppt)	Sludge Toxicity Equivalents (ppt)	MAL (ppq)
2,3,7,8-TCDD	1					10
1,2,3,7,8-PeCDD	1.0					50
2,3,7,8-HxCDDs	0.1					50
1,2,3,4,6,7,8-HpCDD	0.01					50

Compound	Toxicity Equivalent Factors	Wastewater Concentration (ppq)	Wastewater Toxicity Equivalents (ppq)	Sludge Concentration (ppt)	Sludge Toxicity Equivalents (ppt)	MAL (ppq)
2,3,7,8-TCDF	0.1					10
1,2,3,7,8-PeCDF	0.03					50
2,3,4,7,8-PeCDF	0.3					50
2,3,7,8-HxCDFs	0.1					50
2,3,4,7,8-HpCDFs	0.01					50
OCDD	0.0003					100
OCDF	0.0003					100
PCB 77	0.0001					500
PCB 81	0.0003					500
PCB 126	0.1					500
PCB 169	0.03					500
Total						

TABLE 13 (HAZARDOUS SUBSTANCES)

Complete Table 13 **is required** for all **external outfalls** as directed below. (Instructions, Pages 60-61)

Are there any pollutants listed in the instructions (pages 55-62) believed present in the discharge?

☐ Yes ☒ No

Are there pollutants listed in Item 1.c. of Technical Report 1.0 which are believed present in the discharge and have not been analytically quantified elsewhere in this application?

☐ Yes ☒ No

If **yes** to either Items a **or** b, complete Table 13 as instructed.

Table 13 for Outfall No.: Not applicable **Samples are (check one): ☐ Composite ☐ Grab**

Pollutant	CASRN	Sample 1 (µg/L)	Sample 2 (µg/L)	Sample 3 (µg/L)	Sample 4 (µg/L)	Analytical Method

INDUSTRIAL WASTEWATER PERMIT APPLICATION WORKSHEET 4.0: RECEIVING WATERS

This worksheet **is required** for all TPDES permit applications.

Item 1. Domestic Drinking Water Supply (Instructions, Page 80)

a. There is a surface water intake for domestic drinking water supply located within 5 (five) miles downstream from the point/proposed point of discharge.

☐ Yes ☒ No

If **no**, stop here and proceed to Item 2. If **yes**, provide the following information:

1. The legal name of the owner of the drinking water supply intake: Click to enter text.
2. The distance and direction from the outfall to the drinking water supply intake: Click to enter text.

b. Locate and identify the intake on the USGS 7.5-minute topographic map provided for Administrative Report 1.0.

☐ Check this box to confirm the above requested information is provided.

Item 2. Discharge Into Tidally Influenced Waters (Instructions, Page 80)

If the discharge is to tidally influenced waters, complete this section. Otherwise, proceed to Item 3.

a. Width of the receiving water at the outfall: Click to enter text. feet

b. Are there oyster reefs in the vicinity of the discharge?

☐ Yes ☐ No

If **yes**, provide the distance and direction from the outfall(s) to the oyster reefs: Click to enter text.

c. Are there sea grasses within the vicinity of the point of discharge?

☐ Yes ☐ No

If **yes**, provide the distance and direction from the outfall(s) to the grasses: Click to enter text.

Item 3. Classified Segment (Instructions, Page 80)

The discharge is/will be directly into (or within 300 feet of) a classified segment.

☐ Yes ☒ No

If **yes**, stop here and do not complete Items 4 and 5 of this worksheet or Worksheet 4.1.

If **no**, complete Items 4 and 5 and Worksheet 4.1 may be required.

Item 4. Description of Immediate Receiving Waters (Instructions, Page 80)

a. Name of the immediate receiving waters: Calaveras Lake

b. Check the appropriate description of the immediate receiving waters:

☒ Lake or Pond

- Surface area (acres): 3,550 at 485 feet above mean sea level
- Average depth of the entire water body (feet): 17.7
- Average depth of water body within a 500-foot radius of the discharge point (feet): 7 to 10 feet

☐ Man-Made Channel or Ditch

☐ Stream or Creek

☐ Freshwater Swamp or Marsh

☐ Tidal Stream, Bayou, or Marsh

☐ Open Bay

☐ Other, specify:

If **Man-Made Channel or Ditch** or **Stream or Creek** were selected above, provide responses to Items 4.c – 4.g below:

c. For **existing discharges**, check the description below that best characterizes the area **upstream** of the discharge.

For **new discharges**, check the description below that best characterizes the area **downstream** of the discharge.

☐ Intermittent (dry for at least one week during most years)

☐ Intermittent with Perennial Pools (enduring pools containing habitat to maintain aquatic life uses)

☐ Perennial (normally flowing)

Check the source(s) of the information used to characterize the area upstream (existing discharge) or downstream (new discharge):

☐ USGS flow records

☐ personal observation

☐ historical observation by adjacent landowner(s)

☐ other, specify: Click to enter text.

d. List the names of all perennial streams that join the receiving water within three miles downstream of the discharge point: Click to enter text.

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

☐ Yes ☐ No

If **yes**, describe how: Click to enter text.

f. General observations of the water body during normal dry weather conditions: Click to enter text.

Date and time of observation: Click to enter text.

g. The water body was influenced by stormwater runoff during observations.

☐ Yes ☐ No

If **yes**, describe how: Click to enter text.

Item 5. General Characteristics of Water Body (Instructions, Page 81)

a. Is the receiving water upstream of the existing discharge or proposed discharge site influenced by any of the following (check all that apply):

☐ oil field activities
☐ urban runoff
☒ agricultural runoff
☐ septic tanks
☒ upstream discharges
☒ other, specify: Calaveras Lake makeup water is primarily treated domestic wastewater effluent

b. Uses of water body observed or evidence of such uses (check all that apply):

☒ livestock watering
☒ industrial water supply
☒ non-contact recreation
☐ irrigation withdrawal
☐ domestic water supply
☐ navigation
☐ contact recreation
☒ picnic/park activities
☒ fishing
☐ other, specify: Click to enter text.

c. Description which best describes the aesthetics of the receiving water and the surrounding area (check only one):

☐ **Wilderness:** outstanding natural beauty; usually wooded or un-pastured area: water clarity exceptional

☒ **Natural Area:** trees or native vegetation common; some development evident (from fields, pastures, dwellings); water clarity discolored

☐ **Common Setting:** not offensive, developed but uncluttered; water may be colored or turbid

☐ **Offensive:** stream does not enhance aesthetics; cluttered; highly developed; dumping areas; water discolored

INDUSTRIAL WASTEWATER PERMIT APPLICATION WORKSHEET 7.0: STORMWATER DISCHARGES ASSOCIATED WITH INDUSTRIAL ACTIVITIES

This worksheet **is required** for all TPDES permit applications requesting individual permit coverage for discharges consisting of **either**: 1) solely of stormwater discharges associated with industrial activities, as defined in *40 CFR § 122.26(b)(14)(i-xi)*, **or** 2) stormwater discharges associated with industrial activities and any of the listed allowable non-stormwater discharges, as defined in the MSGP (TXR05000), Part II, Section A, Item 6.

Discharges of stormwater as defined in *40 CFR § 122.26 (b)(13)* are not required to obtain authorization under a TPDES permit (see exceptions at *40 CFR §§ 122.26(a)(1)* and *(9)*). Authorization for discharge may be required from a local municipal separate storm sewer system.

Item 1. Applicability (Instructions, Page 89)

Do discharges from any of the existing/proposed outfalls consist either 1) solely of stormwater discharges associated with industrial activities **or** 2) stormwater discharges associated with industrial activities and any of the allowable non-stormwater discharges?

☒ Yes ☐ No

If **no**, stop here. If **yes**, proceed as directed.

Item 2. Stormwater Coverage (Instructions, Page 89)

List each existing/proposed stormwater outfall at the facility and indicate which type of authorization covers or is proposed to cover discharges.

Authorization Coverage

Outfall	Authorization under MSGP	Authorized Under Individual Permit
006	☐	☒
014	☐	☒
015	☐	☒
016	☐	☒
017	☐	☒
018	☐	☒
	☐	☐
	☐	☐

If **all** existing/proposed outfalls which discharge stormwater associated with industrial activities (and any of the allowable non-stormwater discharges) are **authorized under the MSGP**, **stop** here.

If **seeking authorization** for any outfalls which discharge stormwater associated with industrial activities (and any of the allowable non-stormwater discharges) **under an individual permit**, **proceed**.

NOTE: The following information is required for each existing/proposed stormwater outfall for which the facility is seeking individual permit authorization under this application

Item 3. Site Map (Instructions, Page 90)

Attach a site map or maps (drawn to scale) of the entire facility with the following information.

- the location of each stormwater outfall to be covered by the permit
- an outline of the drainage area that is within the facility's boundary and that contributes stormwater to each outfall to be covered by the permit
- connections or discharge points to municipal separate storm sewer systems
- locations of all structures (e.g. buildings, garages, storage tanks)
- structural control devices that are designed to reduce pollution in discharges of stormwater associated with industrial activities
- process wastewater treatment units (including ponds)
- bag house and other air treatment units exposed to stormwater (stormwater runoff, snow melt runoff, and surface runoff and drainage)
- landfills; scrapyards; surface water bodies (including wetlands)
- vehicle and equipment maintenance areas
- physical features of the site that may influence discharges of stormwater associated with industrial activities or contribute a dry weather flow
- locations where spills or leaks of reportable quality (as defined in *30 TAC § 327.4*) have occurred during the three years before this application was submitted to obtain coverage under an individual permit
- processing areas, storage areas, material loading/unloading areas, and other locations where significant materials are exposed to stormwater (stormwater runoff, snow melt runoff, and surface runoff and drainage)

☒ Check the box to confirm all above information was provided on the facility site map(s).

Attachment: O

Item 4. Facility/Site Information (Instructions, Page 90)

a. Provide the area of impervious surface and the total area drained by each stormwater outfall requested for authorization by this permit application.

Impervious Surfaces

Outfall	Area of Impervious Surface (include units)	Total Area Drained (include units)
006	11.3	14.7
014	0.46	9.2
015	2.98	8.5
016	0.43	1.2
017	4.51	9.8
018	2.374	2.374

b. Provide the following local area rainfall information and the source of the information.

Wettest month: May

Average rainfall for wettest month (total inches): 4

25-year, 24-hour rainfall (inches): 8.10

Source: NOAA Online Weather Data (NOW Data), Monthly Climate Normals (1991-2020); NOAA National Weather Service Precipitation Frequency Data Server, both accessed 3/4/2025

c. Attach an inventory, or list, of materials currently handled at the facility that may be exposed to precipitation. **Attachment:** O

d. Attach narrative descriptions of the industrial processes and activities involving the materials in the above-listed inventory that occur outdoors or in some manner that may result in exposure of the materials to precipitation or runoff (see instructions for guidance). **Attachment:** O

e. Describe any BMPs and controls the facility uses/proposes to prevent or effectively reduce pollution in stormwater discharges from the facility: Construction stormwater pollution prevention plans are implemented for small construction activities. Good housekeeping and routine facility inspections are used to ensure that any materials used/stored in the stormwater-only drainage areas are properly managed. Directions on pesticide and herbicide labels are followed.

Item 5. Pollutant Analysis (Instructions, Page 91)

a. Provide the date range of all sampling events conducted to obtain the analytical data submitted with this application (e.g., 05/01/2018-05/30/2018): Samples have been collected but results were not obtained by the application submittal date.

b. ☐ Check the box to confirm all samples were collected no more than 12 months prior to the date of application submittal.

c. Complete Table 17 as directed on page 92 of the Instructions.

Table 17 for Outfall No.: Click to enter text.

Pollutant	Grab Sample* Maximum (mg/L)	Composite Sample** Maximum (mg/L)	Grab Sample* Average (mg/L)	Composite Sample** Average (mg/L)	Number of Storm Events Sampled	MAL (mg/L)
pH (standard units)	(max)	—	(min)	—		—
Total suspended solids						—
Chemical oxygen demand						—
Total organic carbon						—
Oil and grease						—
Arsenic, total						0.0005
Barium, total						0.003
Cadmium, total						0.001
Chromium, total						0.003

Pollutant	Grab Sample* Maximum (mg/L)	Composite Sample** Maximum (mg/L)	Grab Sample* Average (mg/L)	Composite Sample** Average (mg/L)	Number of Storm Events Sampled	MAL (mg/L)
Chromium, trivalent						—
Chromium, hexavalent						0.003
Copper, total						0.002
Lead, total						0.0005
Mercury, total						0.000005
Nickel, total						0.002
Selenium, total						0.005
Silver, total						0.0005
Zinc, total						0.005

* Taken during first 30 minutes of storm event

** Flow-weighted composite sample

d. Complete Table 18 as directed on pages 92-94 of the Instructions.

Table 18 for Outfall No.: Click to enter text.

Pollutant	Grab Sample* Maximum (mg/L)	Composite Sample** Maximum (mg/L)	Grab Sample* Average (mg/L)	Composite Sample** Average (mg/L)	Number of Storm Events Sampled

* Taken during first 30 minutes of storm event

** Flow-weighted composite sample

Attachment: Click to enter text.

Item 6. Storm Event Data (Instructions, Page 93)

Provide the following data for the storm event(s) which resulted in the maximum values for the analytical data submitted:

Date of storm event: Click to enter text.

Duration of storm event (minutes): Click to enter text.

Total rainfall during storm event (inches): Click to enter text.

Number of hours the between beginning of the storm measured and the end of the previous measurable storm event (hours): Click to enter text.

Maximum flow rate during rain event (gallons/minute): Click to enter text.

Total stormwater flow from rain event (gallons): Click to enter text.

Provide a description of the method of flow measurement or estimate:

ATTACHMENT A

COPY OF FEE PAYMENT

Koch, Nancy

From: steers@tceq.texas.gov
Sent: Tuesday, April 15, 2025 8:31 AM
To: Koch, Nancy
Subject: [EXT]:TCEQ ePay Receipt for 582EA000663817

*** External Message *** -- PROBE message before clicking links or opening attachments.

This is an automated message from the TCEQ ePay system. Please do not reply.
Trace Number: 582EA000663817
Date: 04/15/2025 08:30 AM
Payment Method: CC - Authorization 0000097055 TCEQ Amount: $2,050.00 Texas.gov Price: $2,096.38*

* This service is provided by Texas.gov, the official website of Texas. The price of this service includes funds that support the ongoing operations and enhancements of Texas.gov, which is provided by a third party in partnership with the State.

Actor: NANCY KOCH
Email: nancy.koch@westonsolutions.com

Payment Contact: NANCY KOCH
Phone: 512-651-7104
Company: WESTON SOLUTIONS
Address: 5301 SOUTHWEST PARKWAY 450, AUSTIN, TX 78735

Fees Paid:
Fee Description AR Number Amount
WW PERMIT - MAJOR INDUSTRIAL FACILITY - MAJOR AMENDMENT $2,000.00
30 TAC 305.53B WQ NOTIFICATION FEE $50.00

TCEQ Amount: $2,050.00

==========
Voucher: 762324
Trace Number: 582EA000663817
Date: 04/15/2025 08:30 AM
Payment Method: CC - Authorization 0000097055 Voucher Amount: $2,000.00 Fee Paid: WW PERMIT - MAJOR INDUSTRIAL FACILITY - MAJOR AMENDMENT Site Name: CALAVERAS POWER STATION Site Location: 12940 U S HIGHWAY 181 S Customer Name: CITY PUBLIC SERVICE OF SAN ANTONIO Customer Address: P O BOX 1771, SAN ANTONIO, TX 78296 Program Area ID: 0001514000

Voucher: 762325
Trace Number: 582EA000663817
Date: 04/15/2025 08:30 AM
Payment Method: CC - Authorization 0000097055 Voucher Amount: $50.00 Fee Paid: 30 TAC 305.53B WQ NOTIFICATION FEE

==========
To print out a copy of the receipt and vouchers for this transaction either click on or copy and paste the following url into your browser:

ATTACHMENT B

CORE DATA FORM

TCEQ Use Only

TCEQ Core Data Form

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

SECTION I: General Information

1. Reason for Submission (*If other is checked please describe in space provided.*)

☐ New Permit, Registration or Authorization (*Core Data Form should be submitted with the program application.*)

☒ Renewal *(Core Data Form should be submitted with the renewal form)* ☐ Other

2. Customer Reference Number *(if issued)*	Follow this link to search for CN or RN numbers in Central Registry**	3. Regulated Entity Reference Number *(if issued)*
CN 603174244		RN 100217975

SECTION II: Customer Information

4. General Customer Information | **5. Effective Date for Customer Information Updates** (mm/dd/yyyy) 4/20/2025

☐ New Customer ☒ Update to Customer Information ☐ Change in Regulated Entity Ownership
☐ Change in Legal Name (Verifiable with the Texas Secretary of State or Texas Comptroller of Public Accounts)

The Customer Name submitted here may be updated automatically based on what is current and active with the Texas Secretary of State (SOS) or Texas Comptroller of Public Accounts (CPA).

6. Customer Legal Name *(If an individual, print last name first: eg: Doe, John)* *If new Customer, enter previous Customer below:*

City Public Service of San Antonio

7. TX SOS/CPA Filing Number	8. TX State Tax ID (11 digits)	9. Federal Tax ID (9 digits)	10. DUNS Number *(if applicable)*
	17460020716	746002071	

11. Type of Customer:

☐ Corporation ☐ Individual Partnership: ☐ General ☐ Limited
Government: ☒ City ☐ County ☐ Federal ☐ Local ☐ State ☐ Other ☐ Sole Proprietorship ☐ Other:

12. Number of Employees

☐ 0-20 ☐ 21-100 ☐ 101-250 ☐ 251-500 ☒ 501 and higher

13. Independently Owned and Operated?

☒ **Yes** ☐ **No**

14. Customer Role (Proposed or Actual) – *as it relates to the Regulated Entity listed on this form. Please check one of the following*

☐ Owner ☐ Operator ☒ Owner & Operator
☐ Occupational Licensee ☐ Responsible Party ☐ VCP/BSA Applicant ☐ Other:

15. Mailing Address:

P.O. Box 1771

City	State	ZIP	ZIP + 4
San Antonio	TX	78296	

16. Country Mailing Information *(if outside USA)*	17. E-Mail Address *(if applicable)*
	elspeed@cpsenergy.com

18. Telephone Number	19. Extension or Code	20. Fax Number *(if applicable)*

(210) 353-5010		( ) -

SECTION III: Regulated Entity Information

21. General Regulated Entity Information *(If 'New Regulated Entity" is selected, a new permit application is also required.)*

☐ New Regulated Entity ☐ Update to Regulated Entity Name ☒ Update to Regulated Entity Information

The Regulated Entity Name submitted may be updated, in order to meet TCEQ Core Data Standards (removal of organizational endings such as Inc, LP, or LLC).

22. Regulated Entity Name *(Enter name of the site where the regulated action is taking place.)*

Calaveras Power Station

23. Street Address of the Regulated Entity: ***(No PO Boxes)***	12940 U.S. Highway 181 S							
	City	San Antonio	**State**	TX	**ZIP**	78223	**ZIP + 4**	
24. County	Bexar							

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

25. Description to Physical Location:					
26. Nearest City			**State**		**Nearest ZIP Code**

Latitude/Longitude are required and may be added/updated to meet TCEQ Core Data Standards. (Geocoding of the Physical Address may be used to supply coordinates where none have been provided or to gain accuracy).

27. Latitude (N) In Decimal:			**28. Longitude (W) In Decimal:**		
Degrees	Minutes	Seconds	Degrees	Minutes	Seconds
29	18	31.53	98	19	19.12

29. Primary SIC Code (4 digits)	**30. Secondary SIC Code** (4 digits)	**31. Primary NAICS Code** (5 or 6 digits)	**32. Secondary NAICS Code** (5 or 6 digits)
4911	4931	22111	2211

33. What is the Primary Business of this entity? *(Do not repeat the SIC or NAICS description.)*

Electric generation

34. Mailing Address:	**P.O. Box 1771**							
	City	**San Antonio**	**State**	**TX**	**ZIP**	**78296**	**ZIP + 4**	
35. E-Mail Address:	**elspeed@cpsenergy.com**							

36. Telephone Number	**37. Extension or Code**	**38. Fax Number** *(if applicable)*
(210) 353-5010		( ) -

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

☒ Dam Safety	☐ Districts	☐ Edwards Aquifer	☐ Emissions Inventory Air	☒ Industrial Hazardous Waste
				SWR 31445
☒ Municipal Solid Waste	☒ New Source Review Air	☐ OSSF	☒ Petroleum Storage Tank	☐ PWS
	PAL 11; PSDTX1037; PSDTX742M1, 1652, 18426, 45640, 70492		39158	
☐ Sludge	☐ Storm Water	☐ Title V Air	☐ Tires	☒ Used Oil
☐ Voluntary Cleanup	☒ Wastewater	☐ Wastewater Agriculture	☒ Water Rights	☒ Other: Air SOP 8
	WQ0001514000; WQG100044			

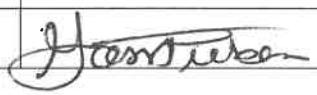
SECTION IV: Preparer Information

40. Name:	Nancy L. Koch	41. Title:	Project Manager

42. Telephone Number	43. Ext./Code	44. Fax Number	45. E-Mail Address
(512) 651-7104		( ) -	nancy.koch@westonsolutions.com

SECTION V: Authorized Signature

46. By my signature below, I certify, to the best of my knowledge, that the information provided in this form is true and complete, and that I have signature authority to submit this form on behalf of the entity specified in Section II, Field 6 and/or as required for the updates to the ID numbers identified in field 39.

Company:	CPS Energy	Job Title:	Director of Environmental Compliance and Planning
Name *(In Print)*:	Gregg Tieken	Phone:	(210) 353- **2339**
Signature:		Date:	4/30/25

ATTACHMENT C

PLAIN LANGUAGE SUMMARY

TEXAS COMMISSION ON ENVIRONMENTAL QUALITY

SUMMARY OF APPLICATION IN PLAIN LANGUAGE FOR TPDES OR TLAP PERMIT APPLICATIONS

Summary of Application (in plain language) Template and Instructions for Texas Pollutant Discharge Elimination System (TPDES) and Texas Land Application (TLAP) Permit Applications

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

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

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

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

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

City Public Service of San Antonio (CN603174244) operates Calaveras Power Plant (RN100217975), a power generating facility. The facility is located at 12940 U.S. Highway 181 S, in San Antonio, Bexar County, Texas 78233. City Public Service of San Antonio has applied to renew and amend water quality permit WQ0001514000. Amendment requests include the removal of internal Outfalls 103 and 109; reduced frequency of monitoring of pH at internal Outfalls 111, 112 and 712 to correct an error; the addition of internal Outfalls 112(d) and 112(e); the removal of total suspended solids monitoring at internal Outfall 108; and clarifications to authorized discharges, sample locations, and Other Requirements, including Other Requirement 6 (related to Outfall 006 progress reports), Other Requirement 18 (related to wastes listed for proposed evaporation ponds), and Other Requirement 13.J.iv (related to daily mass loading calculations for total residual chlorine) and 13.J.v (related to periods of chlorination).

Discharges from the facility are expected to contain free available chlorine, total residual chlorine, chemical oxygen demand, biochemical oxygen demand, oil and grease, total suspended solids, arsenic, mercury, selenium, nitrate/nitrite as N, bromide, total dissolved solids, and *E. coli.* Not every outfall is expected to contain the above list; the list is a summary for all permitted outfalls. Once-through cooling water; flue gas desulfurization wastewater; previously monitored effluents; stormwater (including coal pile runoff); construction stormwater; utility wastewater and low-volume wastes (boiler blowdown, ion exchange treatment system wastewater, reverse osmosis reject, and floor and yard drains); equipment wash water; polisher water; fire/lake water; and allowed non-stormwater discharges such as air conditioning condensate and domestic wastewater are treated by several methods depending on the wastewater type. Once-through cooling water and stormwater outside plant drains are not treated. Domestic wastewater is treated in sanitary package plants. Coal pile runoff is treated in a settling pond with a clarifier. Settling ponds are used for plant area stormwater, low-volume wastes, and utility wastewaters. Flue gas desulfurization wastewater is treated in a pond with a clarifier.

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

AGUAS RESIDUALES INUDSTRIALES /AGUAS PLUVIALES

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

City Public Service of San Antonio (CN603174244) opera Calaveras Power Plant (RN100217975), una instalación de generación de energía. La instalación está ubicada en 12940 U.S. Highway 181, en San Antonio, Condado de Bexar, Texas 78233. City Public Service of San Antonio ha solicitado la renovación y enmienda del permiso de calidad del agua WQ0001514000. Las solicitudes de enmienda incluyen la eliminación de los emisarios internos 103 y 109, reducción de la frecuencia de monitorización del pH en los emisarios internos 111, 112 y 712 para corregir un error; la adición de los emisarios internos 112(d) y 112(e); la remoción del monitoreo de sólidos suspendidos totales en emisarios interno 108; aclaraciones sobre las descargas autorizadas, las ubicaciones de muestras y otros requisitos, incluido el Otro requisito 6 (relacionado con los informes de progreso del emisario 006), otro requisito 18 (relacionado con los desechos enumerados para los estanques de evaporación propuestos) y otro requisito 13.J.iv (relacionado con los cálculos de carga másica diaria para el cloro residual total) y 13.J.v (relacionado con periodos de cloración).

Se espera que las descargas de la instalación contengan cloro libre disponible, cloro residual total, demanda química de oxígeno, demanda bioquímica de oxígeno, aceite y grasa, sólidos suspendidos totales, arsénico, mercurio, selenio, nitrato/nitrito como N, bromuro, sólidos disueltos totales y *E. coli*. No se espera que todos los emisarios contengan la lista anterior; La lista es un resumen de todos los emisarios permitidos. Una vez a través del agua de refrigeración, las aguas residuales de desulfuración de gases de combustión, los efluentes previamente monitoreados, las aguas pluviales (incluida la escorrentía de pilas de carbón), las aguas pluviales de la construcción, las aguas residuales de los servicios públicos y los desechos de bajo volumen (purga de calderas, aguas residuales del sistema de tratamiento de agua de intercambio iónico, rechazo de ósmosis inversa, desagües de pisos y exterior), agua de lavado de equipos, agua de pulidor, agua de incendio / lago, descargas permitidas de aguas no pluviales como condensado de aire acondicionado y aguas residuales domésticas, están tratadas por varios métodos dependiendo del tipo de aguas residuales. Una vez a través del agua de refrigeración y fuera de la planta desagües de aguas pluviales no se tratan. Las aguas residuales domésticas se tratan en plantas de paquetes sanitarios. La escorrentía de las pilas de carbón se trata en un estanque de sedimentación con un clarificador. Los estanques de sedimentación se utilizan para aguas pluviales del área de la planta, desechos de bajo volumen y aguas residuales de servicios públicos. Las aguas residuales de desulfuración de gases de combustión se tratan en un estanque con un clarificador.

ATTACHMENT D

PUBLIC INVOLVEMENT PLAN

Texas Commission on Environmental Quality

Public Involvement Plan Form for Permit and Registration Applications

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

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

Section 1. Preliminary Screening

☐ New Permit or Registration Application

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

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

Section 2. Secondary Screening

☒ Requires public notice,

☐ Considered to have significant public interest, **and**

☒ Located within any of the following geographical locations:

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

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

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

Significant public interest is not anticipated. Permit modifications are largely administrative in nature and no new outfalls or waste streams are proposed.

Section 3. Application Information

Type of Application (check all that apply):

Air ☐ Initial ☐ Federal ☒ Amendment ☐ Standard Permit ☐ Title V

Waste ☐ Municipal Solid Waste ☐ Industrial and Hazardous Waste ☐ Scrap Tire
☐ Radioactive Material Licensing ☐ Underground Injection Control

Water Quality

☒ Texas Pollutant Discharge Elimination System (TPDES)

☐ Texas Land Application Permit (TLAP)

☐ State Only Concentrated Animal Feeding Operation (CAFO)

☐ Water Treatment Plant Residuals Disposal Permit

☐ Class B Biosolids Land Application Permit

☐ Domestic Septage Land Application Registration

Water Rights New Permit

☐ New Appropriation of Water

☐ New or existing reservoir

Amendment to an Existing Water Right

☐ Add a New Appropriation of Water

☐ Add a New or Existing Reservoir

☐ Major Amendment that could affect other water rights or the environment

Section 4. Plain Language Summary

Provide a brief description of planned activities.

The applicant requests the following permit modifications: 1. The removal of Oufalls 103 and 109; 2. The addition of internal Outfalls 112 (d) and 112 (e) for wastes currently generated (boiler blowdown); 3. Correct the monitoring requirements for Outfall 108 to remove total suspended solids as the waste that required that parameter is no longer discharged; 4. Correct a permit error and restore the pH monitoring frequency to 1/week at Outfalls 111 and 112 and 1/6 months at Outfall 712; 5. Remove the requirement (Other Requirement 6) for progress reports at Outfall 006; 6. Clarify sample locations and authorized discharges at several outfalls; 7. Correct typographical errors; 8. Revise chlorine loading calculations to correctly account for the actual number of units discharging and the actual period of chlorination; and 9. Allow for continuous chlorination in the event Zebra mussels require mitigation.

Section 5. Community and Demographic Information

Community information can be found using EPA's EJ Screen, U.S. Census Bureau information, or generally available demographic tools.

Information gathered in this section can assist with the determination of whether alternative language notice is necessary. Please provide the following information.

Alternative notice is required in Spanish.

(City)

(County)

(Census Tract)

Please indicate which of these three is the level used for gathering the following information.

☐ City ☐ County ☐ Census Tract

(a) Percent of people over 25 years of age who at least graduated from high school

(b) Per capita income for population near the specified location

(c) Percent of minority population and percent of population by race within the specified location

(d) Percent of Linguistically Isolated Households by language within the specified location

(e) Languages commonly spoken in area by percentage

(f) Community and/or Stakeholder Groups

(g) Historic public interest or involvement

Section 6. Planned Public Outreach Activities

(a) Is this application subject to the public participation requirements of Title 30 Texas Administrative Code (30 TAC) Chapter 39?

☒ Yes ☐ No

(b) If yes, do you intend at this time to provide public outreach other than what is required by rule?

☐ Yes ☒ No

If Yes, please describe.

If you answered "yes" that this application is subject to 30 TAC Chapter 39, answering the remaining questions in Section 6 is not required.

(c) Will you provide notice of this application in alternative languages?

☐ Yes ☐ No

Please refer to Section 5. If more than 5% of the population potentially affected by your application is Limited English Proficient, then you are required to provide notice in the alternative language.

If yes, how will you provide notice in alternative languages?

☐ Publish in alternative language newspaper

☐ Posted on Commissioner's Integrated Database Website

☐ Mailed by TCEQ's Office of the Chief Clerk

☐ Other (specify)

(d) Is there an opportunity for some type of public meeting, including after notice?

☐ Yes ☐ No

(e) If a public meeting is held, will a translator be provided if requested?

☐ Yes ☐ No

(f) Hard copies of the application will be available at the following (check all that apply):

☐ TCEQ Regional Office ☐ TCEQ Central Office

☐ Public Place (specify)

Section 7. Voluntary Submittal

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

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

☐ Yes ☐ No

What types of notice will be provided?

☐ Publish in alternative language newspaper

☐ Posted on Commissioner's Integrated Database Website

☐ Mailed by TCEQ's Office of the Chief Clerk

☐ Other (specify)

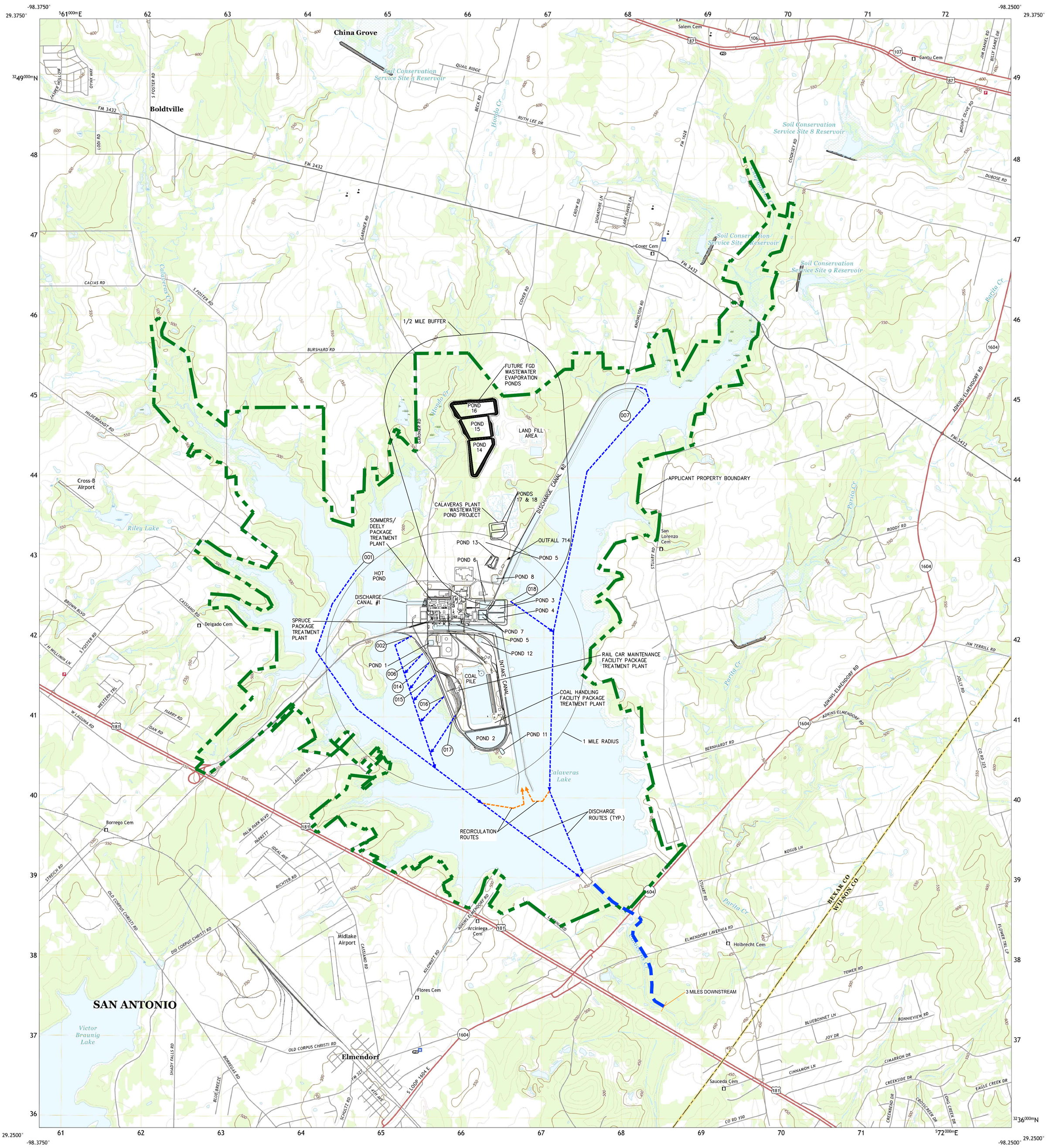
ATTACHMENT E

USGS MAP

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

The National Map US Topo

ELMENDORF QUADRANGLE
TEXAS
7.5-MINUTE SERIES



Produced by the United States Geological Survey
North American Datum of 1983 (NAD83)
World Geodetic System of 1984 (WGS84). Projection and
1 000-meter grid:Universal Transverse Mercator, Zone 14R

This map is not a legal document. Boundaries may be generalized for this map scale. Private lands within government reservations may not be shown. Obtain permission before entering private lands.

Imagery	NAIP,	September 2016 - November 2016
Roads	U.S. Census Bureau,	2015
Names	GNIS,	1979 - 2018
Hydrography	National Hydrography Dataset,	2000 - 2018
Contours	National Elevation Dataset,	2003
Boundaries	Multiple sources; see metadata file	2016 - 2017
Wetlands	FWS National Wetlands Inventory	1983

MN
GN
0°20'
6 MILS
4°0'
71 MILS
UTM GRID AND 2019 MAGNETIC NORTH DECLINATION AT CENTER OF SHEET

U.S. National Grid
100,000 - m Square ID
NT
Grid Zone Designation
14R

SCALE 1:24 000
1 0.5 0 KILOMETERS 1 2
1000 500 0 METERS 1000 2000
1 0.5 0 1
MILES
1000 0 1000 2000 3000 4000 5000 6000 7000 8000 9000 10000
FEET

CONTOUR INTERVAL 10 FEET
NORTH AMERICAN VERTICAL DATUM OF 1988

This map was produced to conform with the
National Geospatial Program US Topo Product Standard, 2011.
A metadata file associated with this product is draft version 0.6.18

TEXAS
QUADRANGLE LOCATION

1	2	3
4		5
6	7	8

1 San Antonio East
2 Martinez
3 Saint Hedwig
4 Southton
5 La Vernia SW
6 Losoya
7 Saspamco
8 Floresville
ADJOINING QUADRANGLES

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

3 MILE DISCHARGE ROUTE
PROPERTY BOUNDARY

NOTE: A REVIEW OF THE TWDB DATABASE INDICATED THAT ALL WELLS (PUBLIC AND PRIVATE) WERE OUTSIDE THE 500 FOOT BUFFER ZONE. CONSEQUENTLY, WELLS LOCATED OUTSIDE THIS ZONE ARE NOT SHOWN.

ELMENDORF, TX
2019



Legend

- Water Well Location
- Pond

0 2,000 4,000

US Feet

N

ATTACHMENT E - FIGURE 2
WATER WELL LOCATION
CALAVERAS POWER STATION
CPS ENERGY
12940 US HIGHWAY 181 SOUTH
SAN ANTONIO, TEXAS

	DATE:	PROJECT NO:	SCALE:
WESTON SOLUTIONS	MAR 2025	10690.020.009	AS SHOWN

FILE: C:\Users\letartes\Documents\ArcGIS\Projects\MyProject5\MyProject5.aprx 4:07 PM 3/11/2025 letartes

STATE OF TEXAS WELL REPORT for Tracking #124429

Owner:	**City Public Service Energy**	Owner Well #:	**JKS # 31**
Address:	**146 Navarro Street San Antonio, TX 78205**	Grid #:	**68-46-5**
Well Location:	**9599 Gardner Road San Antonio, TX 78263**	Latitude:	**29° 18' 43" N**
		Longitude:	**098° 19' 30" W**
Well County:	**Bexar**	Elevation:	**No Data**
Type of Work:	**Reconditioning**	Proposed Use:	**Monitor**

Drilling Start Date: **10/11/2007** Drilling End Date: **10/11/2007**

	Diameter (in.)	*Top Depth (ft.)*	*Bottom Depth (ft.)*
Borehole:	**8**	**0**	**2**

Drilling Method: **Driven**

Borehole Completion: **Unknown**

	Top Depth (ft.)	*Bottom Depth (ft.)*	*Description (number of sacks & material)*
Annular Seal Data:	**0**	**2**	**.25 Cement**

Seal Method: **Hand Mixed**

Sealed By: **Vortex Drilling, Inc.**

Distance to Property Line (ft.): **No Data**

Distance to Septic Field or other concentrated contamination (ft.): **No Data**

Distance to Septic Tank (ft.): **No Data**

Method of Verification: **No Data**

Surface Completion: **Surface Sleeve Installed**

Water Level: **No Data**

Packers: **N/A**

Type of Pump: **No Data**

Well Tests: **No Test Data Specified**

	Description (number of sacks & material)	*Top Depth (ft.)*	*Bottom Depth (ft.)*
Plug Information:	**N/A**		

Water Quality:

Strata Depth (ft.)	Water Type
No Data	**Non-Potable**

Chemical Analysis Made: **No**

Did the driller knowingly penetrate any strata which contained injurious constituents?: **No**

Certification Data: The driller certified that the driller drilled this well (or the well was drilled under the driller's direct supervision) and that each and all of the statements herein are true and correct. The driller understood that failure to complete the required items will result in the report(s) being returned for completion and resubmittal.

Company Information: **Vortex Drilling Inc.**

4412 Bluemel Road
San Antonio, TX 78240

Driller Name: **Gary B. Leifeste** License Number: **55002**

Comments: **No Data**

Lithology:
DESCRIPTION & COLOR OF FORMATION MATERIAL

From (ft)	To (ft)	Description
2" Well repaired with new riser and top cap.		

Casing:
BLANK PIPE & WELL SCREEN DATA

Dia. (in.)	New/Used	Type	Setting From/To (ft.)
2	**New**	**Schedule 40 PVC**	**2 - 0 Riser**
2	**New**	**Top Cap**	

IMPORTANT NOTICE FOR PERSONS HAVING WELLS DRILLED CONCERNING CONFIDENTIALITY

TEX. OCC. CODE Title 12, Chapter 1901.251, authorizes the owner (owner or the person for whom the well was drilled) to keep information in Well Reports confidential. The Department shall hold the contents of the well log confidential and not a matter of public record if it receives, by certified mail, a written request to do so from the owner.

Please include the report's Tracking Number on your written request.

Texas Department of Licensing and Regulation
P.O. Box 12157
Austin, TX 78711
(512) 334-5540

STATE OF TEXAS WELL REPORT for Tracking #124430

Owner:	**City Public Service Energy**	Owner Well #:	**JKS # 37**
Address:	**146 Navarro Street San Antonio, TX 78205**	Grid #:	**68-46-5**
Well Location:	**9599 Gardner Road San Antonio, TX 78263**	Latitude:	**29° 18' 43" N**
		Longitude:	**098° 19' 30" W**
Well County:	**Bexar**	Elevation:	**No Data**

Type of Work: **Reconditioning** Proposed Use: **Monitor**

Drilling Start Date: **10/11/2007** Drilling End Date: **10/11/2007**

Borehole:

Diameter (in.)	*Top Depth (ft.)*	*Bottom Depth (ft.)*
8	**0**	**2**

Drilling Method: **Driven**

Borehole Completion: **Unknown**

Annular Seal Data:

Top Depth (ft.)	*Bottom Depth (ft.)*	*Description (number of sacks & material)*
0	**2**	**.25 Cement**

Seal Method: **Hand Mixed**

Sealed By: **Vortex Drilling, Inc.**

Distance to Property Line (ft.): **No Data**

Distance to Septic Field or other concentrated contamination (ft.): **No Data**

Distance to Septic Tank (ft.): **No Data**

Method of Verification: **No Data**

Surface Completion: **Surface Sleeve Installed**

Water Level: **No Data**

Packers: **N/A**

Type of Pump: **No Data**

Well Tests: **No Test Data Specified**

Plug Information:

Description (number of sacks & material)	*Top Depth (ft.)*	*Bottom Depth (ft.)*
N/A		

Water Quality:

Strata Depth (ft.)	Water Type
No Data	**Non-Potable**

Chemical Analysis Made: **No**

Did the driller knowingly penetrate any strata which contained injurious constituents?: **No**

Certification Data: The driller certified that the driller drilled this well (or the well was drilled under the driller's direct supervision) and that each and all of the statements herein are true and correct. The driller understood that failure to complete the required items will result in the report(s) being returned for completion and resubmittal.

Company Information: **Vortex Drilling Inc.**

4412 Bluemel Road
San Antonio, TX 78240

Driller Name: **Gary B. Leifeste** License Number: **55002**

Comments: **No Data**

Lithology:
DESCRIPTION & COLOR OF FORMATION MATERIAL

From (ft)	To (ft)	Description
2" Well repaired with new riser and top cap.		

Casing:
BLANK PIPE & WELL SCREEN DATA

Dia. (in.)	New/Used	Type	Setting From/To (ft.)
2	**New**	**Schedule 40 PVC**	**2 - 0 Riser**
2	**New**	**Top Cap**	

IMPORTANT NOTICE FOR PERSONS HAVING WELLS DRILLED CONCERNING CONFIDENTIALITY

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Texas Department of Licensing and Regulation
P.O. Box 12157
Austin, TX 78711
(512) 334-5540

STATE OF TEXAS WELL REPORT for Tracking #436639

Owner:	**CPS Energy**	Owner Well #:	**Sommers MW-1**
Address:	**P.O. Box 1771 San Antonio , TX 78296**	Grid #:	**68-46-5**
Well Location:	**9599 Gardner Road San Antonio, TX 78263**	Latitude:	**29° 18' 29.26" N**
		Longitude:	**098° 19' 25.71" W**
Well County:	**Bexar**	Elevation:	**498 ft. above sea level**
Type of Work:	**New Well**	Proposed Use:	**Monitor**

Drilling Start Date: **10/21/2016** Drilling End Date: **10/21/2016**

	Diameter (in.)	*Top Depth (ft.)*	*Bottom Depth (ft.)*
Borehole:	**7.25**	**0**	**15**

Drilling Method: **Hollow Stem Auger**

Borehole Completion: **Filter Packed**

	Top Depth (ft.)	*Bottom Depth (ft.)*	*Filter Material*	*Size*
Filter Pack Intervals:	**3**	**15**	**Sand**	**12/20**

	Top Depth (ft.)	*Bottom Depth (ft.)*	*Description (number of sacks & material)*
Annular Seal Data:	**0**	**2**	**Concrete 0.881 Bags/Sacks**
	2	**3**	**Bentonite 0.35 Bags/Sacks**

Seal Method: **Hand Mixed**

Sealed By: **Driller**

Distance to Property Line (ft.): **No Data**

Distance to Septic Field or other concentrated contamination (ft.): **No Data**

Distance to Septic Tank (ft.): **No Data**

Method of Verification: **No Data**

Surface Completion: **Surface Slab Installed** **Surface Completion by Driller**

Water Level: **5.49 ft.** below land surface on **2016-10-21**

Packers: **No Data**

Type of Pump: **No Data**

Well Tests: **No Test Data Specified**

Water Quality:

Strata Depth (ft.)	Water Type
No Data	**No Data**

Chemical Analysis Made: **No**

Did the driller knowingly penetrate any strata which contained injurious constituents?: **No**

Certification Data: The driller certified that the driller drilled this well (or the well was drilled under the driller's direct supervision) and that each and all of the statements herein are true and correct. The driller understood that failure to complete the required items will result in the report(s) being returned for completion and resubmittal.

Company Information: **Vortex Drilling Inc.**

4412 Bluemel
San Antonio, TX 78240

Driller Name: **Juan R Martinez** License Number: **59856**

Apprentice Name: **Tim Anderson**

Comments: **No Data**

Lithology:
DESCRIPTION & COLOR OF FORMATION MATERIAL

Top (ft.)	Bottom (ft.)	Description
0	**5.5**	**Silty SAND, quartz, very fine grained, loose, tan, dry.**
5.5	**6**	**At 5.5 ft bgs: Wet.**
6	**7**	**At 6.0 ft bgs: Strong hydrocarbon odor.**
7	**11**	**Silty CLAY with Silty SAND, soft to firm stiffness, medium to high plasticity, greenish-grayish brown, wet, hydrocarbon odor. Sand is same as above.**
11	**14.5**	**Silty SAND, quartz, very fine grained, loose, greenish-grayish brown, wet, slight hydrocarbon odor.**
14.5	**15**	**At 14.5 ft bgs: Firm to very firm, strong brown, no odor.**

Casing:
BLANK PIPE & WELL SCREEN DATA

Dia (in.)	Type	Material	Sch./Gage	Top (ft.)	Bottom (ft.)
2	**Top Cap (Locking)**	**New Plastic (PVC)**	**40**		
2	**Bottom Cap**	**New Plastic (PVC)**	**40**		
2	**Riser**	**New Plastic (PVC)**	**40**	**0**	**5**
2	**Screen**	**New Plastic (PVC)**	**40/ 0.010**	**5**	**15**

IMPORTANT NOTICE FOR PERSONS HAVING WELLS DRILLED CONCERNING CONFIDENTIALITY

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Please include the report's Tracking Number on your written request.

Texas Department of Licensing and Regulation
P.O. Box 12157
Austin, TX 78711
(512) 334-5540

STATE OF TEXAS WELL REPORT for Tracking #443567

Owner:	**Calaveras Power Station**	Owner Well #:	**JKS-50R**
Address:	**12940 US 181 San Antonio, TX 78223**	Grid #:	**68-46-5**
Well Location:	**12940 US 181 San Antonio, TX 78223**	Latitude:	**29° 18' 28.4" N**
		Longitude:	**098° 19' 01.91" W**
Well County:	**Bexar**	Elevation:	**No Data**
Type of Work:	**New Well**	Proposed Use:	**Monitor**

Drilling Start Date: **10/7/2016** Drilling End Date: **10/7/2016**

	Diameter (in.)	*Top Depth (ft.)*	*Bottom Depth (ft.)*
Borehole:	**8.25**	**0**	**19.5**

Drilling Method: **Hollow Stem Auger**

Borehole Completion: **Filter Packed**

	Top Depth (ft.)	*Bottom Depth (ft.)*	*Filter Material*	*Size*
Filter Pack Intervals:	**7.5**	**19.5**	**Sand**	**20/40**

	Top Depth (ft.)	*Bottom Depth (ft.)*	*Description (number of sacks & material)*
Annular Seal Data:	**0**	**2**	**Cement 1 Bags/Sacks**
	2	**7.5**	**Bentonite 2 Bags/Sacks**

Seal Method: **Hand Mixed**

Sealed By: **Driller**

Distance to Property Line (ft.): **No Data**

Distance to Septic Field or other concentrated contamination (ft.): **No Data**

Distance to Septic Tank (ft.): **No Data**

Method of Verification: **No Data**

Surface Completion: **Surface Slab Installed** **Surface Completion by Driller**

Water Level: **No Data**

Packers: **No Data**

Type of Pump: **No Data**

Well Tests: **No Test Data Specified**

Water Quality:

Strata Depth (ft.)	Water Type
No Data	**No Data**

Chemical Analysis Made: **No**

Did the driller knowingly penetrate any strata which contained injurious constituents?: **No**

The driller did certify that while drilling, deepening or otherwise altering the above described well, injurious water or constituents was encountered and the landowner or person having the well drilled was informed that such well must be completed or plugged in such a manner as to avoid injury or pollution.

Certification Data: The driller certified that the driller drilled this well (or the well was drilled under the driller's direct supervision) and that each and all of the statements herein are true and correct. The driller understood that failure to complete the required items will result in the report(s) being returned for completion and resubmittal.

Company Information: **Strata Core Services, LLC**

112 S. Norwood Drive
Hurst, TX 76053

Driller Name: **William Fields** License Number: **56033**

Apprentice Name: **Ryan Spaust**

Comments: **No Data**

Lithology:
DESCRIPTION & COLOR OF FORMATION MATERIAL

Top (ft.)	Bottom (ft.)	Description
0	**17.5**	**Clayey sand -light brown**
17.5	**19.5**	**Clayey silty sand - light brown**

Casing:
BLANK PIPE & WELL SCREEN DATA

Dia (in.)	Type	Material	Sch./Gage	Top (ft.)	Bottom (ft.)
2	**Riser**	**New Plastic (PVC)**	**40**	**0**	**9.5**
2	**Screen**	**New Plastic (PVC)**	**40 10**	**9.5**	**19.5**

IMPORTANT NOTICE FOR PERSONS HAVING WELLS DRILLED CONCERNING CONFIDENTIALITY

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Please include the report's Tracking Number on your written request.

Texas Department of Licensing and Regulation
P.O. Box 12157
Austin, TX 78711
(512) 334-5540

STATE OF TEXAS WELL REPORT for Tracking #443571

Owner:	**Calaveras Power Station**	Owner Well #:	**JKS-52**
Address:	**12940 US 181 San Antonio, TX 78223**	Grid #:	**68-46-5**
Well Location:	**12940 US 181 San Antonio, TX 78223**	Latitude:	**29° 18' 28.4" N**
		Longitude:	**098° 19' 01.91" W**
Well County:	**Bexar**	Elevation:	**No Data**
Type of Work:	**New Well**	Proposed Use:	**Monitor**

Drilling Start Date: **9/1/2016** Drilling End Date: **9/1/2016**

Borehole:

Diameter (in.)	*Top Depth (ft.)*	*Bottom Depth (ft.)*
8.25	**0**	**29**

Drilling Method: **Hollow Stem Auger**

Borehole Completion: **Filter Packed**

Filter Pack Intervals:

Top Depth (ft.)	*Bottom Depth (ft.)*	*Filter Material*	*Size*
7.5	**19.5**	**Sand**	**20/40**

Annular Seal Data:

Top Depth (ft.)	*Bottom Depth (ft.)*	*Description (number of sacks & material)*
0	**2**	**Cement 1 Bags/Sacks**
2	**17**	**Bentonite 2 Bags/Sacks**

Seal Method: **Hand Mixed**

Sealed By: **Driller**

Distance to Property Line (ft.): **No Data**

Distance to Septic Field or other concentrated contamination (ft.): **No Data**

Distance to Septic Tank (ft.): **No Data**

Method of Verification: **No Data**

Surface Completion: **Surface Slab Installed** **Surface Completion by Driller**

Water Level: **No Data**

Packers: **No Data**

Type of Pump: **No Data**

Well Tests: **No Test Data Specified**

Water Quality:

Strata Depth (ft.)	Water Type
No Data	**No Data**

Chemical Analysis Made: **No**

Did the driller knowingly penetrate any strata which contained injurious constituents?: **No**

The driller did certify that while drilling, deepening or otherwise altering the above described well, injurious water or constituents was encountered and the landowner or person having the well drilled was informed that such well must be completed or plugged in such a manner as to avoid injury or pollution.

Certification Data: The driller certified that the driller drilled this well (or the well was drilled under the driller's direct supervision) and that each and all of the statements herein are true and correct. The driller understood that failure to complete the required items will result in the report(s) being returned for completion and resubmittal.

Company Information: **Strata Core Services, LLC**

112 S. Norwood Drive
Hurst, TX 76053

Driller Name: **William Fields** License Number: **56033**

Apprentice Name: **Ryan Spaust**

Comments: **No Data**

Lithology:
DESCRIPTION & COLOR OF FORMATION MATERIAL

Top (ft.)	Bottom (ft.)	Description
0	**7**	**Clayey silt - orangish brown**
7	**15**	**Clayey silty - gray to brown**
15	**19**	**Sand - tan with gray**
19	**24**	**Sand - light orange and tan**
24	**29**	**Clayey sand - tan**

Casing:
BLANK PIPE & WELL SCREEN DATA

Dia (in.)	Type	Material	Sch./Gage	Top (ft.)	Bottom (ft.)
2	**Riser**	**New Plastic (PVC)**	**40**	**0**	**19**
2	**Screen**	**New Plastic (PVC)**	**40 10**	**19**	**29**

IMPORTANT NOTICE FOR PERSONS HAVING WELLS DRILLED CONCERNING CONFIDENTIALITY

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Please include the report's Tracking Number on your written request.

Texas Department of Licensing and Regulation
P.O. Box 12157
Austin, TX 78711
(512) 334-5540

STATE OF TEXAS WELL REPORT for Tracking #443589

Owner:	**Calaveras Power Station**	Owner Well #:	**JKS-53**
Address:	**12940 US 181 San Antonio, TX 78223**	Grid #:	**68-46-5**
Well Location:	**12940 US 181 San Antonio, TX 78223**	Latitude:	**29° 18' 28.4" N**
		Longitude:	**098° 19' 01.91" W**
Well County:	**Bexar**	Elevation:	**No Data**
Type of Work:	**New Well**	Proposed Use:	**Monitor**

Drilling Start Date: **9/2/2016** Drilling End Date: **9/2/2016**

Borehole:

Diameter (in.)	*Top Depth (ft.)*	*Bottom Depth (ft.)*
8.25	**0**	**25**

Drilling Method: **Hollow Stem Auger**

Borehole Completion: **Filter Packed**

Filter Pack Intervals:

Top Depth (ft.)	*Bottom Depth (ft.)*	*Filter Material*	*Size*
17	**25**	**Sand**	**20/40**

Annular Seal Data:

Top Depth (ft.)	*Bottom Depth (ft.)*	*Description (number of sacks & material)*
0	**2**	**Cement 1 Bags/Sacks**
2	**17**	**Bentonite 2 Bags/Sacks**

Seal Method: **Hand Mixed**

Sealed By: **Driller**

Distance to Property Line (ft.): **No Data**

Distance to Septic Field or other concentrated contamination (ft.): **No Data**

Distance to Septic Tank (ft.): **No Data**

Method of Verification: **No Data**

Surface Completion: **Surface Slab Installed** **Surface Completion by Driller**

Water Level: **No Data**

Packers: **No Data**

Type of Pump: **No Data**

Well Tests: **No Test Data Specified**

Water Quality:

Strata Depth (ft.)	Water Type
No Data	**No Data**

Chemical Analysis Made: **No**

Did the driller knowingly penetrate any strata which contained injurious constituents?: **No**

The driller did certify that while drilling, deepening or otherwise altering the above described well, injurious water or constituents was encountered and the landowner or person having the well drilled was informed that such well must be completed or plugged in such a manner as to avoid injury or pollution.

Certification Data: The driller certified that the driller drilled this well (or the well was drilled under the driller's direct supervision) and that each and all of the statements herein are true and correct. The driller understood that failure to complete the required items will result in the report(s) being returned for completion and resubmittal.

Company Information: **Strata Core Services, LLC**

112 S. Norwood Drive
Hurst, TX 76053

Driller Name: **William Fields** License Number: **56033**

Apprentice Name: **Ryan Spaust**

Comments: **No Data**

Lithology:
DESCRIPTION & COLOR OF FORMATION MATERIAL

Top (ft.)	Bottom (ft.)	Description
0	**7**	**Clayey silt - orangish brown**
7	**15**	**Clayey silty - gray to brown**
15	**19**	**Sand - tan with gray**
19	**23**	**Sand - light orange and tan**
23	**25**	**Sand - reddish brown**

Casing:
BLANK PIPE & WELL SCREEN DATA

Dia (in.)	Type	Material	Sch./Gage	Top (ft.)	Bottom (ft.)
2	**Riser**	**New Plastic (PVC)**	**40**	**0**	**15**
2	**Screen**	**New Plastic (PVC)**	**40 10**	**15**	**25**

IMPORTANT NOTICE FOR PERSONS HAVING WELLS DRILLED CONCERNING CONFIDENTIALITY

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Texas Department of Licensing and Regulation
P.O. Box 12157
Austin, TX 78711
(512) 334-5540

STATE OF TEXAS WELL REPORT for Tracking #443590

Owner:	**Calaveras Power Station**	Owner Well #:	**JKS-54**
Address:	**12940 US 181 San Antonio, TX 78223**	Grid #:	**68-46-5**
Well Location:	**12940 US 181 San Antonio, TX 78223**	Latitude:	**29° 18' 28.4" N**
		Longitude:	**098° 19' 01.91" W**
Well County:	**Bexar**	Elevation:	**No Data**
Type of Work:	**New Well**	Proposed Use:	**Monitor**

Drilling Start Date: **9/2/2016** Drilling End Date: **9/2/2016**

Borehole:

Diameter (in.)	*Top Depth (ft.)*	*Bottom Depth (ft.)*
8.25	**0**	**22**

Drilling Method: **Hollow Stem Auger**

Borehole Completion: **Filter Packed**

Filter Pack Intervals:

Top Depth (ft.)	*Bottom Depth (ft.)*	*Filter Material*	*Size*
10	**22**	**Sand**	**20/40**

Annular Seal Data:

Top Depth (ft.)	*Bottom Depth (ft.)*	*Description (number of sacks & material)*
0	**2**	**Cement 1 Bags/Sacks**
2	**10**	**Bentonite 2 Bags/Sacks**

Seal Method: **Hand Mixed**

Sealed By: **Driller**

Distance to Property Line (ft.): **No Data**

Distance to Septic Field or other concentrated contamination (ft.): **No Data**

Distance to Septic Tank (ft.): **No Data**

Method of Verification: **No Data**

Surface Completion: **Surface Slab Installed** **Surface Completion by Driller**

Water Level: **No Data**

Packers: **No Data**

Type of Pump: **No Data**

Well Tests: **No Test Data Specified**

Water Quality:

Strata Depth (ft.)	Water Type
No Data	**No Data**

Chemical Analysis Made: **No**

Did the driller knowingly penetrate any strata which contained injurious constituents?: **No**

The driller did certify that while drilling, deepening or otherwise altering the above described well, injurious water or constituents was encountered and the landowner or person having the well drilled was informed that such well must be completed or plugged in such a manner as to avoid injury or pollution.

Certification Data: The driller certified that the driller drilled this well (or the well was drilled under the driller's direct supervision) and that each and all of the statements herein are true and correct. The driller understood that failure to complete the required items will result in the report(s) being returned for completion and resubmittal.

Company Information: **Strata Core Services, LLC**

112 S. Norwood Drive
Hurst, TX 76053

Driller Name: **William Fields** License Number: **56033**

Apprentice Name: **Ryan Spaust**

Comments: **No Data**

Lithology:
DESCRIPTION & COLOR OF FORMATION MATERIAL

Top (ft.)	Bottom (ft.)	Description
0	**7**	**Clayey silt - orangish brown**
7	**15**	**Clayey silty - gray to brown**
15	**19**	**Sand - tan with gray**
19	**22**	**Sand - light orange and tan**

Casing:
BLANK PIPE & WELL SCREEN DATA

Dia (in.)	Type	Material	Sch./Gage	Top (ft.)	Bottom (ft.)
2	**Riser**	**New Plastic (PVC)**	**40**	**0**	**12**
2	**Screen**	**New Plastic (PVC)**	**40 10**	**12**	**22**

IMPORTANT NOTICE FOR PERSONS HAVING WELLS DRILLED CONCERNING CONFIDENTIALITY

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Austin, TX 78711
(512) 334-5540

STATE OF TEXAS WELL REPORT for Tracking #443591

Owner:	**Calaveras Power Station**	Owner Well #:	**JKS-55**
Address:	**12940 US 181 San Antonio, TX 78223**	Grid #:	**68-46-5**
Well Location:	**12940 US 181 San Antonio, TX 78223**	Latitude:	**29° 18' 28.4" N**
		Longitude:	**098° 19' 01.91" W**
Well County:	**Bexar**	Elevation:	**No Data**
Type of Work:	**New Well**	Proposed Use:	**Monitor**

Drilling Start Date: **9/6/2016** Drilling End Date: **9/6/2016**

Borehole:

Diameter (in.)	*Top Depth (ft.)*	*Bottom Depth (ft.)*
8.25	**0**	**25**

Drilling Method: **Hollow Stem Auger**

Borehole Completion: **Filter Packed**

Filter Pack Intervals:

Top Depth (ft.)	*Bottom Depth (ft.)*	*Filter Material*	*Size*
12	**25**	**Sand**	**20/40**

Annular Seal Data:

Top Depth (ft.)	*Bottom Depth (ft.)*	*Description (number of sacks & material)*
0	**2**	**Cement 1 Bags/Sacks**
2	**12**	**Bentonite 2 Bags/Sacks**

Seal Method: **Hand Mixed**

Sealed By: **Driller**

Distance to Property Line (ft.): **No Data**

Distance to Septic Field or other concentrated contamination (ft.): **No Data**

Distance to Septic Tank (ft.): **No Data**

Method of Verification: **No Data**

Surface Completion: **Surface Slab Installed** **Surface Completion by Driller**

Water Level: **No Data**

Packers: **No Data**

Type of Pump: **No Data**

Well Tests: **No Test Data Specified**

Water Quality:

Strata Depth (ft.)	Water Type
No Data	**No Data**

Chemical Analysis Made: **No**

Did the driller knowingly penetrate any strata which contained injurious constituents?: **No**

The driller did certify that while drilling, deepening or otherwise altering the above described well, injurious water or constituents was encountered and the landowner or person having the well drilled was informed that such well must be completed or plugged in such a manner as to avoid injury or pollution.

Certification Data: The driller certified that the driller drilled this well (or the well was drilled under the driller's direct supervision) and that each and all of the statements herein are true and correct. The driller understood that failure to complete the required items will result in the report(s) being returned for completion and resubmittal.

Company Information: **Strata Core Services, LLC**

112 S. Norwood Drive
Hurst, TX 76053

Driller Name: **William Fields** License Number: **56033**

Apprentice Name: **Ryan Spaust**

Comments: **No Data**

Lithology:
DESCRIPTION & COLOR OF FORMATION MATERIAL

Top (ft.)	Bottom (ft.)	Description
0	**7**	**Clayey silt - orangish brown**
7	**15**	**Clayey silty - gray to brown**
15	**19**	**Sand - tan with gray**
19	**23**	**Sand - light orange and tan**
23	**25**	**Sand - reddish brown**

Casing:
BLANK PIPE & WELL SCREEN DATA

Dia (in.)	Type	Material	Sch./Gage	Top (ft.)	Bottom (ft.)
2	**Riser**	**New Plastic (PVC)**	**40**	**0**	**15**
2	**Screen**	**New Plastic (PVC)**	**40 10**	**15**	**25**

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STATE OF TEXAS WELL REPORT for Tracking #443592

Owner:	**Calaveras Power Station**	Owner Well #:	**JKS-56**
Address:	**12940 US 181 San Antonio, TX 78223**	Grid #:	**68-46-5**
Well Location:	**12940 US 181 San Antonio, TX 78223**	Latitude:	**29° 18' 28.4" N**
		Longitude:	**098° 19' 01.91" W**
Well County:	**Bexar**	Elevation:	**No Data**
Type of Work:	**New Well**	Proposed Use:	**Monitor**

Drilling Start Date: **9/6/2016** Drilling End Date: **9/6/2016**

	Diameter (in.)	*Top Depth (ft.)*	*Bottom Depth (ft.)*
Borehole:	**8.25**	**0**	**25**

Drilling Method: **Hollow Stem Auger**

Borehole Completion: **Filter Packed**

	Top Depth (ft.)	*Bottom Depth (ft.)*	*Filter Material*	*Size*
Filter Pack Intervals:	**8**	**25**	**Sand**	**20/40**

	Top Depth (ft.)	*Bottom Depth (ft.)*	*Description (number of sacks & material)*
Annular Seal Data:	**0**	**2**	**Cement 1 Bags/Sacks**
	2	**8**	**Bentonite 2 Bags/Sacks**

Seal Method: **Hand Mixed**

Sealed By: **Driller**

Distance to Property Line (ft.): **No Data**

Distance to Septic Field or other concentrated contamination (ft.): **No Data**

Distance to Septic Tank (ft.): **No Data**

Method of Verification: **No Data**

Surface Completion: **Surface Slab Installed** **Surface Completion by Driller**

Water Level: **No Data**

Packers: **No Data**

Type of Pump: **No Data**

Well Tests: **No Test Data Specified**

Water Quality:

Strata Depth (ft.)	Water Type
No Data	**No Data**

Chemical Analysis Made: **No**

Did the driller knowingly penetrate any strata which contained injurious constituents?: **No**

The driller did certify that while drilling, deepening or otherwise altering the above described well, injurious water or constituents was encountered and the landowner or person having the well drilled was informed that such well must be completed or plugged in such a manner as to avoid injury or pollution.

Certification Data: The driller certified that the driller drilled this well (or the well was drilled under the driller's direct supervision) and that each and all of the statements herein are true and correct. The driller understood that failure to complete the required items will result in the report(s) being returned for completion and resubmittal.

Company Information: **Strata Core Services, LLC**

112 S. Norwood Drive
Hurst, TX 76053

Driller Name: **William Fields** License Number: **56033**

Apprentice Name: **Ryan Spaust**

Comments: **No Data**

Lithology:
DESCRIPTION & COLOR OF FORMATION MATERIAL

Top (ft.)	Bottom (ft.)	Description
0	**7**	**Clayey silt - orangish brown**
7	**15**	**Clayey silty - gray to brown**
15	**19**	**Sand - tan with gray**
19	**23**	**Sand - light orange and tan**
23	**25**	**Sand - reddish brown**

Casing:
BLANK PIPE & WELL SCREEN DATA

Dia (in.)	Type	Material	Sch./Gage	Top (ft.)	Bottom (ft.)
2	**Riser**	**New Plastic (PVC)**	**40**	**0**	**10**
2	**Screen**	**New Plastic (PVC)**	**40 10**	**10**	**25**

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P.O. Box 12157
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(512) 334-5540

STATE OF TEXAS WELL REPORT for Tracking #443593

Owner:	**Calaveras Power Station**	Owner Well #:	**JKS-57**
Address:	**12940 US 181 San Antonio, TX 78223**	Grid #:	**68-46-5**
Well Location:	**12940 US 181 San Antonio, TX 78223**	Latitude:	**29° 18' 28.4" N**
		Longitude:	**098° 19' 01.91" W**
Well County:	**Bexar**	Elevation:	**No Data**
Type of Work:	**New Well**	Proposed Use:	**Monitor**

Drilling Start Date: **9/7/2016** Drilling End Date: **9/7/2016**

Borehole:

Diameter (in.)	*Top Depth (ft.)*	*Bottom Depth (ft.)*
8.25	**0**	**27**

Drilling Method: **Hollow Stem Auger**

Borehole Completion: **Filter Packed**

Filter Pack Intervals:

Top Depth (ft.)	*Bottom Depth (ft.)*	*Filter Material*	*Size*
10	**27**	**Sand**	**20/40**

Annular Seal Data:

Top Depth (ft.)	*Bottom Depth (ft.)*	*Description (number of sacks & material)*
0	**2**	**Cement 1 Bags/Sacks**
2	**10**	**Bentonite 2 Bags/Sacks**

Seal Method: **Hand Mixed**

Sealed By: **Driller**

Distance to Property Line (ft.): **No Data**

Distance to Septic Field or other concentrated contamination (ft.): **No Data**

Distance to Septic Tank (ft.): **No Data**

Method of Verification: **No Data**

Surface Completion: **Surface Slab Installed** **Surface Completion by Driller**

Water Level: **No Data**

Packers: **No Data**

Type of Pump: **No Data**

Well Tests: **No Test Data Specified**

Water Quality:

Strata Depth (ft.)	Water Type
No Data	**No Data**

Chemical Analysis Made: **No**

Did the driller knowingly penetrate any strata which contained injurious constituents?: **No**

The driller did certify that while drilling, deepening or otherwise altering the above described well, injurious water or constituents was encountered and the landowner or person having the well drilled was informed that such well must be completed or plugged in such a manner as to avoid injury or pollution.

Certification Data: The driller certified that the driller drilled this well (or the well was drilled under the driller's direct supervision) and that each and all of the statements herein are true and correct. The driller understood that failure to complete the required items will result in the report(s) being returned for completion and resubmittal.

Company Information: **Strata Core Services, LLC**

112 S. Norwood Drive
Hurst, TX 76053

Driller Name: **William Fields** License Number: **56033**

Apprentice Name: **Ryan Spaust**

Comments: **No Data**

Lithology:
DESCRIPTION & COLOR OF FORMATION MATERIAL

Top (ft.)	Bottom (ft.)	Description
0	**7**	**Clayey silt - orangish brown**
7	**15**	**Clayey silty - gray to brown**
15	**19**	**Sand - tan with gray**
19	**23**	**Sand - light orange and tan**
23	**27**	**Sand - reddish brown**

Casing:
BLANK PIPE & WELL SCREEN DATA

Dia (in.)	Type	Material	Sch./Gage	Top (ft.)	Bottom (ft.)
2	**Riser**	**New Plastic (PVC)**	**40**	**0**	**12**
2	**Screen**	**New Plastic (PVC)**	**40 10**	**12**	**27**

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P.O. Box 12157
Austin, TX 78711
(512) 334-5540

STATE OF TEXAS WELL REPORT for Tracking #443594

Owner:	**Calaveras Power Station**	Owner Well #:	**JKS-58**
Address:	**12940 US 181 San Antonio, TX 78223**	Grid #:	**68-46-5**
Well Location:	**12940 US 181 San Antonio, TX 78223**	Latitude:	**29° 18' 28.4" N**
		Longitude:	**098° 19' 01.91" W**
Well County:	**Bexar**	Elevation:	**No Data**
Type of Work:	**New Well**	Proposed Use:	**Monitor**

Drilling Start Date: **9/7/2016** Drilling End Date: **9/7/2016**

	Diameter (in.)	*Top Depth (ft.)*	*Bottom Depth (ft.)*
Borehole:	**8.25**	**0**	**30**

Drilling Method: **Hollow Stem Auger**

Borehole Completion: **Filter Packed**

	Top Depth (ft.)	*Bottom Depth (ft.)*	*Filter Material*	*Size*
Filter Pack Intervals:	**18**	**30**	**Sand**	**20/40**

	Top Depth (ft.)	*Bottom Depth (ft.)*	*Description (number of sacks & material)*
Annular Seal Data:	**0**	**2**	**Cement 1 Bags/Sacks**
	2	**18**	**Bentonite 4 Bags/Sacks**

Seal Method: **Hand Mixed**

Sealed By: **Driller**

Distance to Property Line (ft.): **No Data**

Distance to Septic Field or other concentrated contamination (ft.): **No Data**

Distance to Septic Tank (ft.): **No Data**

Method of Verification: **No Data**

Surface Completion: **Surface Slab Installed** **Surface Completion by Driller**

Water Level: **No Data**

Packers: **No Data**

Type of Pump: **No Data**

Well Tests: **No Test Data Specified**

Water Quality:

Strata Depth (ft.)	Water Type
No Data	**No Data**

Chemical Analysis Made: **No**

Did the driller knowingly penetrate any strata which contained injurious constituents?: **No**

The driller did certify that while drilling, deepening or otherwise altering the above described well, injurious water or constituents was encountered and the landowner or person having the well drilled was informed that such well must be completed or plugged in such a manner as to avoid injury or pollution.

Certification Data: The driller certified that the driller drilled this well (or the well was drilled under the driller's direct supervision) and that each and all of the statements herein are true and correct. The driller understood that failure to complete the required items will result in the report(s) being returned for completion and resubmittal.

Company Information: **Strata Core Services, LLC**

112 S. Norwood Drive
Hurst, TX 76053

Driller Name: **William Fields** License Number: **56033**

Apprentice Name: **Ryan Spaust**

Comments: **No Data**

Lithology:
DESCRIPTION & COLOR OF FORMATION MATERIAL

Top (ft.)	Bottom (ft.)	Description
0	**7**	**Clayey silt - orangish brown**
7	**15**	**Clayey silty - gray to brown**
15	**19**	**Sand - tan with gray**
19	**23**	**Sand - light orange and tan**
23	**30**	**Sand - reddish brown**

Casing:
BLANK PIPE & WELL SCREEN DATA

Dia (in.)	Type	Material	Sch./Gage	Top (ft.)	Bottom (ft.)
2	**Riser**	**New Plastic (PVC)**	**40**	**0**	**20**
2	**Screen**	**New Plastic (PVC)**	**40 10**	**20**	**30**

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P.O. Box 12157
Austin, TX 78711
(512) 334-5540

STATE OF TEXAS WELL REPORT for Tracking #443595

Owner:	**Calaveras Power Station**	Owner Well #:	**JKS-59**
Address:	**12940 US 181 San Antonio, TX 78223**	Grid #:	**68-46-5**
Well Location:	**12940 US 181 San Antonio, TX 78223**	Latitude:	**29° 18' 28.4" N**
		Longitude:	**098° 19' 01.91" W**
Well County:	**Bexar**	Elevation:	**No Data**
Type of Work:	**New Well**	Proposed Use:	**Monitor**

Drilling Start Date: **9/7/2016** Drilling End Date: **9/7/2016**

Borehole:

Diameter (in.)	*Top Depth (ft.)*	*Bottom Depth (ft.)*
8.25	**0**	**27**

Drilling Method: **Hollow Stem Auger**

Borehole Completion: **Filter Packed**

Filter Pack Intervals:

Top Depth (ft.)	*Bottom Depth (ft.)*	*Filter Material*	*Size*
10	**27**	**Sand**	**20/40**

Annular Seal Data:

Top Depth (ft.)	*Bottom Depth (ft.)*	*Description (number of sacks & material)*
0	**2**	**Cement 1 Bags/Sacks**
2	**10**	**Bentonite 2 Bags/Sacks**

Seal Method: **Hand Mixed**

Sealed By: **Driller**

Distance to Property Line (ft.): **No Data**

Distance to Septic Field or other concentrated contamination (ft.): **No Data**

Distance to Septic Tank (ft.): **No Data**

Method of Verification: **No Data**

Surface Completion: **Surface Slab Installed** **Surface Completion by Driller**

Water Level: **No Data**

Packers: **No Data**

Type of Pump: **No Data**

Well Tests: **No Test Data Specified**

Water Quality:

Strata Depth (ft.)	Water Type
No Data	**No Data**

Chemical Analysis Made: **No**

Did the driller knowingly penetrate any strata which contained injurious constituents?: **No**

The driller did certify that while drilling, deepening or otherwise altering the above described well, injurious water or constituents was encountered and the landowner or person having the well drilled was informed that such well must be completed or plugged in such a manner as to avoid injury or pollution.

Certification Data: The driller certified that the driller drilled this well (or the well was drilled under the driller's direct supervision) and that each and all of the statements herein are true and correct. The driller understood that failure to complete the required items will result in the report(s) being returned for completion and resubmittal.

Company Information: **Strata Core Services, LLC**

112 S. Norwood Drive
Hurst, TX 76053

Driller Name: **William Fields** License Number: **56033**

Apprentice Name: **Ryan Spaust**

Comments: **No Data**

Lithology:
DESCRIPTION & COLOR OF FORMATION MATERIAL

Top (ft.)	Bottom (ft.)	Description
0	**7**	**Clayey silt - orangish brown**
7	**15**	**Clayey silty - gray to brown**
15	**19**	**Sand - tan with gray**
19	**23**	**Sand - light orange and tan**
23	**27**	**Sand - reddish brown**

Casing:
BLANK PIPE & WELL SCREEN DATA

Dia (in.)	Type	Material	Sch./Gage	Top (ft.)	Bottom (ft.)
2	**Riser**	**New Plastic (PVC)**	**40**	**0**	**12**
2	**Screen**	**New Plastic (PVC)**	**40 10**	**12**	**27**

IMPORTANT NOTICE FOR PERSONS HAVING WELLS DRILLED CONCERNING CONFIDENTIALITY

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P.O. Box 12157
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(512) 334-5540

STATE OF TEXAS WELL REPORT for Tracking #443596

Owner:	**Calaveras Power Station**	Owner Well #:	**JKS-60**
Address:	**12940 US 181 San Antonio, TX 78223**	Grid #:	**68-46-5**
Well Location:	**12940 US 181 San Antonio, TX 78223**	Latitude:	**29° 18' 28.4" N**
		Longitude:	**098° 19' 01.91" W**
Well County:	**Bexar**	Elevation:	**No Data**
Type of Work:	**New Well**	Proposed Use:	**Monitor**

Drilling Start Date: **9/7/2016** Drilling End Date: **9/7/2016**

Borehole:

Diameter (in.)	*Top Depth (ft.)*	*Bottom Depth (ft.)*
8.25	**0**	**25**

Drilling Method: **Hollow Stem Auger**

Borehole Completion: **Filter Packed**

Filter Pack Intervals:

Top Depth (ft.)	*Bottom Depth (ft.)*	*Filter Material*	*Size*
8	**25**	**Sand**	**20/40**

Annular Seal Data:

Top Depth (ft.)	*Bottom Depth (ft.)*	*Description (number of sacks & material)*
0	**2**	**Cement 1 Bags/Sacks**
2	**8**	**Bentonite 2 Bags/Sacks**

Seal Method: **Hand Mixed**

Sealed By: **Driller**

Distance to Property Line (ft.): **No Data**

Distance to Septic Field or other concentrated contamination (ft.): **No Data**

Distance to Septic Tank (ft.): **No Data**

Method of Verification: **No Data**

Surface Completion: **Surface Slab Installed** **Surface Completion by Driller**

Water Level: **No Data**

Packers: **No Data**

Type of Pump: **No Data**

Well Tests: **No Test Data Specified**

Water Quality:

Strata Depth (ft.)	Water Type
No Data	**No Data**

Chemical Analysis Made: **No**

Did the driller knowingly penetrate any strata which contained injurious constituents?: **No**

The driller did certify that while drilling, deepening or otherwise altering the above described well, injurious water or constituents was encountered and the landowner or person having the well drilled was informed that such well must be completed or plugged in such a manner as to avoid injury or pollution.

Certification Data: The driller certified that the driller drilled this well (or the well was drilled under the driller's direct supervision) and that each and all of the statements herein are true and correct. The driller understood that failure to complete the required items will result in the report(s) being returned for completion and resubmittal.

Company Information: **Strata Core Services, LLC**

112 S. Norwood Drive
Hurst, TX 76053

Driller Name: **William Fields** License Number: **56033**

Apprentice Name: **Ryan Spaust**

Comments: **No Data**

Lithology:
DESCRIPTION & COLOR OF FORMATION MATERIAL

Top (ft.)	Bottom (ft.)	Description
0	**7**	**Clayey silt - orangish brown**
7	**15**	**Clayey silty - gray to brown**
15	**19**	**Sand - tan with gray**
19	**23**	**Sand - light orange and tan**
23	**25**	**Sand - reddish brown**

Casing:
BLANK PIPE & WELL SCREEN DATA

Dia (in.)	Type	Material	Sch./Gage	Top (ft.)	Bottom (ft.)
2	**Riser**	**New Plastic (PVC)**	**40**	**0**	**10**
2	**Screen**	**New Plastic (PVC)**	**40 10**	**10**	**25**

IMPORTANT NOTICE FOR PERSONS HAVING WELLS DRILLED CONCERNING CONFIDENTIALITY

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Texas Department of Licensing and Regulation
P.O. Box 12157
Austin, TX 78711
(512) 334-5540

STATE OF TEXAS WELL REPORT for Tracking #443597

Owner:	**Calaveras Power Station**	Owner Well #:	**JKS-61**
Address:	**12940 US 181 San Antonio, TX 78223**	Grid #:	**68-46-5**
Well Location:	**12940 US 181 San Antonio, TX 78223**	Latitude:	**29° 18' 28.4" N**
		Longitude:	**098° 19' 01.91" W**
Well County:	**Bexar**	Elevation:	**No Data**
Type of Work:	**New Well**	Proposed Use:	**Monitor**

Drilling Start Date: **9/8/2016** Drilling End Date: **9/8/2016**

Borehole:

Diameter (in.)	*Top Depth (ft.)*	*Bottom Depth (ft.)*
8.25	**0**	**33**

Drilling Method: **Hollow Stem Auger**

Borehole Completion: **Filter Packed**

Filter Pack Intervals:

Top Depth (ft.)	*Bottom Depth (ft.)*	*Filter Material*	*Size*
15	**33**	**Sand**	**20/40**

Annular Seal Data:

Top Depth (ft.)	*Bottom Depth (ft.)*	*Description (number of sacks & material)*
0	**2**	**Cement 1 Bags/Sacks**
2	**15**	**Bentonite 2 Bags/Sacks**

Seal Method: **Hand Mixed**

Sealed By: **Driller**

Distance to Property Line (ft.): **No Data**

Distance to Septic Field or other concentrated contamination (ft.): **No Data**

Distance to Septic Tank (ft.): **No Data**

Method of Verification: **No Data**

Surface Completion: **Surface Slab Installed** **Surface Completion by Driller**

Water Level: **No Data**

Packers: **No Data**

Type of Pump: **No Data**

Well Tests: **No Test Data Specified**

Water Quality:

Strata Depth (ft.)	Water Type
No Data	**No Data**

Chemical Analysis Made: **No**

Did the driller knowingly penetrate any strata which contained injurious constituents?: **No**

The driller did certify that while drilling, deepening or otherwise altering the above described well, injurious water or constituents was encountered and the landowner or person having the well drilled was informed that such well must be completed or plugged in such a manner as to avoid injury or pollution.

Certification Data: The driller certified that the driller drilled this well (or the well was drilled under the driller's direct supervision) and that each and all of the statements herein are true and correct. The driller understood that failure to complete the required items will result in the report(s) being returned for completion and resubmittal.

Company Information: **Strata Core Services, LLC**

112 S. Norwood Drive
Hurst, TX 76053

Driller Name: **William Fields** License Number: **56033**

Apprentice Name: **Ryan Spaust**

Comments: **No Data**

Lithology:
DESCRIPTION & COLOR OF FORMATION MATERIAL

Top (ft.)	Bottom (ft.)	Description
0	**7**	**Clayey silt - orangish brown**
7	**15**	**Clayey silty - gray to brown**
15	**19**	**Sand - tan with gray**
19	**23**	**Sand - light orange and tan**
23	**33**	**Sand - reddish brown**

Casing:
BLANK PIPE & WELL SCREEN DATA

Dia (in.)	Type	Material	Sch./Gage	Top (ft.)	Bottom (ft.)
2	**Riser**	**New Plastic (PVC)**	**40**	**0**	**18**
2	**Screen**	**New Plastic (PVC)**	**40 10**	**18**	**33**

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(512) 334-5540

STATE OF TEXAS WELL REPORT for Tracking #443598

Owner:	**Calaveras Power Station**	Owner Well #:	**JKS-62**
Address:	**12940 US 181 San Antonio, TX 78223**	Grid #:	**68-46-5**
Well Location:	**12940 US 181 San Antonio, TX 78223**	Latitude:	**29° 18' 28.4" N**
		Longitude:	**098° 19' 01.91" W**
Well County:	**Bexar**	Elevation:	**No Data**
Type of Work:	**New Well**	Proposed Use:	**Monitor**

Drilling Start Date: **9/8/2016** Drilling End Date: **9/8/2016**

Borehole:

Diameter (in.)	*Top Depth (ft.)*	*Bottom Depth (ft.)*
8.25	**0**	**30**

Drilling Method: **Hollow Stem Auger**

Borehole Completion: **Filter Packed**

Filter Pack Intervals:

Top Depth (ft.)	*Bottom Depth (ft.)*	*Filter Material*	*Size*
18	**30**	**Sand**	**20/40**

Annular Seal Data:

Top Depth (ft.)	*Bottom Depth (ft.)*	*Description (number of sacks & material)*
0	**2**	**Cement 1 Bags/Sacks**
2	**18**	**Bentonite 2 Bags/Sacks**

Seal Method: **Hand Mixed**

Sealed By: **Driller**

Distance to Property Line (ft.): **No Data**

Distance to Septic Field or other concentrated contamination (ft.): **No Data**

Distance to Septic Tank (ft.): **No Data**

Method of Verification: **No Data**

Surface Completion: **Surface Slab Installed** **Surface Completion by Driller**

Water Level: **No Data**

Packers: **No Data**

Type of Pump: **No Data**

Well Tests: **No Test Data Specified**

Water Quality:

Strata Depth (ft.)	Water Type
No Data	**No Data**

Chemical Analysis Made: **No**

Did the driller knowingly penetrate any strata which contained injurious constituents?: **No**

The driller did certify that while drilling, deepening or otherwise altering the above described well, injurious water or constituents was encountered and the landowner or person having the well drilled was informed that such well must be completed or plugged in such a manner as to avoid injury or pollution.

Certification Data: The driller certified that the driller drilled this well (or the well was drilled under the driller's direct supervision) and that each and all of the statements herein are true and correct. The driller understood that failure to complete the required items will result in the report(s) being returned for completion and resubmittal.

Company Information: **Strata Core Services, LLC**

112 S. Norwood Drive
Hurst, TX 76053

Driller Name: **William Fields** License Number: **56033**

Apprentice Name: **Ryan Spaust**

Comments: **No Data**

Lithology:
DESCRIPTION & COLOR OF FORMATION MATERIAL

Top (ft.)	Bottom (ft.)	Description
0	**7**	**Clayey silt - orangish brown**
7	**15**	**Clayey silty - gray to brown**
15	**19**	**Sand - tan with gray**
19	**23**	**Sand - light orange and tan**
23	**30**	**Sand - reddish brown**

Casing:
BLANK PIPE & WELL SCREEN DATA

Dia (in.)	Type	Material	Sch./Gage	Top (ft.)	Bottom (ft.)
2	**Riser**	**New Plastic (PVC)**	**40**	**0**	**20**
2	**Screen**	**New Plastic (PVC)**	**40 10**	**20**	**30**

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STATE OF TEXAS WELL REPORT for Tracking #443600

Owner:	**Calaveras Power Station**	Owner Well #:	**JKS-64**
Address:	**12940 US 181 San Antonio, TX 78223**	Grid #:	**68-46-5**
Well Location:	**12940 US 181 San Antonio, TX 78223**	Latitude:	**29° 18' 28.4" N**
		Longitude:	**098° 19' 01.91" W**
Well County:	**Bexar**	Elevation:	**No Data**
Type of Work:	**New Well**	Proposed Use:	**Monitor**

Drilling Start Date: **9/9/2016** Drilling End Date: **9/9/2016**

	Diameter (in.)	*Top Depth (ft.)*	*Bottom Depth (ft.)*
Borehole:	**8.25**	**0**	**30**

Drilling Method: **Hollow Stem Auger**

Borehole Completion: **Filter Packed**

	Top Depth (ft.)	*Bottom Depth (ft.)*	*Filter Material*	*Size*
Filter Pack Intervals:	**12**	**30**	**Sand**	**20/40**

	Top Depth (ft.)	*Bottom Depth (ft.)*	*Description (number of sacks & material)*
Annular Seal Data:	**0**	**2**	**Cement 1 Bags/Sacks**
	2	**12**	**Bentonite 2 Bags/Sacks**

Seal Method: **Hand Mixed**

Sealed By: **Driller**

Distance to Property Line (ft.): **No Data**

Distance to Septic Field or other concentrated contamination (ft.): **No Data**

Distance to Septic Tank (ft.): **No Data**

Method of Verification: **No Data**

Surface Completion: **Surface Slab Installed** **Surface Completion by Driller**

Water Level: **No Data**

Packers: **No Data**

Type of Pump: **No Data**

Well Tests: **No Test Data Specified**

Water Quality:

Strata Depth (ft.)	Water Type
No Data	**No Data**

Chemical Analysis Made: **No**

Did the driller knowingly penetrate any strata which contained injurious constituents?: **No**

The driller did certify that while drilling, deepening or otherwise altering the above described well, injurious water or constituents was encountered and the landowner or person having the well drilled was informed that such well must be completed or plugged in such a manner as to avoid injury or pollution.

Certification Data: The driller certified that the driller drilled this well (or the well was drilled under the driller's direct supervision) and that each and all of the statements herein are true and correct. The driller understood that failure to complete the required items will result in the report(s) being returned for completion and resubmittal.

Company Information: **Strata Core Services, LLC**

112 S. Norwood Drive
Hurst, TX 76053

Driller Name: **William Fields** License Number: **56033**

Apprentice Name: **Ryan Spaust**

Comments: **No Data**

Lithology:
DESCRIPTION & COLOR OF FORMATION MATERIAL

Top (ft.)	Bottom (ft.)	Description
0	**7**	**Clayey silt - orangish brown**
7	**15**	**Clayey silty - gray to brown**
15	**19**	**Sand - tan with gray**
19	**23**	**Sand - light orange and tan**
23	**30**	**Sand - reddish brown**

Casing:
BLANK PIPE & WELL SCREEN DATA

Dia (in.)	Type	Material	Sch./Gage	Top (ft.)	Bottom (ft.)
2	**Riser**	**New Plastic (PVC)**	**40**	**0**	**15**
2	**Screen**	**New Plastic (PVC)**	**40 10**	**15**	**30**

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STATE OF TEXAS WELL REPORT for Tracking #502018

Owner:	**CPS Energy**	Owner Well #:	**DMW-1**
Address:	**P.O. Box 1771 San Antonio, TX 78296**	Grid #:	**68-46-5**
Well Location:	**9599 Gardner Road San Antonio, TX 78263**	Latitude:	**29° 18' 28.04" N**
		Longitude:	**098° 19' 22.68" W**
Well County:	**Bexar**	Elevation:	**No Data**
Type of Work:	**New Well**	Proposed Use:	**Monitor**

Drilling Start Date: **12/21/2018** Drilling End Date: **12/21/2018**

Borehole:

Diameter (in.)	*Top Depth (ft.)*	*Bottom Depth (ft.)*
8	**0**	**9**

Drilling Method: **Hydro-Vac**

Borehole Completion: **Filter Packed**

Filter Pack Intervals:

Top Depth (ft.)	*Bottom Depth (ft.)*	*Filter Material*	*Size*
1	**6.88**	**Sand**	**12/20**

Annular Seal Data:

Top Depth (ft.)	*Bottom Depth (ft.)*	*Description (number of sacks & material)*
0	**0.5**	**Concrete 0.58 Bags/Sacks**
0.5	**1**	**Bentonite 0.272 Bags/Sacks**
6.88	**9**	**Spoil Sloughing**

Seal Method: **Hand Mixed**

Sealed By: **Driller**

Distance to Property Line (ft.): **No Data**

Distance to Septic Field or other concentrated contamination (ft.): **No Data**

Distance to Septic Tank (ft.): **No Data**

Method of Verification: **No Data**

Surface Completion: **Alternative Procedure Used** **Surface Completion by Driller**

Water Level: **4.85 ft.** below land surface on **2018-12-21**

Packers: **No Data**

Type of Pump: **No Data**

Well Tests: **No Test Data Specified**

Water Quality:

Strata Depth (ft.)	Water Type
No Data	**No Data**

Chemical Analysis Made: **No**

Did the driller knowingly penetrate any strata which contained injurious constituents?: **No**

Certification Data: The driller certified that the driller drilled this well (or the well was drilled under the driller's direct supervision) and that each and all of the statements herein are true and correct. The driller understood that failure to complete the required items will result in the report(s) being returned for completion and resubmittal.

Company Information: **Vortex Drilling**

4412 Bluemel Road
San Antonio, TX 78240

Driller Name: **Heriberto Martinez** License Number: **59554**

Apprentice Name: **Joe Lopez**

Comments: **No Data**

Lithology:
DESCRIPTION & COLOR OF FORMATION MATERIAL

Top (ft.)	Bottom (ft.)	Description
0	**9**	**SILTY SANDY GRAVEL, coarse to very fine grained, quartz, little clay, loose, tan, moist to wet.**

Casing:
BLANK PIPE & WELL SCREEN DATA

Dia (in.)	Type	Material	Sch./Gage	Top (ft.)	Bottom (ft.)
2	**Top Cap (Locking)**	**New Plastic (PVC)**	**40**		
2	**Bottom Cap**	**New Plastic (PVC)**	**40**		
2	**Riser**	**New Plastic (PVC)**	**40**	**0**	**1.88**
2	**Screen**	**New Plastic (PVC)**	**40 0.010**	**1.88**	**6.88**

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(512) 334-5540

STATE OF TEXAS WELL REPORT for Tracking #511515

Owner:	**CPS Energy**	Owner Well #:	**JKS-63R**
Address:	**P.O. Box 2906** **San Antonio , TX 78299**	Grid #:	**68-46-5**
Well Location:	**Calaveras Power Station** **12940 US 181** **San Antonio, TX 78263**	Latitude:	**29° 19' 27.98" N**
		Longitude:	**098° 18' 56.77" W**
Well County:	**Bexar**	Elevation:	**516 ft. above sea level**
Type of Work:	**New Well**	Proposed Use:	**Monitor**

Drilling Start Date: **5/2/2019** Drilling End Date: **5/2/2019**

Borehole:

Diameter (in.)	*Top Depth (ft.)*	*Bottom Depth (ft.)*
8.25	**0**	**50**

Drilling Method: **Hollow Stem Auger**

Borehole Completion: **Filter Packed**

Filter Pack Intervals:

Top Depth (ft.)	*Bottom Depth (ft.)*	*Filter Material*	*Size*
33	**50**	**Sand**	**12/20**

Annular Seal Data:

Top Depth (ft.)	*Bottom Depth (ft.)*	*Description (number of sacks & material)*
0	**2**	**Concrete 1.16 Bags/Sacks**
2	**33**	**Bentonite 15.08 Bags/Sacks**

Seal Method: **Hand Mixed**

Sealed By: **Driller**

Distance to Property Line (ft.): **No Data**

Distance to Septic Field or other concentrated contamination (ft.): **No Data**

Distance to Septic Tank (ft.): **No Data**

Method of Verification: **No Data**

Surface Completion: **Surface Sleeve Installed** **Surface Completion by Driller**

Water Level: **36 ft.** below land surface on **2019-05-02**

Packers: **No Data**

Type of Pump: **No Data**

Well Tests: **No Test Data Specified**

Water Quality:

Strata Depth (ft.)	Water Type
No Data	**No Data**

Chemical Analysis Made: **No**

Did the driller knowingly penetrate any strata which contained injurious constituents?: **No**

Certification Data: The driller certified that the driller drilled this well (or the well was drilled under the driller's direct supervision) and that each and all of the statements herein are true and correct. The driller understood that failure to complete the required items will result in the report(s) being returned for completion and resubmittal.

Company Information: **Vortex Drilling**

4412 Bluemel Road
San Antonio, TX 78240

Driller Name: **James E. Neal** License Number: **4868**

Apprentice Name: **Tony Elmendorf**

Comments: **No Data**

Report Amended on 7/12/2019 by Request #28256

Lithology:
DESCRIPTION & COLOR OF FORMATION MATERIAL

Top (ft.)	Bottom (ft.)	Description
0	**3.5**	**Sand**
3.5	**7.5**	**Sandy Clay**
7.5	**8.5**	**Clayey Sand**
8.5	**10**	**Silt**
10	**17.5**	**Sand**
17.5	**24**	**Interbedded Clay and Sand**
24	**50**	**Sand**

Casing:
BLANK PIPE & WELL SCREEN DATA

Dia (in.)	Type	Material	Sch./Gage	Top (ft.)	Bottom (ft.)
2	**Top Cap (Locking)**	**New Plastic (PVC)**	**40**		
2	**Bottom Cap**	**New Plastic (PVC)**	**40**		
2	**Riser**	**New Plastic (PVC)**	**40**	**-3**	**35**
2	**Screen**	**New Plastic (PVC)**	**40 0.010**	**35**	**50**

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(512) 334-5540

STATE OF TEXAS WELL REPORT for Tracking #551889

Owner:	**CPS Energy**	Owner Well #:	**JKS-65**
Address:	**P.O. Box 2906** **San Antonio , TX 78299**	Grid #:	**68-46-5**
Well Location:	**Calaveras Power Station** **12940 US 181** **San Antonio, TX 78263**	Latitude:	**29° 18' 50.56" N**
		Longitude:	**098° 19' 02.52" W**
Well County:	**Bexar**	Elevation:	**No Data**
Type of Work:	**New Well**	Proposed Use:	**Monitor**

Drilling Start Date: **8/17/2020** Drilling End Date: **8/19/2020**

	Diameter (in.)	*Top Depth (ft.)*	*Bottom Depth (ft.)*
Borehole:	**8.25**	**0**	**40**

Drilling Method: **Hollow Stem Auger**

Borehole Completion: **Filter Packed**

	Top Depth (ft.)	*Bottom Depth (ft.)*	*Filter Material*	*Size*
Filter Pack Intervals:	**18**	**40**	**Sand**	**12/20**

	Top Depth (ft.)	*Bottom Depth (ft.)*	*Description (number of sacks & material)*
Annular Seal Data:	**0**	**2**	**Concrete 1.16 Bags/Sacks**
	2	**18**	**Bentonite 8 Bags/Sacks**

Seal Method: **Hand Mixed**

Sealed By: **Driller**

Distance to Property Line (ft.): **No Data**

Distance to Septic Field or other concentrated contamination (ft.): **No Data**

Distance to Septic Tank (ft.): **No Data**

Method of Verification: **No Data**

Surface Completion: **Surface Sleeve Installed** **Surface Completion by Driller**

Water Level: **22.5 ft.** below land surface on **2020-08-17**

Packers: **No Data**

Type of Pump: **No Data**

Well Tests: **No Test Data Specified**

Water Quality:

Strata Depth (ft.)	Water Type
No Data	**No Data**

Chemical Analysis Made: **No**

Did the driller knowingly penetrate any strata which contained injurious constituents?: **No**

Certification Data: The driller certified that the driller drilled this well (or the well was drilled under the driller's direct supervision) and that each and all of the statements herein are true and correct. The driller understood that failure to complete the required items will result in the report(s) being returned for completion and resubmittal.

Company Information: **Vortex Drilling Partners, LP**

4412 Bluemel Road
San Antonio, TX 78240

Driller Name: **James E. Neal** License Number: **4868**

Apprentice Name: **Joe Lopez**

Comments: **No Data**

Report Amended on 8/28/2020 by Request #32573

Lithology:
DESCRIPTION & COLOR OF FORMATION MATERIAL

Top (ft.)	Bottom (ft.)	Description
0	**5**	**No recovery**
5	**6.5**	**Sandy Silty Clay**
6.5	**9.5**	**Silty Sand**
9.5	**11.3**	**Clayey Silt**
11.3	**12**	**Clay**
12	**30**	**Sand**
30	**39.5**	**Silty Sand**
39.5	**40**	**Sandy Clay**

Casing:
BLANK PIPE & WELL SCREEN DATA

Dia (in.)	Type	Material	Sch./Gage	Top (ft.)	Bottom (ft.)
2	**Top Cap (Locking)**	**New Plastic (PVC)**	**40**		
2	**Bottom Cap**	**New Plastic (PVC)**	**40**		
2	**Riser**	**New Plastic (PVC)**	**40**	**-3**	**20**
2	**Screen**	**New Plastic (PVC)**	**40 0.010**	**20**	**40**

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Texas Department of Licensing and Regulation
P.O. Box 12157
Austin, TX 78711
(512) 334-5540

STATE OF TEXAS WELL REPORT for Tracking #551899

Owner:	**CPS Energy**	Owner Well #:	**JKS-66**
Address:	**P.O. Box 2906 San Antonio , TX 78299**	Grid #:	**68-46-5**
Well Location:	**Calaveras Power Station 12940 US 181 San Antonio, TX 78263**	Latitude:	**29° 18' 52.65" N**
		Longitude:	**098° 18' 58.53" W**
Well County:	**Bexar**	Elevation:	**No Data**

Type of Work: **New Well** Proposed Use: **Monitor**

Drilling Start Date: **8/17/2020** Drilling End Date: **8/19/2020**

	Diameter (in.)	*Top Depth (ft.)*	*Bottom Depth (ft.)*
Borehole:	**8.25**	**0**	**40**

Drilling Method: **Hollow Stem Auger**

Borehole Completion: **Filter Packed**

	Top Depth (ft.)	*Bottom Depth (ft.)*	*Filter Material*	*Size*
Filter Pack Intervals:	**18**	**40**	**Sand**	**12/20**

	Top Depth (ft.)	*Bottom Depth (ft.)*	*Description (number of sacks & material)*
Annular Seal Data:	**0**	**2**	**Concrete 1.16 Bags/Sacks**
	2	**18**	**Bentonite 7 Bags/Sacks**

Seal Method: **Hand Mixed**

Sealed By: **Driller**

Distance to Property Line (ft.): **No Data**

Distance to Septic Field or other concentrated contamination (ft.): **No Data**

Distance to Septic Tank (ft.): **No Data**

Method of Verification: **No Data**

Surface Completion: **Surface Sleeve Installed** **Surface Completion by Driller**

Water Level: **22.5 ft.** below land surface on **2020-08-18**

Packers: **No Data**

Type of Pump: **No Data**

Well Tests: **No Test Data Specified**

Water Quality:

Strata Depth (ft.)	Water Type
No Data	**No Data**

Chemical Analysis Made: **No**

Did the driller knowingly penetrate any strata which contained injurious constituents?: **No**

Certification Data: The driller certified that the driller drilled this well (or the well was drilled under the driller's direct supervision) and that each and all of the statements herein are true and correct. The driller understood that failure to complete the required items will result in the report(s) being returned for completion and resubmittal.

Company Information: **Vortex Drilling Partners, LP**

4412 Bluemel Road
San Antonio, TX 78240

Driller Name: **James E. Neal** License Number: **4868**

Apprentice Name: **Joe Lopez**

Comments: **No Data**

Report Amended on 8/28/2020 by Request #32574

Lithology:
DESCRIPTION & COLOR OF FORMATION MATERIAL

Top (ft.)	Bottom (ft.)	Description
0	**5**	**No recovery**
5	**7.5**	**Sandy Clay**
7.5	**12.5**	**Clayey Sand**
12.5	**23.3**	**Sand**
23.3	**27.5**	**Clayey Sand**
27.5	**40**	**Sand**

Casing:
BLANK PIPE & WELL SCREEN DATA

Dia (in.)	Type	Material	Sch./Gage	Top (ft.)	Bottom (ft.)
2	**Top Cap (Locking)**	**New Plastic (PVC)**	**40**		
2	**Bottom Cap**	**New Plastic (PVC)**	**40**		
2	**Riser**	**New Plastic (PVC)**	**40**	**-3**	**20**
2	**Screen**	**New Plastic (PVC)**	**40 0.010**	**20**	**40**

IMPORTANT NOTICE FOR PERSONS HAVING WELLS DRILLED CONCERNING CONFIDENTIALITY

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Texas Department of Licensing and Regulation
P.O. Box 12157
Austin, TX 78711
(512) 334-5540

STATE OF TEXAS WELL REPORT for Tracking #551902

Owner:	**CPS Energy**	Owner Well #:	**JKS-67**
Address:	**P.O. Box 2906** **San Antonio , TX 78299**	Grid #:	**68-46-5**
Well Location:	**Calaveras Power Station** **12940 US 181** **San Antonio, TX 78263**	Latitude:	**29° 18' 45.98" N**
		Longitude:	**098° 18' 57.53" W**
Well County:	**Bexar**	Elevation:	**No Data**

Type of Work: **New Well** Proposed Use: **Monitor**

Drilling Start Date: **8/17/2020** Drilling End Date: **8/19/2020**

	Diameter (in.)	*Top Depth (ft.)*	*Bottom Depth (ft.)*
Borehole:	**8.25**	**0**	**25**

Drilling Method: **Hollow Stem Auger**

Borehole Completion: **Filter Packed**

	Top Depth (ft.)	*Bottom Depth (ft.)*	*Filter Material*	*Size*
Filter Pack Intervals:	**18**	**25**	**Sand**	**12/20**

	Top Depth (ft.)	*Bottom Depth (ft.)*	*Description (number of sacks & material)*
Annular Seal Data:	**0**	**2**	**Concrete 1.16 Bags/Sacks**
	2	**8**	**Bentonite 4.5 Bags/Sacks**

Seal Method: **Hand Mixed**

Sealed By: **Driller**

Distance to Property Line (ft.): **No Data**

Distance to Septic Field or other concentrated contamination (ft.): **No Data**

Distance to Septic Tank (ft.): **No Data**

Method of Verification: **No Data**

Surface Completion: **Surface Sleeve Installed** **Surface Completion by Driller**

Water Level: **10 ft.** below land surface on **2020-08-17**

Packers: **No Data**

Type of Pump: **No Data**

Well Tests: **No Test Data Specified**

Water Quality:

Strata Depth (ft.)	Water Type
No Data	**No Data**

Chemical Analysis Made: **No**

Did the driller knowingly penetrate any strata which contained injurious constituents?: **No**

Certification Data: The driller certified that the driller drilled this well (or the well was drilled under the driller's direct supervision) and that each and all of the statements herein are true and correct. The driller understood that failure to complete the required items will result in the report(s) being returned for completion and resubmittal.

Company Information: **Vortex Drilling Partners, LP**

4412 Bluemel Road
San Antonio, TX 78240

Driller Name: **James E. Neal** License Number: **4868**

Apprentice Name: **Joe Lopez**

Comments: **No Data**

Report Amended on 8/28/2020 by Request #32575

Lithology:
DESCRIPTION & COLOR OF FORMATION MATERIAL

Top (ft.)	Bottom (ft.)	Description
0	**5**	**No recovery**
5	**7.5**	**Silty Sand**
7.5	**9.5**	**Silty Clayey Sand**
9.5	**10**	**Clayey Sand**
10	**11**	**Sand**
11	**12.5**	**Clayey Silty Sand**
12.5	**15**	**Sandy Clay**
15	**20.3**	**Silty Clayey Sand**
20.3	**25**	**Sand**

Casing:
BLANK PIPE & WELL SCREEN DATA

Dia (in.)	Type	Material	Sch./Gage	Top (ft.)	Bottom (ft.)
2	**Top Cap (Locking)**	**New Plastic (PVC)**	**40**		
2	**Bottom Cap**	**New Plastic (PVC)**	**40**		
2	**Riser**	**New Plastic (PVC)**	**40**	**-3**	**10**
2	**Screen**	**New Plastic (PVC)**	**40 0.010**	**10**	**25**

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Austin, TX 78711
(512) 334-5540

STATE OF TEXAS WELL REPORT for Tracking #563522

Owner:	**CPS Energy**	Owner Well #:	**DMW-2**
Address:	**P.O. Box 2906 San Antonio , TX 78299**	Grid #:	**68-46-5**
Well Location:	**Deely Unit 1 9599 Gardner Road San Antonio, TX 78263**	Latitude:	**29° 18' 28.1" N**
		Longitude:	**098° 19' 22.88" W**
Well County:	**Bexar**	Elevation:	**496 ft. above sea level**
Type of Work:	**New Well**	Proposed Use:	**Monitor**

Drilling Start Date: **11/4/2020** Drilling End Date: **11/4/2020**

	Diameter (in.)	*Top Depth (ft.)*	*Bottom Depth (ft.)*
Borehole:	**12**	**0**	**11**

Drilling Method: **Hydro-Vac**

Borehole Completion: **Filter Packed**

	Top Depth (ft.)	*Bottom Depth (ft.)*	*Filter Material*	*Size*
Filter Pack Intervals:	**3**	**10.1**	**Sand**	**12/20**

	Top Depth (ft.)	*Bottom Depth (ft.)*	*Description (number of sacks & material)*
Annular Seal Data:	**0**	**2**	**Concrete 1.16 Bags/Sacks**
	2	**3**	**Bentonite 0.46 Bags/Sacks**
	10.1	**11**	**Spoil Sloughing**

Seal Method: **Hand Mixed**

Sealed By: **Driller**

Distance to Property Line (ft.): **No Data**

Distance to Septic Field or other concentrated contamination (ft.): **No Data**

Distance to Septic Tank (ft.): **No Data**

Method of Verification: **No Data**

Surface Completion: **Surface Slab Installed** **Surface Completion by Driller**

Water Level: **8.01 ft.** below land surface on **2020-11-04**

Packers: **No Data**

Type of Pump: **No Data**

Well Tests: **No Test Data Specified**

Water Quality:

Strata Depth (ft.)	Water Type
No Data	**No Data**

Chemical Analysis Made: **No**

Did the driller knowingly penetrate any strata which contained injurious constituents?: **No**

Certification Data: The driller certified that the driller drilled this well (or the well was drilled under the driller's direct supervision) and that each and all of the statements herein are true and correct. The driller understood that failure to complete the required items will result in the report(s) being returned for completion and resubmittal.

Company Information: **Vortex Drilling Partners, LP**

4412 Bluemel Road
San Antonio, TX 78240

Driller Name: **Heriberto Martinez** License Number: **59554**

Apprentice Name: **Luis Castaneda**

Comments: **No Data**

Report Amended on 1/11/2021 by Request #33386

Lithology:
DESCRIPTION & COLOR OF FORMATION MATERIAL

Top (ft.)	Bottom (ft.)	Description
0	**1.5**	**SILTY SANDY GRAVEL, coarse to very fine grained, quartz, little clay, loose, tan, dry to slightly moist.**
1.5	**11**	**SANDY SILTY CLAY, soft to firm, dark brown, slightly moist to moist with depth. -At 6 ft bgs: Soft.**

Casing:
BLANK PIPE & WELL SCREEN DATA

Dia (in.)	Type	Material	Sch./Gage	Top (ft.)	Bottom (ft.)
2	**Top Cap (Locking)**	**New Plastic (PVC)**	**40**		
2	**Bottom Cap**	**New Plastic (PVC)**	**40**		
2	**Riser**	**New Plastic (PVC)**	**40**	**0**	**5**
2	**PrePacked Screen**	**New Plastic (PVC)**	**40 0.010**	**5**	**10.1**

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(512) 334-5540

STATE OF TEXAS WELL REPORT for Tracking #563525

Owner:	**CPS Energy**	Owner Well #:	**DMW-3**
Address:	**P.O. Box 2906 San Antonio , TX 78299**	Grid #:	**68-46-5**
Well Location:	**Deely Unit 1 9599 Gardner Road San Antonio, TX 78263**	Latitude:	**29° 18' 27.77" N**
		Longitude:	**098° 19' 22.86" W**
Well County:	**Bexar**	Elevation:	**496 ft. above sea level**
Type of Work:	**New Well**	Proposed Use:	**Monitor**

Drilling Start Date: **11/4/2020** Drilling End Date: **11/4/2020**

Borehole:

Diameter (in.)	*Top Depth (ft.)*	*Bottom Depth (ft.)*
12	**0**	**12**

Drilling Method: **Hydro-Vac**

Borehole Completion: **Filter Packed**

Filter Pack Intervals:

Top Depth (ft.)	*Bottom Depth (ft.)*	*Filter Material*	*Size*
4.5	**11.9**	**Sand**	**12/20**

Annular Seal Data:

Top Depth (ft.)	*Bottom Depth (ft.)*	*Description (number of sacks & material)*
0	**2**	**Concrete 2.54 Bags/Sacks**
2	**4.5**	**Bentonite 2.5 Bags/Sacks**
11.9	**12**	**Spoil Sloughing**

Seal Method: **Hand Mixed**

Sealed By: **Driller**

Distance to Property Line (ft.): **No Data**

Distance to Septic Field or other concentrated contamination (ft.): **No Data**

Distance to Septic Tank (ft.): **No Data**

Method of Verification: **No Data**

Surface Completion: **Surface Slab Installed** **Surface Completion by Driller**

Water Level: **No Data**

Packers: **No Data**

Type of Pump: **No Data**

Well Tests: **No Test Data Specified**

Water Quality:

Strata Depth (ft.)	Water Type
No Data	**No Data**

Chemical Analysis Made: **No**

Did the driller knowingly penetrate any strata which contained injurious constituents?: **No**

Certification Data: The driller certified that the driller drilled this well (or the well was drilled under the driller's direct supervision) and that each and all of the statements herein are true and correct. The driller understood that failure to complete the required items will result in the report(s) being returned for completion and resubmittal.

Company Information: **Vortex Drilling Partners, LP**

4412 Bluemel Road
San Antonio, TX 78240

Driller Name: **Heriberto Martinez** License Number: **59554**

Apprentice Name: **Luis Castaneda**

Comments: **No Data**

Report Amended on 1/11/2021 by Request #33387

Lithology:
DESCRIPTION & COLOR OF FORMATION MATERIAL

Top (ft.)	Bottom (ft.)	Description
0	**0.5**	**ASPHALT & BASE**
0.5	**2.5**	**CONCRETE BLOCK**
2.5	**12**	**SANDY SILTY CLAY, soft to firm, dark brown, slightly moist to moist with depth..**

Casing:
BLANK PIPE & WELL SCREEN DATA

Dia (in.)	Type	Material	Sch./Gage	Top (ft.)	Bottom (ft.)
2	**Top Cap (Locking)**	**New Plastic (PVC)**	**40**		
2	**Bottom Cap**	**New Plastic (PVC)**	**40**		
2	**Riser**	**New Plastic (PVC)**	**40**	**0**	**6.5**
2	**PrePacked Screen**	**New Plastic (PVC)**	**40 0.010**	**6.5**	**11.9**

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STATE OF TEXAS WELL REPORT for Tracking #612892

Owner:	**CPS Energy**	Owner Well #:	**JKS-68**
Address:	**P.O. Box 2906 San Antonio, TX 78299**	Grid #:	**68-46-5**
Well Location:	**12940 US 181 San Antonio, TX 78263**	Latitude:	**29° 18' 50.01" N**
		Longitude:	**098° 18' 56.05" W**
Well County:	**Bexar**	Elevation:	**No Data**
Type of Work:	**New Well**	Proposed Use:	**Monitor**

Drilling Start Date: **7/12/2022** Drilling End Date: **7/12/2022**

Borehole:

Diameter (in.)	*Top Depth (ft.)*	*Bottom Depth (ft.)*
7.25	**0**	**27**

Drilling Method: **Hollow Stem Auger**

Borehole Completion: **Filter Packed**

Filter Pack Intervals:

Top Depth (ft.)	*Bottom Depth (ft.)*	*Filter Material*	*Size*
10	**27**	**Sand**	**16/30**

Annular Seal Data:

Top Depth (ft.)	*Bottom Depth (ft.)*	*Description (number of sacks & material)*
0	**2**	**Concrete 1 Bags/Sacks**
2	**10**	**Bentonite 2 Bags/Sacks**

Seal Method: **Hand Mixed**

Sealed By: **Driller**

Distance to Property Line (ft.): **No Data**

Distance to Septic Field or other concentrated contamination (ft.): **No Data**

Distance to Septic Tank (ft.): **No Data**

Method of Verification: **No Data**

Surface Completion: **Surface Sleeve Installed** **Surface Completion by Driller**

Water Level: **15 ft.** below land surface on **2022-07-12**

Packers: **No Data**

Type of Pump: **No Data**

Well Tests: **No Test Data Specified**

Water Quality:

Strata Depth (ft.)	Water Type
No Data	**No Data**

Chemical Analysis Made: **No**

Did the driller knowingly penetrate any strata which contained injurious constituents?: **No**

Certification Data: The driller certified that the driller drilled this well (or the well was drilled under the driller's direct supervision) and that each and all of the statements herein are true and correct. The driller understood that failure to complete the required items will result in the report(s) being returned for completion and resubmittal.

Company Information: **Envirotech Drilling Services LLC**

PO BOX 19064
Houston, TX 77224

Driller Name: **Jaime Vasquez** License Number: **58171**

Comments: **No Data**

Report Amended on 8/24/2022 by Request #37320

Lithology:
DESCRIPTION & COLOR OF FORMATION MATERIAL

Top (ft.)	Bottom (ft.)	Description
0	**5**	**No recovery**
5	**9.9**	**Silty Sand (light greyish brown)**
9.9	**16**	**Sand (light orangish brown)**
16	**27**	**Silty Sand (light greyish brown)**

Casing:
BLANK PIPE & WELL SCREEN DATA

Dia (in.)	Type	Material	Sch./Gage	Top (ft.)	Bottom (ft.)
2	**Riser**	**New Plastic (PVC)**	**40**	**-3**	**12**
2	**Screen**	**New Plastic (PVC)**	**40 0.010**	**12**	**27**

IMPORTANT NOTICE FOR PERSONS HAVING WELLS DRILLED CONCERNING CONFIDENTIALITY

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Texas Department of Licensing and Regulation
P.O. Box 12157
Austin, TX 78711
(512) 334-5540

STATE OF TEXAS WELL REPORT for Tracking #612893

Owner:	**CPS Energy**	Owner Well #:	**JKS-69**
Address:	**P.O. Box 2906 San Antonio, TX 78299**	Grid #:	**68-46-5**
		Latitude:	**29° 18' 46.99" N**
Well Location:	**12940 US 181 San Antonio, TX 78263**	Longitude:	**098° 19' 02.31" W**
Well County:	**Bexar**	Elevation:	**No Data**
Type of Work:	**New Well**	Proposed Use:	**Monitor**

Drilling Start Date: **7/12/2022** Drilling End Date: **7/12/2022**

Borehole:

Diameter (in.)	*Top Depth (ft.)*	*Bottom Depth (ft.)*
7.25	**0**	**40**

Drilling Method: **Hollow Stem Auger**

Borehole Completion: **Filter Packed**

Filter Pack Intervals:

Top Depth (ft.)	*Bottom Depth (ft.)*	*Filter Material*	*Size*
23	**40**	**Sand**	**16/30**

Annular Seal Data:

Top Depth (ft.)	*Bottom Depth (ft.)*	*Description (number of sacks & material)*
0	**2**	**Concrete 1 Bags/Sacks**
2	**23**	**Bentonite 6 Bags/Sacks**

Seal Method: **Hand Mixed**

Sealed By: **Driller**

Distance to Property Line (ft.): **No Data**

Distance to Septic Field or other concentrated contamination (ft.): **No Data**

Distance to Septic Tank (ft.): **No Data**

Method of Verification: **No Data**

Surface Completion: **Surface Sleeve Installed** **Surface Completion by Driller**

Water Level: **25 ft.** below land surface on **2022-07-12**

Packers: **No Data**

Type of Pump: **No Data**

Well Tests: **No Test Data Specified**

Water Quality:

Strata Depth (ft.)	Water Type
No Data	**No Data**

Chemical Analysis Made: **No**

Did the driller knowingly penetrate any strata which contained injurious constituents?: **No**

Certification Data: The driller certified that the driller drilled this well (or the well was drilled under the driller's direct supervision) and that each and all of the statements herein are true and correct. The driller understood that failure to complete the required items will result in the report(s) being returned for completion and resubmittal.

Company Information: **Envirotech Drilling Services LLC**

PO BOX 19064
Houston, TX 77224

Driller Name: **Jaime Vasquez** License Number: **58171**

Comments: **No Data**

Report Amended on 8/24/2022 by Request #37321

Lithology:
DESCRIPTION & COLOR OF FORMATION MATERIAL

Top (ft.)	Bottom (ft.)	Description
0	**5**	**No recovery**
5	**8.6**	**Silty clay (light orangish brown)**
8.6	**10.5**	**Silty sand (light orangish brown)**
10.5	**11.4**	**Silty clay (light grey)**
11.4	**22**	**Sand (light orangish brown)**
22	**40**	**Silty sand (light orangish brown)**

Casing:
BLANK PIPE & WELL SCREEN DATA

Dia (in.)	Type	Material	Sch./Gage	Top (ft.)	Bottom (ft.)
2	**Riser**	**New Plastic (PVC)**	**40**	**-3**	**25**
2	**Screen**	**New Plastic (PVC)**	**40 0.010**	**25**	**40**

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Austin, TX 78711
(512) 334-5540

STATE OF TEXAS WELL REPORT for Tracking #612894

Owner:	**CPS Energy**	Owner Well #:	**JKS-70**
Address:	**P.O. Box 2906 San Antonio, TX 78299**	Grid #:	**68-46-5**
		Latitude:	**29° 18' 34.83" N**
Well Location:	**12940 US 181 San Antonio, TX 78263**	Longitude:	**098° 19' 03.65" W**
Well County:	**Bexar**	Elevation:	**No Data**
Type of Work:	**New Well**	Proposed Use:	**Monitor**

Drilling Start Date: **7/12/2022** Drilling End Date: **7/12/2022**

Borehole:

Diameter (in.)	*Top Depth (ft.)*	*Bottom Depth (ft.)*
7.25	**0**	**27**

Drilling Method: **Hollow Stem Auger**

Borehole Completion: **Filter Packed**

Filter Pack Intervals:

Top Depth (ft.)	*Bottom Depth (ft.)*	*Filter Material*	*Size*
10	**27**	**Sand**	**16/30**

Annular Seal Data:

Top Depth (ft.)	*Bottom Depth (ft.)*	*Description (number of sacks & material)*
0	**2**	**Concrete 1 Bags/Sacks**
2	**10**	**Bentonite 2.5 Bags/Sacks**

Seal Method: **Hand Mixed**

Sealed By: **Driller**

Distance to Property Line (ft.): **No Data**

Distance to Septic Field or other concentrated contamination (ft.): **No Data**

Distance to Septic Tank (ft.): **No Data**

Method of Verification: **No Data**

Surface Completion: **Surface Sleeve Installed** **Surface Completion by Driller**

Water Level: **15 ft.** below land surface on **2022-07-12**

Packers: **No Data**

Type of Pump: **No Data**

Well Tests: **No Test Data Specified**

Water Quality:

Strata Depth (ft.)	Water Type
No Data	**No Data**

Chemical Analysis Made: **No**

Did the driller knowingly penetrate any strata which contained injurious constituents?: **No**

Certification Data: The driller certified that the driller drilled this well (or the well was drilled under the driller's direct supervision) and that each and all of the statements herein are true and correct. The driller understood that failure to complete the required items will result in the report(s) being returned for completion and resubmittal.

Company Information: **Envirotech Drilling Services LLC**

PO BOX 19064
Houston, TX 77224

Driller Name: **Jaime Vasquez** License Number: **58171**

Comments: **No Data**

Report Amended on 9/1/2022 by Request #37418

Lithology:
DESCRIPTION & COLOR OF FORMATION MATERIAL

Top (ft.)	Bottom (ft.)	Description
0	**5**	**0 - 5 ft: No recovery**
5	**8.5**	**5 - 8.5 ft: Silty sand (light grey & brown)**
8.5	**11.5**	**8.5 - 11.5 ft: Silty clay (brown)**
11.5	**13.5**	**11.5 - 13.5 ft: Silt (brown to orangish brown)**
13.5	**15**	**13.5 - 15 ft: Silty sand (orangish brown)**
15	**20.8**	**15 - 20.8 ft: Sand (light grey to light brown)**
20.8	**22**	**20.8 - 22 ft: Silty clayey sand (brown with dark brown)**
22	**27**	**22 - 27 ft: Sand (light greyish brown)**

Casing:
BLANK PIPE & WELL SCREEN DATA

Dia (in.)	Type	Material	Sch./Gage	Top (ft.)	Bottom (ft.)
2	**Riser**	**New Plastic (PVC)**	**40**	**-3**	**12**
2	**Screen**	**New Plastic (PVC)**	**40 0.010**	**12**	**27**

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P.O. Box 12157
Austin, TX 78711
(512) 334-5540

STATE OF TEXAS WELL REPORT for Tracking #615367

Owner:	**CPS Energy**	Owner Well #:	**JKS-70**
Address:	**P.O. Box 2906 San Antonio, TX 78299**	Grid #:	**68-46-5**
		Latitude:	**29° 18' 34.83" N**
Well Location:	**12940 US 181 San Antonio, TX 78263**	Longitude:	**098° 19' 03.65" W**
Well County:	**Bexar**	Elevation:	**No Data**
Type of Work:	**New Well**	Proposed Use:	**Monitor**

Drilling Start Date: **7/12/2022** Drilling End Date: **7/12/2022**

Borehole:

Diameter (in.)	*Top Depth (ft.)*	*Bottom Depth (ft.)*
7.25	**0**	**27**

Drilling Method: **Hollow Stem Auger**

Borehole Completion: **Filter Packed**

Filter Pack Intervals:

Top Depth (ft.)	*Bottom Depth (ft.)*	*Filter Material*	*Size*
10	**27**	**Sand**	**16/30**

Annular Seal Data:

Top Depth (ft.)	*Bottom Depth (ft.)*	*Description (number of sacks & material)*
0	**2**	**Concrete 1 Bags/Sacks**
2	**10**	**Bentonite 2.5 Bags/Sacks**

Seal Method: **Hand Mixed**

Sealed By: **Driller**

Distance to Property Line (ft.): **No Data**

Distance to Septic Field or other concentrated contamination (ft.): **No Data**

Distance to Septic Tank (ft.): **No Data**

Method of Verification: **No Data**

Surface Completion: **Surface Sleeve Installed** **Surface Completion by Driller**

Water Level: **15 ft.** below land surface on **2022-07-12**

Packers: **No Data**

Type of Pump: **No Data**

Well Tests: **No Test Data Specified**

Water Quality:

Strata Depth (ft.)	Water Type
No Data	**No Data**

Chemical Analysis Made: **No**

Did the driller knowingly penetrate any strata which contained injurious constituents?: **No**

Certification Data: The driller certified that the driller drilled this well (or the well was drilled under the driller's direct supervision) and that each and all of the statements herein are true and correct. The driller understood that failure to complete the required items will result in the report(s) being returned for completion and resubmittal.

Company Information: **Envirotech Drilling Services LLC**

PO BOX 19064
Houston, TX 77224

Driller Name: **Jaime Vasquez** License Number: **58171**

Comments: **No Data**

Lithology:
DESCRIPTION & COLOR OF FORMATION MATERIAL

Top (ft.)	Bottom (ft.)	Description
0	**5**	**0 - 5 ft: No recovery**
5	**8.5**	**5 - 8.5 ft: Silty sand (light grey & brown)**
8.5	**11.5**	**8.5 - 11.5 ft: Silty clay (brown)**
11.5	**13.5**	**11.5 - 13.5 ft: Silt (brown to orangish brown)**
13.5	**15**	**13.5 - 15 ft: Silty sand (orangish brown)**
15	**20.8**	**15 - 20.8 ft: Sand (light grey to light brown)**
20.8	**22**	**20.8 - 22 ft: Silty clayey sand (brown with dark brown)**
22	**27**	**22 - 27 ft: Sand (light greyish brown)**

Casing:
BLANK PIPE & WELL SCREEN DATA

Dia (in.)	Type	Material	Sch./Gage	Top (ft.)	Bottom (ft.)
2	**Riser**	**New Plastic (PVC)**	**40**	**-3**	**12**
2	**Screen**	**New Plastic (PVC)**	**40 0.010**	**12**	**27**

IMPORTANT NOTICE FOR PERSONS HAVING WELLS DRILLED CONCERNING CONFIDENTIALITY

TEX. OCC. CODE Title 12, Chapter 1901.251, authorizes the owner (owner or the person for whom the well was drilled) to keep information in Well Reports confidential. The Department shall hold the contents of the well log confidential and not a matter of public record if it receives, by certified mail, a written request to do so from the owner.

Please include the report's Tracking Number on your written request.

Texas Department of Licensing and Regulation
P.O. Box 12157
Austin, TX 78711
(512) 334-5540

STATE OF TEXAS WELL REPORT for Tracking #666009

Owner:	**Nathan Thompson**	Owner Well #:	**1**
Address:	**1290 Casiano Rd San Antonio, TX 78223**	Grid #:	**68-46-4**
		Latitude:	**29° 17' 39" N**
Well Location:	**1290 Casiano Rd San Antonio, TX 78223**	Longitude:	**098° 20' 05" W**
Well County:	**Bexar**	Elevation:	**500 ft. above sea level**
Type of Work:	**New Well**	Proposed Use:	**Domestic**

Drilling Start Date: **5/8/2024** Drilling End Date: **5/13/2024**

	Diameter (in.)	*Top Depth (ft.)*	*Bottom Depth (ft.)*
Borehole:	**8.75**	**0**	**280**

Drilling Method: **Mud (Hydraulic) Rotary**

Borehole Completion: **Perforated or Slotted**

	Top Depth (ft.)	*Bottom Depth (ft.)*	*Description (number of sacks & material)*
Annular Seal Data:	**-1**	**12**	**Cement 9 Bags/Sacks**
	140	**160**	**Bentonite 2 Bags/Sacks**

Seal Method: **Hand Mixed**

Sealed By: **Driller**

Variance Number: **No**

Distance to Property Line (ft.): **62**

Distance to Septic Field or other concentrated contamination (ft.): **135**

Distance to Septic Tank (ft.): **105**

Method of Verification: **Tape Measeure**

Surface Completion: **Surface Sleeve Installed** **Surface Completion NOT by Driller**

Water Level: **62 ft.** below land surface, and **0 GPM** artesian flow on **2024-05-13** Measurement Method: **Pressure Gauge**

Packers: **Rubber at 12 ft.**

Type of Pump: **Submersible** Pump Depth (ft.): **140**

Well Tests: **Jetted** **Yield: 75+ GPM with 16 ft. drawdown after 4 hours**

Water Quality:

Strata Depth (ft.)	Water Type
No Data	**No Data**

Chemical Analysis Made: **No**

Did the driller knowingly penetrate any strata which contained injurious constituents?: **No**

Certification Data: The driller certified that the driller drilled this well (or the well was drilled under the driller's direct supervision) and that each and all of the statements herein are true and correct. The driller understood that failure to complete the required items will result in the report(s) being returned for completion and resubmittal.

Company Information: **STEVENS DRILLING & WATER WELL SERVICE**

12653 FM 539
LA VERNIA, TX 78121

Driller Name: **Kody B. Stevens** License Number: **59538**

Comments: **15@80-1.5**
29@100-32
46@120-9
75@140-13

Lithology:
DESCRIPTION & COLOR OF FORMATION MATERIAL

Top (ft.)	Bottom (ft.)	Description
0	**12**	**Top Soil**
12	**17**	**Tan & White Clay**
17	**30**	**White & Grey Clay**
30	**40**	**Shale**
40	**41**	**Rock**
41	**90**	**Grey Sand**
90	**110**	**Sandy Shale**
110	**111**	**Rock**
111	**120**	**Shale & Rock**
120	**140**	**Hard Shale w/ Streaks of Sandy Shale**
140	**147**	**Hard Shale**
147	**163**	**Sandy Shale & Grey Sand Mix**
163	**167**	**Sandy Shale & Rock**
167	**200**	**Grey Sand**
200	**202**	**Rock**
202	**204**	**Sandy Shale**

Casing:
BLANK PIPE & WELL SCREEN DATA

Dia (in.)	Type	Material	Sch./Gage	Top (ft.)	Bottom (ft.)
4.5	**Blank**	**New Plastic (PVC)**	**SDR-17**	**-2**	**235**
4.5	**Perforated or Slotted**	**New Plastic (PVC)**	**SDR-17 0.020**	**235**	**275**
4.5	**Blank**	**New Plastic (PVC)**	**SDR-17**	**275**	**280**

204	**208**	**Sandy Shale & Rock**
208	**210**	**Sandy Shale**
210	**240**	**Grey Sand w/ Streaks of Sandy Shale**
240	**260**	**Grey Sand**
260	**261**	**Rock**
261	**266**	**Sandy Shale & Rock**
266	**280**	**Grey Sand (TD)**

IMPORTANT NOTICE FOR PERSONS HAVING WELLS DRILLED CONCERNING CONFIDENTIALITY

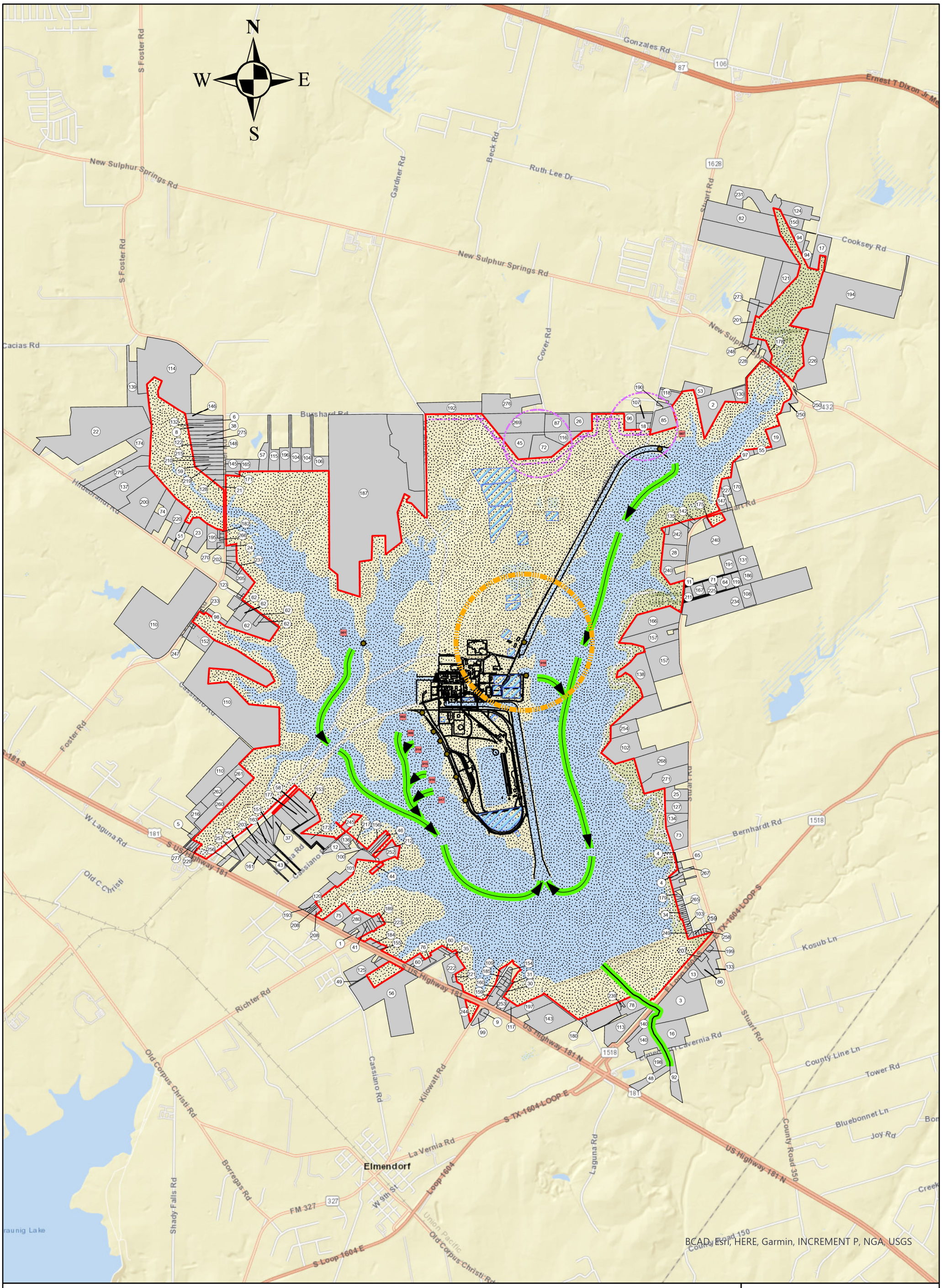
TEX. OCC. CODE Title 12, Chapter 1901.251, authorizes the owner (owner or the person for whom the well was drilled) to keep information in Well Reports confidential. The Department shall hold the contents of the well log confidential and not a matter of public record if it receives, by certified mail, a written request to do so from the owner.

Please include the report's Tracking Number on your written request.

Texas Department of Licensing and Regulation
P.O. Box 12157
Austin, TX 78711
(512) 334-5540

ATTACHMENT F

LANDOWNER INFORMATION



Note:
*Some Map IDs are reserved.

0 1,000 2,000 4,000
Feet
0 0.47 1.9
Miles

WESTON SOLUTIONS

EXHIBIT 3
ADJACENT LANDOWNERS MAP
CALAVERAS POWER STATION
SAN ANTONIO, BEXAR COUNTY, TEXAS

DATE	PROJECT NO	SCALE
MAY 2025	10690.023.002.0001	AS SHOWN

Attachment F
Landowner List

Map_ID	OWNER	Address	City	State	Zip Code
1	A&P ACQUISITIONS LLC	14030 S US HIGHWAY 181	SAN ANTONIO	TX	78223
2	AGUILAR JOSE & CECILIA		SAN ANTONIO	TX	78263
3	AHMADZAI HAYAT	3906 CRESTRIDGE DR	SAN ANTONIO	TX	78229
4	GOLDEN STATE PROPERTIES LLC	3906 CRESTRIDGE DR	SAN ANTONIO	TX	78229-4727
4	GOLDEN STATE PROPERTIES LLC	3906 CRESTRIDGE DR	SAN ANTONIO	TX	78229-4727
5	KRIST STEPHANIE JO		SAN ANTONIO	TX	78263
6	ALEMAN RAUL JR & LONGORIA CAROLINA	24397 LOUISIANA RD	LA FERIA	TX	78559-4358
7	ALMAGUER DAVID & SYLVIA	14398 KILOWATT RD	SAN ANTONIO	TX	78223-9727
8	ALVARADO ALEJANDRO OROZCO & OROZCO NANCY	3665 CANDLEHEAD LN	SAN ANTONIO	TX	78244
9	ARC DG EDFTX001 LLC	PO BOX 460369 DPT 100	HOUSTON	TX	77056-8369
10	ARIAS OBDULIA P EST OF	14404 KILOWATT RD	SAN ANTONIO	TX	78223-9727
11	ARISPE JESUS S & JUDY K	10184 STUART RD	SAN ANTONIO	TX	78263-9692
12	ATCHISON VIRGINIA H	12999 LAGUNA RD	SAN ANTONIO	TX	78223
13	ATG PROPERTY MANAGEMENT LLC	PO BOX 1269	ARANSAS PASS	TX	78335
14	BAIN BILLY B & BARBARA	7963 RICHTER RD LOT 2	SAN ANTONIO	TX	78223-9750
16	BAYYAT JAFIAR L	48 HEMLOCK AVE	CRANSTON	RI	02910
17	BEALE KRISTEN BROOKE	10590 COOKSEY RD	ADKINS	TX	78101
18	BIESENBACH RICHARD A	8681 KNOWLTON RD	SAN ANTONIO	TX	78263-9715
19	BLOCH DIANE & CHERYL	8857 STUART RD	SAN ANTONIO	TX	78263-9676
20	BOSWELL LUTHER B	5003 JOHN YOUNG DR	SAN ANTONIO	TX	78219-1261
21	BOUBLE CHRISTOPHER M & BRUCE H & DONNA T	226 HATCHER AVE	SAN ANTONIO	TX	78223-3326
22	BREHM GENE A	8990 HILDEBRANDT RD	SAN ANTONIO	TX	78222-6038
23	BREHM GENE A & VICKI D	7809 BROADWAY ST	SAN ANTONIO	TX	78209-2558
24	BRINGAS-ZAVALA JOSLYN JEANELLE & ZAVALA BOBB	9578 S FOSTER RD	SAN ANTONIO	TX	78222
25	BRISTER ROBERTA JOYCE	12423 STUART RD	SAN ANTONIO	TX	78263-6214
26	BUDDE CHRISTOPHER M & CYNTHIA M	8434 COVER RD	SAN ANTONIO	TX	78263
27	CAMPBELL RICHARD K SR	9802 SPINNAKER PATH	SAN ANTONIO	TX	78263-2380
28	CANO THERESA TERRILL	13271 HUNTERS LARK ST	SAN ANTONIO	TX	78230-2017
29	CANTU MARIA I & RICHARD O	13363 LEEWARD LN	SAN ANTONIO	TX	78263-2383
30	CARDENAS CARLOS G &	14630 ADKINS ELMENDORF RD	SAN ANTONIO	TX	78223-9756
31	CARDENAS LOUIS P EST OF	14510 ADKINS ELMENDORF RD	SAN ANTONIO	TX	78223-9756
32	CARDENAS TIMOTHY JASON	9818 SPINNAKER PATH	SAN ANTONIO	TX	78263-2380
33	CARDONA SHERRIE ANN & RONALD	13403 LEEWARD LN	SAN ANTONIO	TX	78263-2384
34	CARPENTER NORMAN	13367 LEEWARD LN	SAN ANTONIO	TX	78263
35	CARRANZA JOSE RAMON	14420 S US HIGHWAY 181 LOT 4	SAN ANTONIO	TX	78223-9744
36	CARRANZA RUBEN	760 FALLING LEAVES DR	ADKINS	TX	78101-2623
37	CASSIANO DIANA &	13221 LAGUNA RD UNIT 1	SAN ANTONIO	TX	78223-4512
38	CASTELLANOS JOSE ROGELIO & MARIA LUISA	1254 KEATS ST	SAN ANTONIO	TX	78211-1638
39	CASTELLANOS SAUL E & MEJIA SILVIA	2207 SW 19TH ST	SAN ANTONIO	TX	78207-7804
40	CASTILLO RIGOBERTO J JR	13371 LEEWARD LN	SAN ANTONIO	TX	78263-2383
41	CASTLEMAN CHRISTEENA & TIM	7951 RICHTER RD	SAN ANTONIO	TX	78223
42	CASTRUITA ERNESTO & LYDIA	8609 S FOSTER RD	SAN ANTONIO	TX	78222
43	CAZARES ROBERTO & NAVARRO JANET	13335 LAGUNA RD	SAN ANTONIO	TX	78223-9704
44	CEMETERY				
45	CGH REALTY HOLDINGS LLC	206 WILMINGTON AVE	SAN ANTONIO	TX	78215
46	CHAGOYA EVA &	12915 LAGUNA RD	SAN ANTONIO	TX	78223-9706
47	CHAVARRIA TERA	13407 LEEWARD LN	SAN ANTONIO	TX	78263-2384
48	CHRIS & JONELLE PIPES LIVING TRUST	361 COUNTY ROAD 223	FLORESVILLE	TX	78114-5038
49	CITY OF ELMENDORF	8304 FM 327	ELMENDORF	TX	78112
50	CLANTON GEORGE	14910 LAGUNA RD LOT 1	SAN ANTONIO	TX	78223-9730
51	CONNOR CATHERINE E	9540 HILDEBRANDT RD	SAN ANTONIO	TX	78222-6026
52	CONTRERAS LETICIA C	10270 STUART RD	SAN ANTONIO	TX	78263-9693
53	COOPER LEROY	8090 KNOWLTON RD	SAN ANTONIO	TX	78263-9672
54	CORDOVA JUAN A	7512 NEW SULPHUR SPRINGS RI	SAN ANTONIO	TX	78263-2518
55	COVER VIRGINIA R	PO BOX 207	ADKINS	TX	78101-0207
56	CRANK NOVELLA M	14391 S US HIGHWAY 181	SAN ANTONIO	TX	78223-4527
57	CRUZ HOMERO	PO BOX 200211	SAN ANTONIO	TX	78220-0211

Attachment F
Landowner List

Map_ID	OWNER	Address	City	State	Zip Code
58	CRUZ RAFAEL & NORA	6703 PARADISE OAK DR	SAN ANTONIO	TX	78227-2032
59	CUELLAR ERASMO & MARINA	4119 FAMILY TREE	SAN ANTONIO	TX	78222-2701
60	DANYSH ROBERT	4606 JIM DANIEL	ADKINS	TX	78101-9619
60	DANYSH ROBERT F	4606 JIM DANIEL	ADKINS	TX	78101-9619
60	DANYSH ROBERT F	4606 JIM DANIEL	ADKINS	TX	78101-9619
64	DAVIS BOBBY JOE & DAVIS BETTY	2838 RED SCHAFFE	SAN ANTONIO	TX	78219
65	DE LOS SANTOS VICTOR	5763 FM 1628	ADKINS	TX	78101
62	DELGADO EMIL & BEATRICE	9912 S FOSTER RD	SAN ANTONIO	TX	78223-4450
71	DENNIS CATHY M	10366 STUART RD	SAN ANTONIO	TX	78263-9694
72	DEWAAL ROBERTA	1118 AIRPORT RD	ROCKPORT	TX	78382
73	DOWLEARN JAMES A III	12991 STUART RD	SAN ANTONIO	TX	78263-6258
74	DURY BETTY J	9460 HILDEBRANDT RD	SAN ANTONIO	TX	78222-6028
75	E&L WILBORN 13934 LLC	300 GOLIAD RD #156	SAN ANTONIO	TX	78223
76	ELITE TIRES & WHEELS MOBILE CO LLC	10011 JENSEN DR	HOUSTON	TX	77093-5606
78	EQUINE THERAPY AND ANIMAL RESCUE INC	14910 LAGUNA RD	SAN ANTONIO	TX	78223-9729
79	ESCUDERO JOSE GUADALUPE CERVANTES & CHAVARI	14415 ADKINS	ELMENDORF	TX	78112
80	ESPINOZA MARIANO JR	14615 ADKINS ELMENDORF RD	SAN ANTONIO	TX	78223-4245
81	FALCON FELIX F JR & VIRGINIA D	13375 LEEWARD LN	SAN ANTONIO	TX	78263-2383
82	FAUBION GLENN WALLACE	6590 FM 1628	SAN ANTONIO	TX	78263-6123
84	FAULKNER DIANA L	2823 WOODCREST DR	SAN ANTONIO	TX	78209-3045
85	FOSTER JOHN D & KAREN S	PO BOX 482	ADKINS	TX	78101-0482
86	FWI SSF TX 101 LLC	14027 MEMORIAL DR #396	HOUSTON	TX	77079
87	GALLEGOS ANTERO & LAURA	2312 MCKINLEY AVE	SAN ANTONIO	TX	78210-3709
88	GARCIA DIANA LEE & JUAN M III	13359 LEEWARD LN	SAN ANTONIO	TX	78263-2383
89	GARCIA RENE & MARGIE MEDINA	13343 LEEWARD LANE	SAN ANTONIO	TX	78263
90	GARZA LETISIA & STEVE	13339 LEEWARD LN	SAN ANTONIO	TX	78263-2383
92	GAYTAN FELICIA LEE & ROMAN	9720 ELMENDORF LAVERNIA RI	SAN ANTONIO	TX	78223
93	GIBBS DAMON	22719 RED SAND DRIVE	SAN ANTONIO	TX	78264
94	GIBSON CAITLIN MORGAN	6795 COOKSEY RD	ADKINS	TX	78101-2245
96	GISH KYLE A	11603 N WEIDNER RD	SAN ANTONIO	TX	78233-6011
97	GLAZE PATRICIA ANN	PO BOX 175	ADKINS	TX	78101-0175
98	GONZALES CATARINA EST OF	10020 S FOSTER RD	SAN ANTONIO	TX	78223-4409
99	GONZALEZ ANTONIO SR	14985 ADKINS ELMENDORF	ELMENDORF	TX	78112-5601
100	GONZALEZ JOSE & PERRYMAN PATRICIA LOU	12915 LAGUNA RD	SAN ANTONIO	TX	78223-9706
101	GONZALEZ LUSANDRA L &	12930 LAGUNA RD	SAN ANTONIO	TX	78223-9706
102	GRAHAM CHARLOTTE	11841 STUART RD LOT 2 #	SAN ANTONIO	TX	78263-9737
103	GRAYSON WILLIAM A & JACQUELINE M	13411 LEEWARD LN	SAN ANTONIO	TX	78263-2384
104	GUADIANO HERLINDA	4407 GOLF VIEW DR	SAN ANTONIO	TX	78223-1602
106	GUERRERO HUMBERTO & MARIA & GUERRERO YESEN	7672 BURSHARD RD	SAN ANTONIO	TX	78263
107	HAECKER PAMELA K	8575 KNOWLTON RD	SAN ANTONIO	TX	78263-9714
108	HAHN AUDREY LYNNE	PO BOX 693	ADKINS	TX	78101-0693
109	HALLINAN NICHOLAS	14395 KILOWATT RD	SAN ANTONIO	TX	78223-9727
110	HARRISON REESE L JR ETAL	11630 SANDMAN ST	SAN ANTONIO	TX	78216-3033
113	HEINESH RANDOLPH A REV TR	2512 ARTESIA BLVD STE 300C	REDONDO BEAC	CA	90278-3277
114	HERBER FRANKLIN D	10786 S FOSTER RD	SAN ANTONIO	TX	78223-4423
115	HERNANDEZ HUMBERTO P	1826 W LAUREL	SAN ANTONIO	TX	78201-6127
116	HERNANDEZ MARIO & HORTENCIA ESCOBAR	227 GABRIEL	SAN ANTONIO	TX	78202
117	HERNANDEZ NORMA JEAN	14892 S US HIGHWAY 181	SAN ANTONIO	TX	78223-4289
118	HERNANDEZ TAYLER	8390 KNOWLTON RD	SAN ANTONIO	TX	78263-9637
119	HILL WADE L & KARALYN J	10378 STUART RD	SAN ANTONIO	TX	78263-9694
120	HILLYER DERECK K & ELIZA M	1353 RICE RD	SAN ANTONIO	TX	78220-3522
121	HOLTON JENNIFER JOYCE	10155 NEW SULPHUR SPRINGS R	SAN ANTONIO	TX	78263-9610
122	HOWARD RUSSELL & TINA	8709 S FOSTER RD	SAN ANTONIO	TX	78222-5917
123	HUDEL WILLIAM H & PEGGY S	10080 HILDEBRANDT RD	SAN ANTONIO	TX	78222-6016
124	HUMMEL THOMAS E JR &	6685 COOKSEY RD	ADKINS	TX	78101-2205
125	JALALA INC	32900 REGENTS BLVD	UNION CITY	CA	94587-5411
127	JAMES KAREN SUE & BLACK CORY REAGAN & BLACK I	12549 STUART RD	SAN ANTONIO	TX	78263

Attachment F
Landowner List

Map_ID	OWNER	Address	City	State	Zip Code
128	JEFFERS REBECCA MARIE	9075 S FOSTER RD	SAN ANTONIO	TX	78222-6001
129	JERMIER DANIEL M & SHERRI K	9826 SPINNAKER PATH	SAN ANTONIO	TX	78263-2380
130	JIMENEZ EDGAR EDUARDO	3510 N MILMO AVE	LAREDO	TX	78043
131	JOCHEN DENNIS M	10228 STUART RD	SAN ANTONIO	TX	78263-9693
132	JOHNSON LARRY & HENRY FIONA	6631 HARTNET FIELDS	CONVERSE	TX	78109
133	JOSEPH RALPH E	14156 E LOOP 1604 S	SAN ANTONIO	TX	78223-9725
134	K&H PARTNERS LLC	113 E ASHTON BLVD	FLORESVILLE	TX	78114
135	KAVANAGH DANA MARIE	9665 STUART RD	SAN ANTONIO	TX	78263-9638
136	KEILMANN ROBERT	PO BOX 23191	SAN ANTONIO	TX	78223-0191
137	KELLER GILBERT E SR &	9362 HILDEBRANDT RD	SAN ANTONIO	TX	78222-6030
138	KOEHN DELTON & GERALDINE	11121 STUART RD	SAN ANTONIO	TX	78263-9695
139	KREEW VENTURES LLC	7809 BROADWAY	SAN ANTONIO	TX	78209
140	KUNERT ROBERT E	9581 ELMENDORF LAVERNIA RI	SAN ANTONIO	TX	78223-9761
142	KYRISCH NORBERT M & BONNIE A	9645 STUART RD	SAN ANTONIO	TX	78263-9638
143	LAGUNA ROAD PROPERTIES LLC	4040 BROADWAY ST STE 308	SAN ANTONIO	TX	78209-6375
144	LAMM DENNIS W & ROSEMARY	13415 LEEWARD LN	SAN ANTONIO	TX	78263-2384
145	LARA ALMALIGA	8904 S FOSTER RD	SAN ANTONIO	TX	78222
146	LE & G INVESTMENTS	11392 S FOSTER RD	SAN ANTONIO	TX	78223-4443
147	LEE GERALD A & MARY JO	9475 STUART RD	SAN ANTONIO	TX	78263-9685
148	LOPEZ JESUS & MAYRA E	8803 S FOSTER RD	SAN ANTONIO	TX	78222-5916
150	LOPEZ JESUS B & CAROLINA	6703 COOKSEY RD	ADKINS	TX	78101-2245
151	LOPEZ LUIS	5126 LARK	SAN ANTONIO	TX	78228-4530
152	LUBIANSKI MARGARET R	10340 S FOSTER RD	SAN ANTONIO	TX	78223-4415
153	MARTIN CHARLES	325 REGINA ST	SAN ANTONIO	TX	78223-1158
154	MARTINEZ ANABELLE & SAN JUAN	14388 KILOWATT RD	SAN ANTONIO	TX	78223
155	MARTINEZ JUAN M & VILLASANA DIANA J	14186 S US HIGHWAY 181	SAN ANTONIO	TX	78223-4534
156	MARTINEZ PAULINE F	12933 LAGUNA RD	SAN ANTONIO	TX	78223-9706
157	MARTINEZ RAMIRO JR	10615 STUART RD	SAN ANTONIO	TX	78263-9697
159	MARTINEZ SHARI & LESLEY THOMAS HOPKINS	14680 KILOWATT RD APT 3	SAN ANTONIO	TX	78223-9405
160	MARTINEZ STEVE	14512 KILOWATT RD	SAN ANTONIO	TX	78223
161	MASSEY EARL & MARIA	1164 COUNTY ROAD 122	FLORESVILLE	TX	78114-6045
162	MENDEZ ANJEL CERVANTES	7714 SCHULTZ RD	ELMENDORF	TX	78112-9788
163	MENDEZ SALVADOR	13251 LAGUNA RD	SAN ANTONIO	TX	78223-4295
165	MENDOZA PAUL	12126 JIMMER CV	SAN ANTONIO	TX	78221-3151
166	MENGER ALFRED C JR &	10535 STUART RD	SAN ANTONIO	TX	78263-9696
167	MEYER KENNETH J & CARRIE G	10240 STUART RD	SAN ANTONIO	TX	78263-9693
168	MICKNICZ ANDREW A & ANITA	13379 LEEWARD LN	SAN ANTONIO	TX	78263-2383
169	MONGE ERIC ALBERTO	9810 SPINNAKER PATH	SAN ANTONIO	TX	78263-2380
170	MONTEMAYOR JESUS E	9417 STUART RD	SAN ANTONIO	TX	78263-9685
171	MOODY DAVID & TRACY	9030 S FOSTER RD	SAN ANTONIO	TX	78222-6002
172	MORADO IBALDO R	12915 CASSIANO RD	SAN ANTONIO	TX	78223-4574
174	MORALES ALFONSO & ELDA T	9180 HILDEBRANDT RD	SAN ANTONIO	TX	78222-6040
175	MORGAN LEANN M	9580 STUART RD	SAN ANTONIO	TX	78263-9614
176	MUELLER JOSHUA KANE & SYLVIA CELINA	13218 COMPASS ROSE	SAN ANTONIO	TX	78263-2382
177	MUNOZ ALFONSO	739 MCDOUGAL AVE	SAN ANTONIO	TX	78223-1543
178	MURPHY LINDA	10235 NEW SULPHUR SPRINGS R	SAN ANTONIO	TX	78263-9759
179	NAVARRO MICHELE M & JAMES RENUARD	9809 VISTA CIR	SAN ANTONIO	TX	78263-4405
180	NEW WILLIAM JR & WANDA J	14950 LAGUNA RD	SAN ANTONIO	TX	78223-9726
182	NGUYEN NHAN	6525 W LAGUNA RD	SAN ANTONIO	TX	78223-9623
184	NICHOLS LINDA LOU	14096 S US HIGHWAY 181 LOT 1	SAN ANTONIO	TX	78223-9748
185	NICKENS JAMES D & DAWN	14450 KILOWATT RD	SAN ANTONIO	TX	78223-9727
186	NIXON GARY GLENN & LAURA ANN	10234 STUART RD	SAN ANTONIO	TX	78263-9693
187	NORTHLAKE SA LLC	1067 FM 306 STE 106	NEW BRAUNFEL	TX	78130
189	OLVERA MANUEL LORENZO & REBBECCA SUSANN	9938 BERMUDA PALM	SAN ANTONIO	TX	78245
190	PADALECKI HARRY JR	8440 KNOWLTON RD	SAN ANTONIO	TX	78263-9673
191	PADIER KRISANDRA M	10222 STUART RD	SAN ANTONIO	TX	78263-9693
192	PADUA GRID LLC	4845 PEARL EAST CIR STE 118	BOULDER	CO	80301

Attachment F
Landowner List

Map_ID	OWNER	Address	City	State	Zip Code
193	PALACIOS MARIA ELIZA	129 CASTILLO AVE	SAN ANTONIO	TX	78210-2809
194	PALMER MILTON L JR LIVING TRUST	523 PALMER RD	PLEASANTON	TX	78064-6334
195	PALOMO DANIEL C	PO BOX 75	ELMENDORF	TX	78112-0075
196	PEREZ RUTH	8331 GLEN CT	SAN ANTONIO	TX	78239-3020
197	POLLOK TIMOTHY & MONICA	11392 S FOSTER RD LOT 2	SAN ANTONIO	TX	78223-4447
198	PORTER JAMES E	343 KILLARNEY DR	SAN ANTONIO	TX	78223-2853
199	PRINCE ESTATES LLC	14072 E LOOP 1604 S	SAN ANTONIO	TX	78223-9725
200	PSENCIK ROBERT A & KAREN J	9366 HILDEBRANDT RD	SAN ANTONIO	TX	78222-6030
201	RAMIREZ CHARLES & JANIE R	10135 NEW SULPHUR SPRINGS R	SAN ANTONIO	TX	78263-9610
202	RAMIREZ LIVING TRUST	9658 S FOSTER RD	SAN ANTONIO	TX	78222-6014
203	RAMIREZ RICARDO	13257 LAGUNA RD	SAN ANTONIO	TX	78223-4295
204	RAUSCHUBER IRREVOCABLE TRUST	10826 KOBORT CANYON	SAN ANTONIO	TX	78023
205	RC SCHUBERT FAMILY TRUST	4115 E SOUTHCROSS BLVD	SAN ANTONIO	TX	78222-3729
207	REMPEL JEFF R & PATRICIA B	245 OAK HOLLOW DR	LA VERNIA	TX	78121-5855
208	REYES JESUS JR	13762 S US HIGHWAY 181	SAN ANTONIO	TX	78223-4288
210	RIVERA JOSE LOUIS ACEVEDO	254 OELKERS	SAN ANTONIO	TX	78204-2910
211	RODRIGUEZ CESAR JAVIER & GRACIELA N	10340 STUART RD	SAN ANTONIO	TX	78263-9694
212	RODRIGUEZ JENOVEBA R ETAL	12911 LAGUNA RD	SAN ANTONIO	TX	78223-9706
213	RODRIGUEZ MICHAEL A & MARTHA JO	13419 LEEWARD LN	SAN ANTONIO	TX	78263-2384
214	RODRIGUEZ VIRGIL M & REBECCA L	9814 SPINNAKER PATH	SAN ANTONIO	TX	78263-2380
215	RUTIAGA CESAR R & MARIA D	216 MARGO ST	SAN ANTONIO	TX	78223-5605
216	SAENZ JUAN ANTONIO JR	6815 HARRY RD	SAN ANTONIO	TX	78223-9412
217	SALINAS RAYMOND & SYLVIA G	12961 LAGUNA RD LOT 2	SAN ANTONIO	TX	78223-9752
219	SANCHEZ ERIK & LISA	4102 WINESAP DR	SAN ANTONIO	TX	78222-4842
220	SANCHEZ JUAN DIEGO	1658 GORMAN	SAN ANTONIO	TX	78202-2607
221	SCHODTS DAVID	14528 S US HIGHWAY 181	SAN ANTONIO	TX	78223-9702
222	SCHODTS DON & PATSY	14528 S US HIGHWAY 181	SAN ANTONIO	TX	78223-9702
223	SECRETARY OF HOUSING & URBAN DEVELOPMENT	2401 NW 23RD ST STE 1D	OKLAHOMA CIT	OK	73107-2420
224	SEGOVIA JESSE & CHELSY CRISP	775 UTOPIA LN	SAN ANTONIO	TX	78223-3315
225	SEGURA CARLOS JR	10360 STUART RD	SAN ANTONIO	TX	78263-9694
226	SEPULVEDA MARCO	19918 PARK RNCH	SAN ANTONIO	TX	78259-1934
227	SERRANO JOSE & MARIA	511 ANCHORS COACH	SAN ANTONIO	TX	78245
228	SHEDROCK DAVID A	10231 NEW SULPHUR SPRINGS R	SAN ANTONIO	TX	78263-9612
229	SILER SAMUEL DEVONNE &	12902 S US HIGHWAY 181	SAN ANTONIO	TX	78223-4285
231	SMITH JENNIFER LEIGH	6420 FM 1628	ADKINS	TX	78101-2275
232	SOLIS ELOISA T	10042 S FOSTER RD	SAN ANTONIO	TX	78223-4409
233	SOLIS GILBERT & REBECCA	10036 S FOSTER RD	SAN ANTONIO	TX	78223-4409
234	SPIVEY ROBERT S	PO BOX 192	ELMENDORF	TX	78112-0192
235	STRUNK CARMEN	9590 S FOSTER RD	SAN ANTONIO	TX	78222-6012
237	SYMA JUSTIN ALBERT	15045 CASSIANO RD	ELMENDORF	TX	78112-4710
239	TAYLOR JANIS M & KETNICK DAVID J	14910 LAGUNA RD	SAN ANTONIO	TX	78223-9729
240	TERRILL FERDINAND A	10025 STUART RD	SAN ANTONIO	TX	78263-9670
242	TERRILL JOHN	9955 STUART RD	SAN ANTONIO	TX	78263-9510
244	THOMAS JOHN A	451 LINDA DR	SAN ANTONIO	TX	78216-7420
245	THOMPSON NATHAN G	11880 S US HIGHWAY 181	SAN ANTONIO	TX	78223-4278
246	TOBIAS KEVIN	12270 S US HIGHWAY 181	SAN ANTONIO	TX	78223-4270
247	TOBIAS KEVIN G & EUGENE B	10210 S FOSTER RD	SAN ANTONIO	TX	78223-4514
248	TOVAR KRISTINA	322 SUSSEX AVE	SAN ANTONIO	TX	78221
249	TOVAR STEVEN & ALICIA T	9800 SPINNAKER PATH	SAN ANTONIO	TX	78263-2380
250	TRACY W B	8401 STUART RD	SAN ANTONIO	TX	78263-9653
252	TREVINO DANIEL C	2318 W HERMOSA DR	SAN ANTONIO	TX	78201-3350
253	TREVINO SHEILA &	14858 S US HIGHWAY 181	SAN ANTONIO	TX	78223-4289
254	TROSTMANN CATHERINE C & KUNO S	10615 GARRICK LN	HOUSTON	TX	77013-5435
255	UNKNOWN				
256	UNKNOWN				
257	UNKNOWN				
258	UNKNOWN				

Attachment F
Landowner List

Map_ID	OWNER	Address	City	State	Zip Code
259	UNKNOWN				
260	UNKNOWN				
261	UNKNOWN				
262	UNKNOWN				
263	UNKNOWN	DOES NOT EXIST			
264	VALDES JULIO C & HERNANDEZ CIRILA PATRICIO	9495 S FOSTER RD	SAN ANTONIO	TX	78222
265	VALDEZ DAVID & MARIA M	13355 LEEWARD LN	SAN ANTONIO	TX	78263-2383
266	VARELA JEANIE L & VARELA DONALD	9505 S FOSTER RD	SAN ANTONIO	TX	78222
267	VARGAS-LAMBOY HIROS EMMANUEL & MARICELA I V	2543 PINTAIL LOOP	COPPERAS COVE	TX	76522
268	VASBINDER ARTHUR D	12055 STUART RD	SAN ANTONIO	TX	78263-9732
269	VEGA ALFONSO	1243 SANTA ANNA	SAN ANTONIO	TX	78201-4210
270	VEGA DIANA GONZALEZ	156 N FOSTER RD #2	SAN ANTONIO	TX	78219
271	VEILLEUX THOMAS J SR &	12145 STUART RD	SAN ANTONIO	TX	78263-9511
272	VERASTEGUI REJINO M & PETRA	10066 HILDEBRANDT RD	SAN ANTONIO	TX	78222-6016
273	VILLAREAL JUDITH MARIE & GUSTAVO	10147 NEW SULPHUR SPRINGS R	SAN ANTONIO	TX	78263
275	VILLEGAS MARIA	3650 CANDLEHEAD LN	SAN ANTONIO	TX	78244-2104
276	WALDREP R B	8485 COVER RD	SAN ANTONIO	TX	78263-9632
277	WALLACE JOHNNY B	222 COUNTY ROAD 446	NIXON	TX	78140-4006
279	WENGLER MARK E	9140 HILDEBRANDT RD	SAN ANTONIO	TX	78222-6034
280	WESCH FRANK H JR &	7015 TRANQUIL LN	CONVERSE	TX	78109-1017

ATTACHMENT G

PHOTOLOG

PHOTOGRAPHIC LOG

Project Name:	Site Location:	Project No.
TPDES Application, Attachment G	WQ0001514000, Calaveras Outfalls	10690.020.009.0001

Photo No. 1	Date:

Description:

Outfall 001



Photo No. 2	Date:

Description:

Outfall 001



PHOTOGRAPHIC LOG

Project Name:	Site Location:	Project No.
TPDES Application, Attachment G	WQ0001514000, Calaveras Outfalls	10690.020.009.0001

Photo No. 3	Date:

Description:

Outfall 002



Photo No. 4	Date:

Description:

Outfall 002



PHOTOGRAPHIC LOG

Project Name:	Site Location:	Project No.
TPDES Application, Attachment G	WQ0001514000, Calaveras Outfalls	10690.020.009.0001

Photo No. 5	Date:

Description:

Outfall 006



Photo No. 6	Date:

Description:

Outfall 006



PHOTOGRAPHIC LOG

Project Name:	Site Location:	Project No.
TPDES Application, Attachment G	WQ0001514000, Calaveras Outfalls	10690.020.009.0001

Photo No. 7	Date:

Description:

Outfall 006



Photo No. 8	Date:

Description:

Outfall 007



PHOTOGRAPHIC LOG

Project Name:	Site Location:	Project No.
TPDES Application, Attachment G	WQ0001514000, Calaveras Outfalls	10690.020.009.0001

Photo No. 9	Date:

Description:

Outfall 007



Photo No. 10	Date:

Description:

Outfall 014



PHOTOGRAPHIC LOG

Project Name:	Site Location:	Project No.
TPDES Application, Attachment G	WQ0001514000, Calaveras Outfalls	10690.020.009.0001

Photo No. 11	Date:

Description:

Outfall 014



Photo No. 12	Date:

Description:

Outfall 015



PHOTOGRAPHIC LOG

Project Name:	Site Location:	Project No.
TPDES Application, Attachment G	WQ0001514000, Calaveras Outfalls	10690.020.009.0001

Photo No. 13	Date:

Description:

Outfall 015



Photo No. 14	Date:

Description:

Outfall 016



PHOTOGRAPHIC LOG

Project Name:	Site Location:	Project No.
TPDES Application, Attachment G	WQ0001514000, Calaveras Outfalls	10690.020.009.0001

Photo No. 15	Date:

Description:

Outfall 016



Photo No. 16	Date:

Description:

Outfall 017



PHOTOGRAPHIC LOG

Project Name:	Site Location:	Project No.
TPDES Application, Attachment G	WQ0001514000, Calaveras Outfalls	10690.020.009.0001

Photo No. 17	Date:

Description:

Outfall 017



Photo No. 18	Date:

Description:

Outfall 018



PHOTOGRAPHIC LOG

Project Name:	Site Location:	Project No.
TPDES Application, Attachment G	WQ0001514000, Calaveras Outfalls	10690.020.009.0001

Photo No. 19	Date:

Description:

Outfall 018



ATTACHMENT H

SUPPLEMENTAL PERMIT INFORMATION FORM (SPIF)

TEXAS COMMISSION ON ENVIRONMENTAL QUALITY

SUPPLEMENTAL PERMIT INFORMATION FORM (SPIF)

FOR AGENCIES REVIEWING DOMESTIC OR INDUSTRIAL TPDES WASTEWATER PERMIT APPLICATIONS

TCEQ USE ONLY:

Application type: _____Renewal _____Major Amendment ____Minor Amendment _____New

County: _____ Segment Number: _____

Admin Complete Date: _____

Agency Receiving SPIF:

_____ Texas Historical Commission _____ U.S. Fish and Wildlife

_____ Texas Parks and Wildlife Department _____ U.S. Army Corps of Engineers

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

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

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

The following applies to all applications:

1. Permittee: City Public Service of San Antonio

   Permit No. WQ00 01514000 EPA ID No. TX 0063681

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

   Calaveras Power Station, 12940 U.S. Highway 181 S, San Antonio, Bexar County, Texas

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

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

First and Last Name: Emily Speed

Credential (P.E, P.G., Ph.D., etc.): Click here to enter text.

Title: Environmental Analyst

Mailing Address: P.O. Box 1771 MD: RT0601

City, State, Zip Code: San Antonio, Texas 78296

Phone No.: 210.353.5010 Ext.: Click here to enter text. Fax No.: none

E-mail Address: elspeed@cpsenergy.com

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

The property owner is not different than the applicant.

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

The discharge from the facility is to Calaveras Lake, thence to Calaveras Creek, thence to Upper San Antonio River in Segment No. 1911 of the San Antonio River Basin.

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

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

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

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

☐ Disturbance of vegetation or wetlands

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

No construction is proposed.

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

The facility is a developed power generating facility.

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

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

Construction dates include 1972, 1977, 1992 and 2010.

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

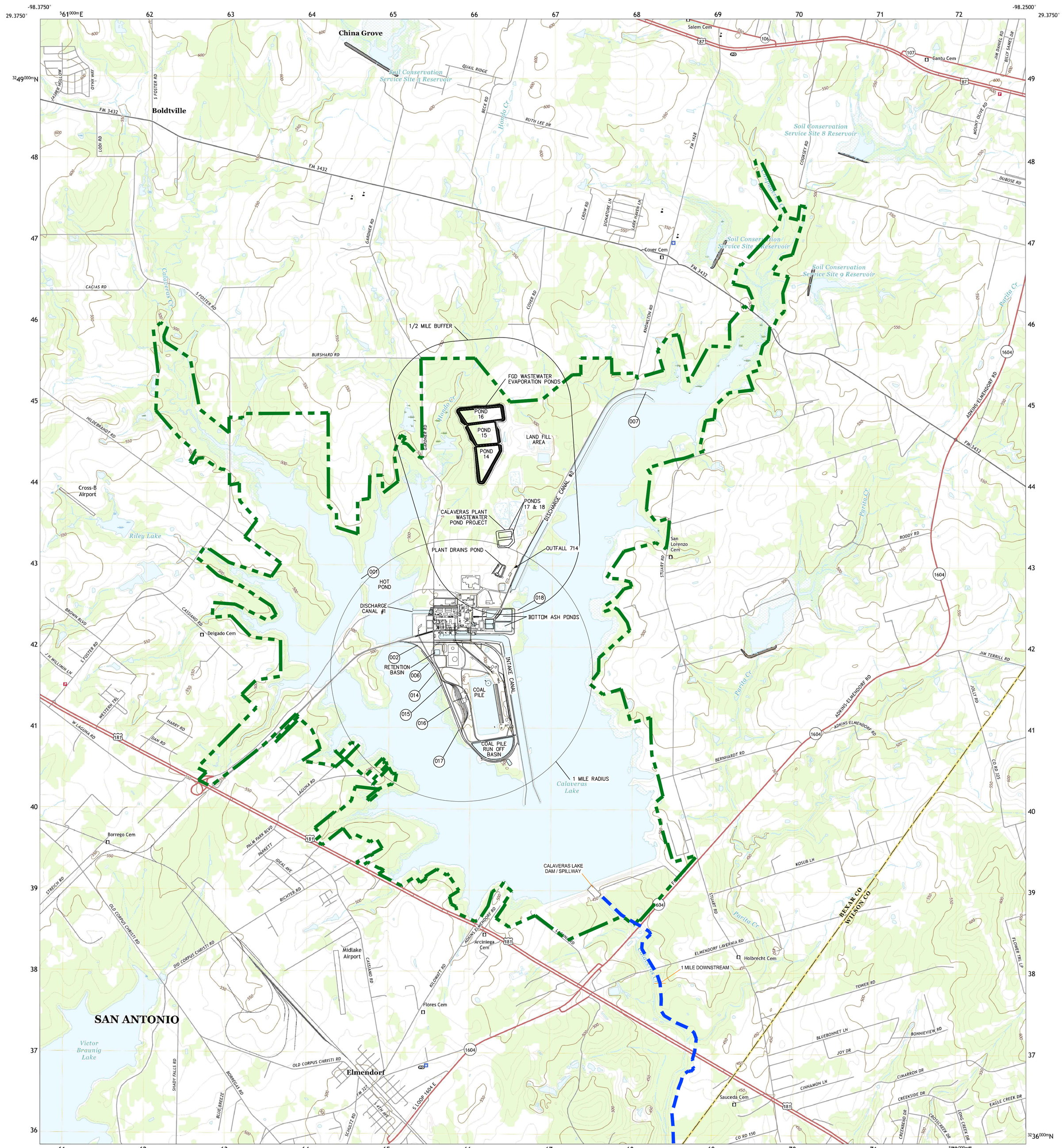
The property was undeveloped before its first development as a power generating facility. The subsequent construction dates are associated with plant expansions. The architect/builder is not known.

USGS science for a changing world

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

The National Map US Topo

ELMENDORF QUADRANGLE
TEXAS
7.5-MINUTE SERIES



Produced by the United States Geological Survey
North American Datum of 1983 (NAD83)
World Geodetic System of 1984 (WGS84). Projection and
1 000-meter grid:Universal Transverse Mercator, Zone 14R

This map is not a legal document. Boundaries may be generalized for this map scale. Private lands within government reservations may not be shown. Obtain permission before entering private lands.

Imagery.....NAIP, September 2016 - November 2016
Roads..... U.S. Census Bureau, 2015
Names.....GNIS, 1979 - 2018
Hydrography.....National Hydrography Dataset, 2000 - 2018
Contours.....National Elevation Dataset, 2003
Boundaries.....Multiple sources; see metadata file 2016 - 2017

Wetlands.....FWS National Wetlands Inventory 1983

MN
GN
4°0′ 71 MILS
0°20′ 6 MILS
UTM GRID AND 2019 MAGNETIC NORTH DECLINATION AT CENTER OF SHEET

U.S. National Grid
100,000 - m Square ID
NT
Grid Zone Designation 14R

SCALE 1:24 000
1 0.5 0 KILOMETERS 1 2
1000 500 0 METERS 1000 2000
1 0.5 0 1
MILES
1000 0 1000 2000 3000 4000 5000 6000 7000 8000 9000 10000
FEET

CONTOUR INTERVAL 10 FEET
NORTH AMERICAN VERTICAL DATUM OF 1988

This map was produced to conform with the National Geospatial Program US Topo Product Standard, 2011.
A metadata file associated with this product is draft version 0.6.18

TEXAS
QUADRANGLE LOCATION

1	2	3
4		5
6	7	8

ADJOINING QUADRANGLES
1 San Antonio East
2 Martinez
3 Saint Hedwig
4 Southton
5 La Vernia SW
6 Losoya
7 Saspamco
8 Floresville

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

3 MILE DISCHARGE ROUTE
PROPERTY BOUNDARY

ELMENDORF, TX
2019

ATTACHMENT I

WW GENERAL PROCESSES

Attachment I

Technical Report Items 1 and 2

Wastewater Generating Processes and Treatment by Outfall

The Calaveras Plant generates process wastewater subject to Categorical Effluent Guidelines under 40 Code of Federal Regulations (CFR) 423, cooling water, low volume waste sources (ion exchange water treatment systems, laboratory and sampling streams, boiler blowdown, floor drains, cooling tower basin cleaning wastes, recirculating house service water systems), utility waste waters, sanitary wastewater, and stormwater associated with industrial activity. These waste streams and their treatment are summarized in the table below:

Outfall	Waste Streams	Treatment
001	Once-through cooling water, previously monitored effluents (PMEs), stormwater, MSGP non-stormwater, utility water, uncontaminated stormwater, from secondary containments, stormwater runoff from material storage areas and occasional construction-related activities	Settling; previously monitored effluent – Domestic Wastewater-Aeration, clarification, and disinfection; Low volume waste – Oil/water separation
101 *102*	Low volume waste sources (water treatment wastes), and low volume waste sources, polisher wastewater and water treatment bulk chemical secondary containments	Aeration and neutralization
104	Coal pile runoff, floor and yard drains, stormwater, MSGP non-stormwater, utility wastewater, uncontaminated stormwater from secondary containments, stormwater runoff from material storage areas and occasional construction-related activities, stormwater from railcar facilities, railroad tracks, coal transfer conveyor areas, car and equipment wash water, treated domestic wastewater from internal Outfall 110	Car Wash and equipment wash: Pre-treatment is grit trap and oil/water separation; domestic wastewater: aeration, clarification, and disinfection. Final treatment is settling and clarification (Pond # 2)
108	Boiler blowdowns	None
110	Treated domestic wastewater	Aeration, clarification, and disinfection
111	Stormwater and washdown water from plant yard drains	Sedimentation and evaporation (Pond # 5)

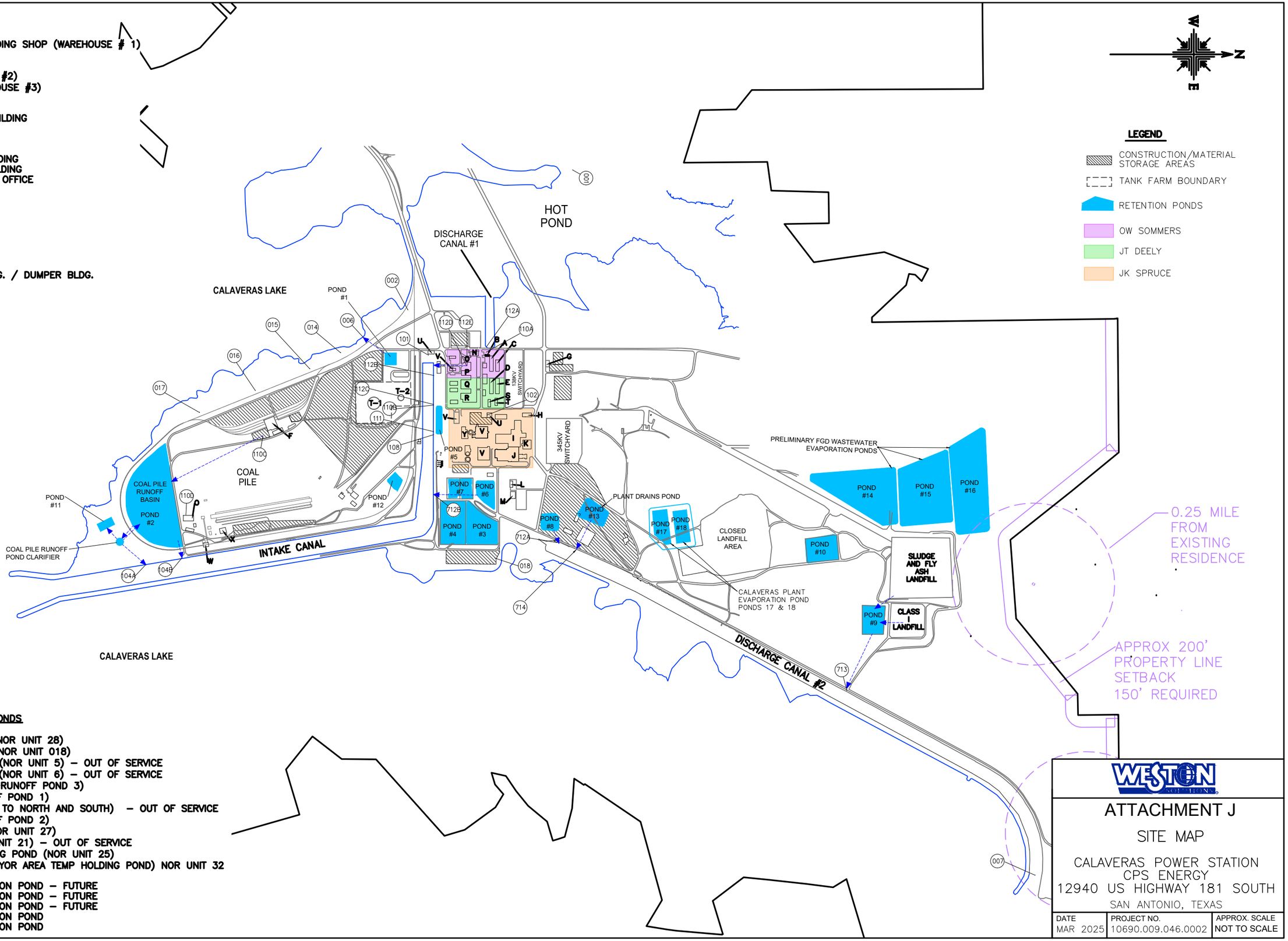
Outfall	Waste Streams	Treatment
112	Low volume waste sources (boiler blowdown, floor and yard drains), car and equipment wash water, MSGP non-stormwater, stormwater, utility wastewater, uncontaminated stormwater from secondary	Oil /water separation
002	Low volume waste sources (floor and yard drains, reverse osmosis reject water), screen wash, stormwater, stormwater runoff from material storage areas and occasional construction-related activities, utility wastewater, uncontaminated stormwater from secondary containment	None, process waters and some stormwaters – oil/water separation
006	Stormwater	Sedimentation, evaporation, and oil/water separation (Pond # 1)
007	Once-through cooling water, PMEs, stormwater runoff from material storage areas and occasional construction-related activities, MSGP non-stormwater, utility wastewater, uncontaminated stormwater from secondary containments	Settling, PMEs – domestic wastewater – aeration, clarification, and disinfection, low volume waste – oil/water separation
712	Stormwater, stormwater runoff from material storage areas and occasional construction-related activities, steam condensate tank overflow and contents, Fire water/lake water, MSGP non-stormwater, wash water, utility wastewater, uncontaminated stormwater from secondary containment	Sedimentation, settling (Pond # 6 and Pond # 8)
713	Stormwater, landfill stormwater	Sedimentation, oil/water separation and evaporation (Pond # 9 – Fly Ash Retention Pond)
714	FGD wastewater, low volume waste sources, auxiliary cooling water area drains, quench water, washdown water, and utility wastewater	Pond 13 and Pond 13 clarifier
014, 016, 017, & 018	Stormwater, stormwater runoff from material storage areas and occasional construction-related activities, MSGP non-stormwater	None

ATTACHMENT J

SITE MAP

PLANT WORK AREA

- A GMS / ELECTRICAL / WELDING SHOP (WAREHOUSE # 1)
- B SEWAGE TREATMENT
- C THORPE WAREHOUSE
- D STORE ROOM (WAREHOUSE #2)
- E 591 STORE ROOM (WAREHOUSE #3)
- F RAIL CAR MAINTENANCE
- G FUEL ISLAND
- H GENERATION OPERATION BUILDING
- I JK SPRUCE 1
- J JK SPRUCE 2
- K JK SPRUCE OFFICE
- L ENGINEERING SERVICE BUILDING
- M CONSTRUCTION OFFICE BUILDING
- N JT DEELY & OW SOMMERS OFFICE
- O OWS 1
- P OWS 2
- Q JTD 1
- R JTD 2
- S WAREHOUSE #4
- T WAREHOUSE #5
- U NEUTRALIZATION BASIN
- V BAG HOUSE
- W COAL CAR UNLOADING BLDG. / DUMPER BLDG.
- X TRANSFER BLDG
- Y BALL MILL



LEGEND

- CONSTRUCTION/MATERIAL STORAGE AREAS
- TANK FARM BOUNDARY
- RETENTION PONDS
- OW SOMMERS
- JT DEELY
- JK SPRUCE

SURFACE RETENTION PONDS

1. DIKED OIL STORAGE AREA (NOR UNIT 28)
2. COAL PILE RUNOFF POND (NOR UNIT 018)
3. NORTH BOTTOM ASH POND (NOR UNIT 5) – OUT OF SERVICE
4. SOUTH BOTTOM ASH POND (NOR UNIT 6) – OUT OF SERVICE
5. STORM WATER (SOUTHWEST RUNOFF POND 3)
6. STORM WATER (CRP RUNOFF POND 1)
7. SRH / FGD POND (DIVIDED TO NORTH AND SOUTH) – OUT OF SERVICE
8. STORM WATER (CRP RUNOFF POND 2)
9. FLY ASH RUNOFF POND (NOR UNIT 27)
10. EVAPORATION POND (NOR UNIT 21) – OUT OF SERVICE
11. CLARIFIER SLUDGE RECYCLING POND (NOR UNIT 25)
12. STORM WATER (COAL CONVEYOR AREA TEMP HOLDING POND) NOR UNIT 32
13. PLANT DRAINS POND
14. FGD WASTEWATER EVAPORATION POND – FUTURE
15. FGD WASTEWATER EVAPORATION POND – FUTURE
16. FGD WASTEWATER EVAPORATION POND – FUTURE
17. FGD WASTEWATER EVAPORATION POND
18. FGD WASTEWATER EVAPORATION POND

WESTON SOLUTIONS, INC.

ATTACHMENT J

SITE MAP

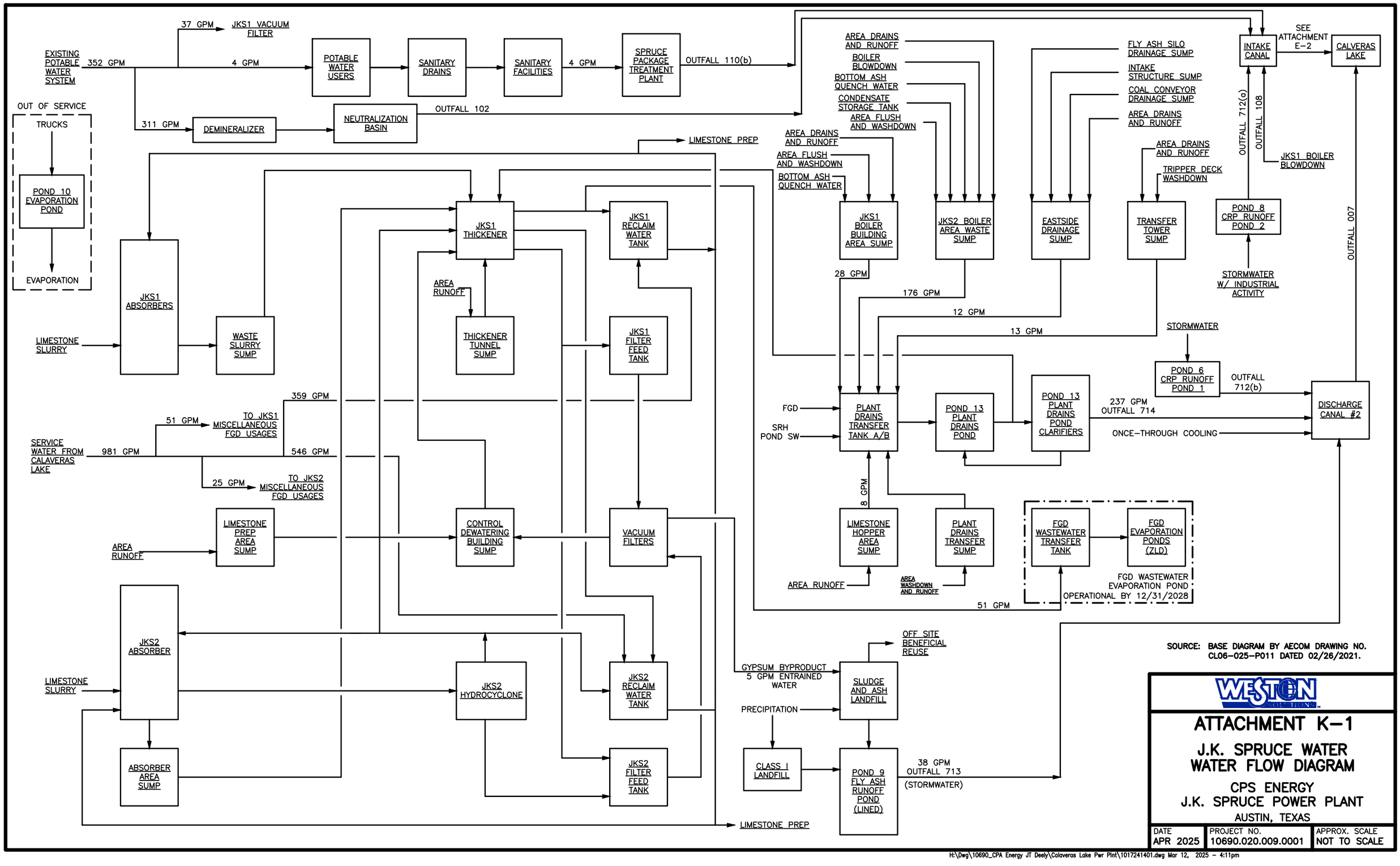
CALAVERAS POWER STATION
CPS ENERGY
12940 US HIGHWAY 181 SOUTH
SAN ANTONIO, TEXAS

DATE	PROJECT NO.	APPROX. SCALE
MAR 2025	10690.009.046.0002	NOT TO SCALE

C:\Users\stasb\Weston Solutions, Inc\Engineering Community - AutoCAD\Projects_Drawn\TCEQ-18_Calaveras Power Plant Map 2.dwg Mar 20, 2025 - 9:35am

ATTACHMENT K

FLOW DIAGRAMS



SOURCE: BASE DIAGRAM BY AECOM DRAWING NO. CL06-025-P011 DATED 02/26/2021.

WESTON SOLUTIONS, INC.

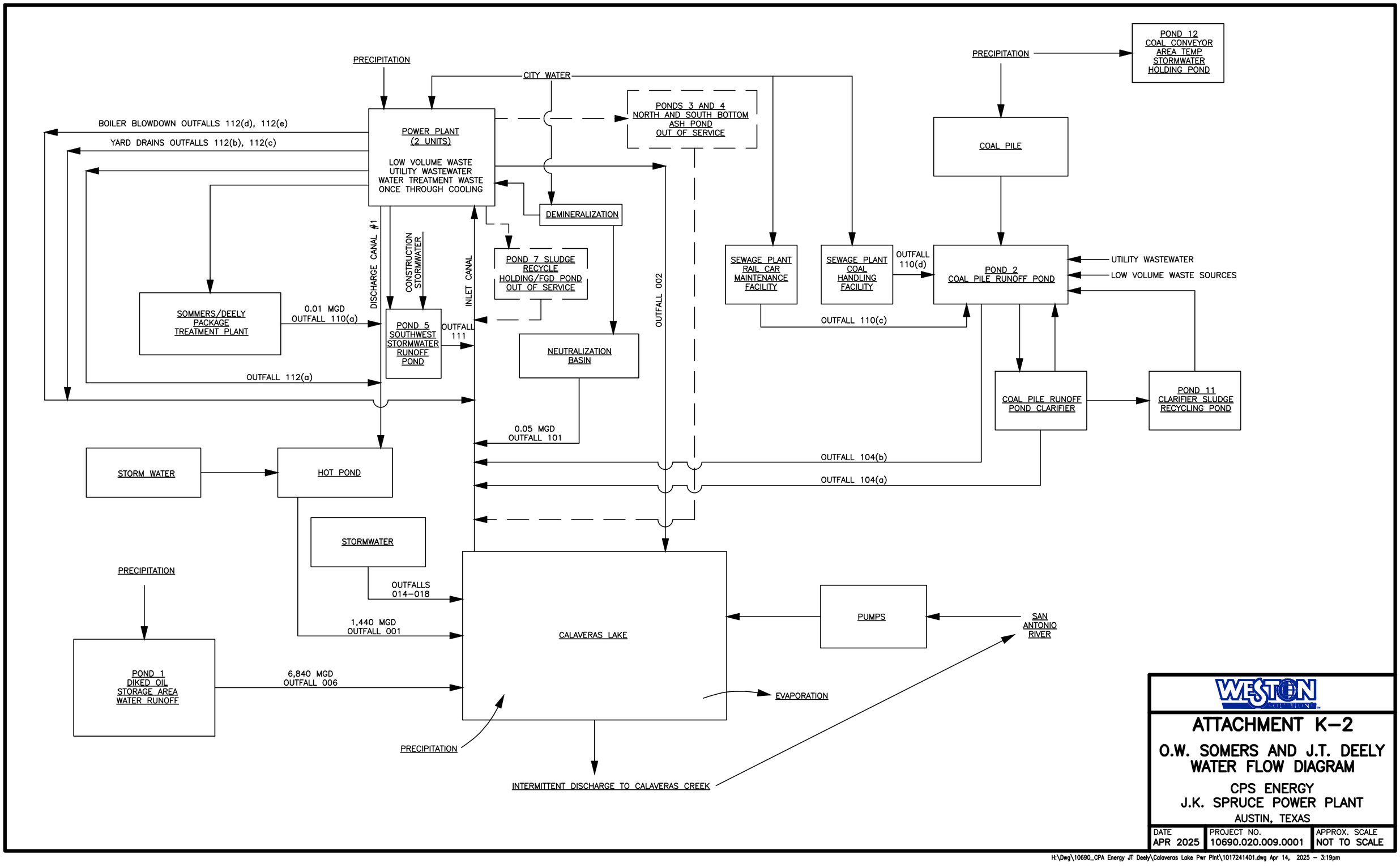
ATTACHMENT K-1

J.K. SPRUCE WATER WATER FLOW DIAGRAM

CPS ENERGY
J.K. SPRUCE POWER PLANT
AUSTIN, TEXAS

DATE	PROJECT NO.	APPROX. SCALE
APR 2025	10690.020.009.0001	NOT TO SCALE

H:\Dwg\10690_CPA Energy JT Deely\Calaveras Lake Pwr Plnt\1017241401.dwg Mar 12, 2025 - 4:11pm



ATTACHMENT K–2

O.W. SOMERS AND J.T. DEELY WATER FLOW DIAGRAM

CPS ENERGY
J.K. SPRUCE POWER PLANT
AUSTIN, TEXAS

DATE	PROJECT NO.	APPROX. SCALE
APR 2025	10690.020.009.0001	NOT TO SCALE

H:\Dwg\10690_CPA Energy JT Deely\Calaveras Lake Pwr Plnt\1017241401.dwg Apr 14, 2025 – 3:19pm

ATTACHMENT L

TECH REPORT ITEM 3 IMPOUNDMENT INFORMATION

Attachment L-Existing Surface Impoundment Information

Description	Diked Oil Storage Area (NOR Unit 28)	Coal Pile Runoff Pond (NOR Unit 018)	North Bottom Ash Pond (NOR UnIt 5), alternate use with Pond # 4	South Bottom Ash Pond (NOR UnIt 6), alternate use with Pond # 3
Year constructed (approx)	**Pond # 1 - 1974**	**Pond # 2 - Pre 1977**	**Pond # 3 - 1977**	**Pond # 4 - 1977**
Use Designation (T, D, C or E)	C	C, T	C	C
Associated Outfall Number	006	104(b), 001		
Liner Type (C), (I), (S)	unknown	unknown	unknown	unknown
Alt. Liner Attachment Reference				
Length (ft)	190		525	702
Width (ft)	190		480	395
Depth from Water Surface (ft)			4	
Avg. Depth from Natural Ground Level (ft)	4		11	11
Max. Depth from Natural Ground Level (ft)				
Freeboard (ft)		8	4.8	
Surface Area (acres)	1	25	6.3	6.4
Storage Capacity (gallons)	0.2 million gallons	32.6 million gallons	17.5 million gallons	22.8 million gallons
Compliance with 40 CFR Chapter 257, Subpart D is required	n/a	n/a	Pond Closure Pending	Pond Closure Pending

Description	Storm Water (Southwest Run Off Pond 3)	Storm Water (CRP Runoff Pond 1)	SRH/FGD Pond (divided to North and South),used alternately	Storm Water (CRP Runoff Pond 2)
Year constructed (approx)	**Pond # 5 - Pre 1992**	**Pond # 6 - Pre 1992**	**Pond # 7 - 1992**	**Pond # 8 - Pre 1992**
Use Designation (T, D, C or E)	C	C	C, T	C
Associated Outfall Number	111, 001	712 (b), 007	formerly 109, 001	712 (a) & 007
Liner Type (C), (I), (S)	unknown	unknown	compacted sand over concrete, 30 Mil HDPE, geotextile	unknown
Alt. Liner Attachment Reference				
Length (ft)	430	410	342.5	200
Width (ft)	77.2	237	414	200
Depth from Water Surface (ft)				
Avg. Depth from Natural Ground Level (ft)	5	6	4	2.5
Max. Depth from Natural Ground Level (ft)				
Freeboard (ft)			2.17	
Surface Area (acres)	1	1.9	3.2	0.92
Storage Capacity (gallons)	1.24 million gallons	3.6 million gallons	9 million gallons	750K gallons
Compliance with 40 CFR Chapter 257, Subpart D is required	n/a	n/a	yes; Pond inactive - to be closed after 2028	n/a

Description	Fly Ash Run off Pond (NOR Unit 27)	Evaporation Pond (NOR Unit 21)	Clarifier Sludge Recyling Pond (NOR Unit 25)	Storm Water (coal conveyor area temporary holding pond) (NOR Unit 32)
Year constructed (approx)	**Pond # 9 - 1992**	**Pond # 10 - 1990**	**Pond # 11 - Pre 1977**	**Pond # 12 - Pre 1977**
Use Designation (T, D, C or E)	C, T	E	C (temporary holding area for the clarifier sludge; sludge recycled back into the coal pile runoff pond)	C
Associated Outfall Number	713 & 007	No Discharge	No Discharge	No Discharge
Liner Type (C), (I), (S)	clay, PVC,	PVC, 30 mil HDPE	unknown	unknown
Alt. Liner Attachment Reference				
Length (ft)	454	360	250	
Width (ft)	360	500	125	
Depth from Water Surface (ft)				
Avg. Depth from Natural Ground Level (ft)		9		
Max. Depth from Natural Ground Level (ft)				
Freeboard (ft)				
Surface Area (acres)	3.53	4.13	0.72	1.44
Storage Capacity (gallons)	9.2 million gallons		470K gallons	

Compliance with 40 CFR Chapter 257, Subpart D is required	yes	Yes: Out of service	n/a	n/a

Description	New Low Volume Waste Pond (Plant Drains Pond)	FGD Wastewater Evaporation Pond (South Cell)	FGD Wastewater Evaporation Pond (North Cell)	
Year constructed	**Pond # 13 - 2023**	**Pond # 17 - 2022**	**Pond # 18 - 2022**	
Use Designation (T, D, C or E)	C, T	E	E	
Associated Outfall Number	714 & 007	No Discharge	No Discharge	
Liner Type (C), (I), (S)	Geosynthetic Clay & Geomembrane	Geomembrane and Clay	Geomembrane and Clay	
Alt. Liner Attachment Reference				
Length (ft)	470	610 (max)	560	
Width (ft)	350	320 (max)	270	
Depth from Water Surface (ft)	4'8" - 5'2"	0	0	
Avg. Depth from Natural Ground Level (ft)				
Max. Depth from Natural Ground Level (ft)		4	5.5	
Freeboard (ft)	2	2	2	
Surface Area (acres)	3.35	3.38	3.4	
Storage Capacity (gallons)	~6 million gallons	2.85 million gallons	2.95 million gallons	
Compliance with 40 CFR Chapter 257, Subpart D is required	yes	yes	yes	

Attachment L-Proposed Surface Impoundments (Preliminary Information-Final Location and Design TBD)				
PARAMETER	**Pond # 14***	**Pond # 15***	**Pond # 16***	
Description	FGD Waste Evaporation Pond	FGD Waste Evaporation Pond	FGD Waste Evaporation Pond	
Use Designation (T, D, C or E)	E	E	E	
Associated Outfall Number	No Discharge	No Discharge	No Discharge	
Liner Type (C), (I), (S)	TBD	TBD	TBD	
Alt. Liner Attachment Reference	TBD	TBD	TBD	
Length (ft)	TBD	TBD	TBD	
Width (ft)	TBD	TBD	TBD	
Depth from Water Surface (ft)	TBD	TBD	TBD	
Avg. Depth from Natural Ground Level (ft)	TBD	TBD	TBD	
Max. Depth from Natural Ground Level (ft)	TBD	TBD	TBD	
Freeboard (ft)	TBD	TBD	TBD	
Surface Area (acres)	TBD	TBD	TBD	
Storage Capacity (gallons)	TBD	TBD	TBD	
Compliance with 40 CFR Chapter 257, Subpart D is required	yes	yes	yes	

*Pending final location and design

ATTACHMENT M

TECH REPORT ITEM 4 WASTESTREAM CONTRIBUTIONS

Wastestream Contributions

Attachment M

Outfall No.: 001

Contributing Wastestreams	Volume (MGD)	% of Total Flow
Once-through cooling water	1440	99.99
Previously monitored effluent (treated domestic wastewater, coal pile runoff, FGD wastewater, low volume wastes, utility water, and uncontaminated stormwater from secondary containments)	Variable	Variable
Stormwater runoff from plant area, intake canal, and hot pond area	Variable	Variable
Stormwater runoff from material storage areas and occasional construction activities	Variable	Variable
MSGP non-stormwater sources	Variable	Variable
Stormwater	Variable	Variable
Utility water	Variable	Variable
Uncontaminated stormwater from secondary containments	Variable	Variable

Outfall No.: 101

Contributing Wastestreams	Volume (MGD)	% of Total Flow
Ion exchange (demineralizer) water treatment wastes	Intermittent and variable	99
Reverse osmosis reject water	Intermittent and variable	Variable
Other water treatment wastes	Intermittent and variable	Variable
Water treatment bulk chemical secondary containments	Variable	Variable

Outfall No.: 102

Contributing Wastestreams	Volume (MGD)	% of Total Flow
Ion exchange (demineralizer) water treatment wastes	Intermittent and variable	99
Reverse osmosis reject water (new RO system)	Intermittent and variable	TBD
Polisher wastewater	Intermittent and variable	Variable
Other water treatment wastes, including pilot study waste streams	Intermittent and variable	Variable
Water treatment bulk chemical secondary containments	Variable	Variable

Outfall No.: 104 (a) and (b)

Contributing Wastestreams	Volume (MGD)	% of Total Flow
Coal pile runoff, including water from dust suppression system	Intermittent and variable	99
Treated domestic effluent from the rail car maintenance and coal handling facility sewage package treatment plants	Intermittent and variable	Variable

Contributing Wastestreams	Volume (MGD)	% of Total Flow
Floor and yard drains	Intermittent and variable	Variable
Equipment wash and car wash water	Intermittent and variable	Variable
Stormwater from railcar facilities, railroad tracks, and coal transfer conveyor areas	Intermittent and variable	Variable
Stormwater runoff from material storage areas and occasional construction-related activities	Intermittent and variable	Variable
MSGP non-stormwater	Intermittent and variable	Variable
Utility water	Intermittent and variable	Variable
Uncontaminated stormwater from secondary containments	Intermittent and variable	Variable

Outfall No.: 108

Contributing Wastestreams	Volume (MGD)	% of Total Flow
Boiler blowdown (Spruce unit 1)	Intermittent and variable	Variable

Outfall No.: 110

Contributing Wastestreams	Volume (MGD)	% of Total Flow
Treated sewage effluent from four sewage package treatment plants	0.04 to 0.08	100

Outfall No.: 111

Contributing Wastestreams	Volume (MGD)	% of Total Flow
Stormwater associated with industrial activity (runoff from Deely plant area, material storage) and MSGP non-stormwater discharges	Intermittent and variable	Variable
Occasional construction stormwater (including runoff from equipment and material storage areas)	Intermittent and variable	Variable
Miscellaneous wash down water	Intermittent and variable	Variable
Low-volume wastewater	Intermittent and variable	Variable
Utility water	Intermittent and variable	Variable

Outfall No.: 112 (a),(b), (c), (d) and (e)

Contributing Wastestreams	Volume (MGD)	% of Total Flow
Consists of three floor and yard drains and two boiler blowdowns		
Floor and yard drains (112 a, b, and c)	Intermittent and variable	Variable
Boiler blowdown (112 (d), (e))	Intermittent and variable	Variable
Car and equipment wash water	Intermittent and variable	Variable
Stormwater and MSGP non-stormwater	Intermittent and variable	Variable
Uncontaminated stormwater from secondary containments	Intermittent and variable	Variable
Utility water	Intermittent and variable	Variable

Outfall No.: 002

Contributing Wastestreams	Volume (MGD)	% of Total Flow
Reverse osmosis reject water	Intermittent and variable	Variable
Floor and yard drains	Intermittent and variable	Variable
Screen wash	Intermittent and variable	Variable
Stormwater runoff from material storage areas and occasional construction-related activities	Intermittent and variable	Variable
Miscellaneous wash water	Intermittent and variable	Variable
Stormwater	Intermittent and variable	Variable
Utility water	Intermittent and variable	Variable
Uncontaminated stormwater from secondary containments	Intermittent and variable	Variable

Outfall No.: 006

Contributing Wastestreams	Volume (MGD)	% of Total Flow
Stormwater runoff from the diked oil storage area, fuel unloading station, and retention basin	Intermittent and variable	Variable
Stormwater runoff from material storage area and occasional construction-related activities	Intermittent and variable	Variable
MSGP non-stormwater discharges	Intermittent and variable	Variable

Outfall No.: 007

Contributing Wastestreams	Volume (MGD)	% of Total Flow
Once through cooling water	1440 to 1800	99.99
Domestic wastewater, coal pile runoff, FGD wastewater, low-volume wastes, utility water, and uncontaminated stormwater from secondary containments	Intermittent and variable	Variable
Stormwater runoff from the plant area and other facilities discharging into the intake canal and Spruce discharge canal (Discharge Canal #2)	Intermittent and variable	Variable
Stormwater runoff from material storage areas and occasional construction-related activities	Intermittent and variable	Variable
MSGP non-stormwater	Intermittent and variable	Variable
Stormwater	Variable	Variable
Utility water	Variable	Variable
Uncontaminated stormwater from secondary containments	Variable	Variable

Outfall No.: 712

Contributing Wastestreams	Volume (MGD)	% of Total Flow
Stormwater associated with industrial activity (includes stormwater runoff from the Spruce plant, baghouse, and 345-kv switchyard areas, and containment areas) and MSGP non-stormwater discharges	Intermittent and variable	Variable
Construction stormwater	Intermittent and variable	Variable
Steam condensate tank overflow and contents**	Intermittent and variable	Variable

Contributing Wastestreams	Volume (MGD)	% of Total Flow
Fire water/lake water discharges	Intermittent and variable	Variable
Wash water	Intermittent and variable	Variable
Utility water	Variable	Variable

**The steam condensate tank is inspected every 2 years and may be drained via stormwater sumps to Pond #6 (Outfall 712(b)). Potential reroute to low-volume waste pond, Pond #13.

Outfall No.: 713

Contributing Wastestreams	Volume (MGD)	% of Total Flow
Stormwater runoff from the landfill areas (sludge and fly ash disposal areas, Class 1 landfill, and retention pond)	Intermittent and variable	Variable

Outfall No.: 714

Contributing Wastestreams	Volume (MGD)	% of Total Flow
FGD system waste streams	Intermittent and variable	Majority of flow
Boiler blowdown (Spruce unit 2)	Intermittent and variable	Variable
Floor and yard drains and sumps (Spruce plant area)	Intermittent and variable	Variable
Auxiliary cooling water area drains	Intermittent and variable	Variable
Miscellaneous plant wash down water	Intermittent and variable	Variable
Stormwater	Intermittent and variable	Variable
Other low-volume wastes	Intermittent and variable	Variable
Treatment technology optimization waste streams (pilot test waters)	Intermittent and variable	Variable
Utility water	Intermittent and variable	Variable

Outfall No.: 014, 015, 016, 017, 018

Contributing Wastestreams	Volume (MGD)	% of Total Flow
Stormwater associated with industrial activity (primarily railroad track areas) and MSGP non-stormwater discharges	Variable and intermittent	Variable
Occasional construction stormwater, including associated material and equipment staging areas	Variable and intermittent	Variable

ATTACHMENT N

TECH REPORT ITEM 5 BOILER CHEMICAL SUMMARY

ATTACHMENT N
SUMMARY OF COOLING TOWER AND BOILER CHEMICALS

Manufacturer	Chemical Name or Manufacturer's Product Identification/ Number	Product Use	Chemical Composition	Corresponding CAS Number	Toxicity: Species and test	Toxicity: LC50 and NOEL / Lethal Concentration / No Observed Effect Level		Toxicity for Whole Product?	Persistent / Non-persistent / bioaccumulative	Product or active ingred. half life: time	half life: pH	half life: Temp	Concentration of Product in Blowdown	Frequency of Product Use	Source[1]	Outfall(s)[2]
ICL	Tri-Sodium Phosphate	pH adjustment and raw water ingress control	Tri-Sodium Phosphate (100%)	7601-54-9	Bluegill Sunfish - 96h	LC50	220 mg/L	Product					≤ 4 ppm	1 lbs/day (OWS/JTD Boiler) < 0.1 lbs/day (JKS 1 & 2 Boilers)	OWS/JTD Boiler JKS 1 Boiler JKS 2 Boiler	001, 007
					Rainbow Trout - 96h	LC50	120 mg/L	Product								
					Daphnia - 50h	LC50	177 mg/L	Product								
Avantor	Sodium Hydroxide	pH adjustment	Sodium Hydroxide(20-40%)	1310-73-2	Western Mosquitofish - 96h	LC50	125 mg/L	Product					≤ 0.413 ppm	0.1 lbs/year	OWS/JTD Boiler JKS 1 Boiler JKS 2 Boiler	001, 007
					Lepomis Macrochirus - 48h	LC50	99 mg/L	Product								
					Ophrytocha Diadema - 48 h	LC50	33-100 mg/L	Product								
					Cockle - 48 h	LC50	330 - 1,000 mg/L	Product								
GC3	Hydrazine 35%	pH adjustment and dissolved oxygen control	Hydrazine (35%)	301-01-2	Fathead Minnow - 96h	LC50	5.98 mg/L	Hydrazine					0 ppm (breaks down upon application)	5 lbs/day (per boiler)	OWS/JTD Boiler JKS 1 Boiler JKS 2 Boiler	001, 007
					Fathead Minnow - 96h	LC50	2.84 mg/L	Hydrazine								
			Hydroquinone (< 1%)	123-31-9	Daphnia Pulex Larvae - 48h	LC50	0.16 mg/L	Hydrazine								
GC[3]	Aqua Ammonia 19%	pH control	Ammonium Hydroxide (39%)	1336-21-6	Fathead Minnow - 48h	LC50	7 mg/L	Ammonium Hydroxide					≤ 0.5 ppm	0.1 lbs/year (OWS/JTD Boiler & JKS 1 Boiler) 4 lbs/day (JKS 2 Boiler)	OWS/JTD Boiler JKS 1 Boiler JKS 2 Boiler	001, 007
					Water Flea - 100h	LC50	20 mg/L	Ammonium Hydroxide								
Sigma Aldrich	3-Methoxypropylamine	pH control	3-Methoxypropylamine (100%)	5332-73-0	Not Available	Not Available		Not Available					< 1 ppm (breaks down upon application)	4 lbs/day (OWS/JTD Boiler & JKS 2 Boiler) 1 lbs/day (JKS 1 Boiler)	OWS/JTD Boiler	001, 007
Suez	Steammate HRSG04	Condensate corrosion inhibitor and pH control	Cyclohexylamine (10-20%)	108-91-8	Fathead Minnow - 96h	LC50	1.4 mg/L	Product					< 1 ppm (breaks down upon application)	< 0.1 lbs/day	OWS/JTD Boiler	001, 007
					Mysid Shrimp - 96h	LC50	0.58 mg/L	Product								
			Ethanolamine (10-20%)	141-43-5	Fathead Minnow - 96h	NOEL	1 mg/L	Product								
					Mysid Shrimp - 96h	NOEL	0.25 mg/L	Product								
			Alkyl Diaminopropane (2.5-10%)	7173-62-8	Daphnia Magna - 48h	LC50	1.4 mg/L	Product								
					Daphnia Magna - 48h	NOEL	1 mg/L	Product								
			Oleylamine (1-2.5%)	112-90-3	Rainbow Trout - 96h	LC50	1.5 mg/L	Product								
					Rainbow Trout - 96h	NOEL	1 mg/L	Product								
Univar	Sodium Hypochlorite, 10-16%	Condenser sanitation	Sodium Hypochlorite (10-16%)	7681-52-9	Bluegill - 96h	LC50	2.2-2.64 mg/L	Sodium Hypochlorite					Not detectable	7,020 lbs/day (OWS/JTD CW) 3,600 lbs/day (JKS 1 & 2 CWs)	OWS/JTD CW JKS 1 CW JKS 2 CW	001, 007
			Sodium Hydroxide (0.3-5%)	1310-73-2	Western Mosquitofish - 24h	LC50	125 mg/L	Sodium Hydroxide								
					Guppy - 24h	LC50	145 mg/L	Sodium Hydroxide								
			Water (80-89.7%)	7732-18-5	Goldfish - 24h	LC50	160 mg/L	Sodium Hydroxide								
Tetra	Sodium Bromide, 40%	Condenser sanitation	Sodium Bromide (1-48%)	7647-15-6	Not Available	Not Available		Not Available					Not detectable	2,685 lbs/day (OWS/JTD CW) 1,401 lbs/day (JKS 1 & 2 CWs)	OWS/JTD CW JKS 1 CW JKS 2 CW	001, 007
GC[3]	D-281 CPS	CaCO3 Scale Inhibitor	Polyacrylic Acid (5-20%)	9003-01-4	Bluegill	LC50	>2.5 mg/L	Polymaleic Acid					0.233 ppm	1,453 lbs/day (OWS/JTD CW) 1,506 lbs/day (JKS 1 CW) 2,133 lbs/day (JKS 2 CW)	OWS/JTD CW JKS 1 CW JKS 2 CW	001, 007
			2-Phosphobutane-1,2,4-tricarboxylic acid (5-20%)	37971-36-1	Water Flea	LC50	>1.0 mg/L	Polymaleic Acid								
			Polymaleic Acid (1-10%)	26099-09-2	Brown Shrimp	LC50	>0.6 mg/L	Polymaleic Acid								
			Sodium Hydroxide (0-5%)	1310-73-2												
GC[3]	D-282 CPS	CaCO3 Scale Inhibitor	1-Hydroxyethylidene-1,1-diphosphoric acid (20-21%)	2809-21-4	Bluegill - 96h	LC50	868 mg/L	CAS # 2809-21-4					0.465 ppm	< 0.1 lbs/day	OWS/JTD CW JKS 1 CW JKS 2 CW	001, 007
			Sodium Polyacrylate (5-10%)	9003-07-7	Rainbow trout - 96h	LC50	368 mg/L	CAS # 2809-21-4								
			Acrylic Terpolymer (3-5%)	N/A	Bluegill - 96h	LC50	> 1,000 mg/L	Sodium Polyacrylate								
			Sodium Hydroxide (1-3%)	1310-73-2	Rainbow trout - 96h	LC50	> 1,000 mg/L	Sodium Polyacrylate								
Buckman	BULAB 7145	CaCO3 Scale Inhibitor	Organic Phosphonate (proprietary)	N/A	Daphnia - 48h	LC50	340 mg/L	Product					0.233 ppm	< 0.1 lbs/day	OWS/JTD CW JKS 1 CW JKS 2 CW	001, 007
			Maleic Acid (< 1%)	110-16-7	Fish - 48h	LC50	362 mg/L	Product								

1 CW = Once-Through Cooling Water
2 Boiler water from all plants goes through both Outfalls 001 and 007
CW from OWS/JTD goes through Outfall 001 and CW from JKS 1 goes through Outfall 007

Safety Data Sheet

Where needs take us

RESPONSIBLE CARE®
OUR COMMITMENT TO SUSTAINABILITY

This product is distributed by
Canada Colors and Chemicals Limited
General Inquiry: (905) 459-1232
24 Hour Emergency: (416) 444-2112
CCC: Product Code: 940156
CCC: Product Name: TSP ANHYD. FG GRAN <>

1. CHEMICAL PRODUCT AND COMPANY IDENTIFICATION

Identification

Product Name: TRISODIUM PHOSPHATE ANHYDROUS
Reference Number: AST10064
Date: August 31, 2015

Use of the substance or preparation

Industrial and household cleaners, water conditioner, photograph developer bath ingredient, paint remover, denture cleaners, emulsifier and pH control agent for foods. May be used to treat drinking water.

Company/Undertaking Identification

ICL PERFORMANCE PRODUCTS LP
622 Emerson Road - Suite 500
St. Louis, Missouri 63141

Emergency telephone

In USA call CHEMTREC: 1 800 424 9300

Outside the USA, including ships at sea, call CHEMTREC's international and maritime telephone number (collect calls accepted): +1 (703) 527-3887

In Canada call CANUTEC: 1 613 996 6666

General Information: +1 800 244 6169 (Worldwide)

2. HAZARDS IDENTIFICATION

Classification of the substance/preparation

GHS



Warning

GHS07

Skin Irrit. 2 H315 Causes skin irritation.
Eye Irrit. 2 H319 Causes serious eye irritation.
STOT SE 3 H335 May cause respiratory irritation.

H315 - Causes skin irritation.
H319 - Causes serious eye irritation.
H335 - May cause respiratory irritation.

Prevention:

P261 Avoid breathing dust/fume/gas/mist/vapours/spray.
P280 Wear protective gloves/protective clothing/eye protection/face protection.

Response:

P302+P352 IF ON SKIN: Wash with plenty of soap and water.
P305+P351+P338 IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.
P332+P313 If skin irritation occurs: Get medical advice/attention.
P337+P313 If eye irritation persists: Get medical advice/attention.

3. COMPOSITION/INFORMATION ON INGREDIENTS

Substance	CAS No.	%w/w	EINECS No.
Trisodium Phosphate Anhydrous	7601-54-9	100	231-509-8

4. FIRST AID MEASURES

General

Treatment is symptomatic and supportive.

Eye contact

In case of contact with eyes, immediately flush the eyes with plenty of water for at least 15 minutes. Seek medical attention if irritation, pain, swelling, lacrimation, or photophobia persists.

Skin contact

Immediately remove this material from skin and wash with plenty of water. Remove contaminated clothing. Wash clothing and thoroughly clean shoes before reuse.

Inhalation

Inhalation of the dust may cause coughing and sneezing. Remove to fresh air immediately. If not breathing, give artificial respiration. If breathing is difficult, give oxygen.

Ingestion

If victim is conscious and alert, give 2-4 cupfuls of milk or water. Never give anything by mouth to an unconscious person. Do NOT induce vomiting. Get medical attention immediately. Contact a Poison Control Center. Swallowing this product may cause severe nausea, vomiting, abdominal discomfort, and burning sensation.

5. FIRE FIGHTING MEASURES

Extinguishing media

Non-combustible. No special requirement. To extinguish fire use water spray, dry chemical, carbon dioxide, or appropriate foam.

Unsuitable extinguishable media

Non-combustible. No special requirement.

Exposure hazards

No special considerations.

Protective equipment

As a general precaution, firefighters and others exposed, wear self-contained breathing apparatus.

6. ACCIDENTAL RELEASE MEASURES

Personal precautions

Avoid unnecessary exposure and remove all material from eyes, skin and clothing.

Environmental precautions

Small quantities: Avoid discharge into the environment
Large quantities: Avoid discharge into the environmental – See section 15

Method for cleaning up

Sweep, scoop or vacuum spill material, contaminated soil and other contaminated material and place in clean, dry containers for removal. If possible, complete cleanup on a dry basis.

7. HANDLING AND STORAGE

Handling

Do not get in eyes, on skin, or on clothing. Avoid breathing dust. Do not taste or swallow. Use only in adequate ventilation. Wash thoroughly after handling. Remove material from clothing.

Engineering measures

Ensure adequate ventilation. The use of local mechanical exhaust ventilation is preferred at sources of air contamination such as open process equipment.

Storage

Store in cool, dry place to maintain product performance. Product should be stored in sealed containers and be kept free of water due to product corrosivity.

8. EXPOSURE CONTROLS/PERSONAL PROTECTION

Occupational Exposure limit

OSHA and ACGIH have not established specific exposure limits for this material. However, OSHA and ACGIH have established limits for particulates not otherwise regulated (PNOR) and particulates not otherwise classified (PNOC) which are the least stringent exposure limits applicable to dusts.

ACGIH TLV 10 mg/m^3 (inhalable) 8-hr TWA, 3 mg/m^3 (respirable) 8-hr TWA
OSHA PEL 15 mg/m^3 (total dust) 8-hr TWA, 5 mg/m^3 (respirable) 8-hr TWA

Respiratory protection

Avoid breathing dust. In case of insufficient ventilation, use approved respiratory protective equipment as described in OSHA 29 CFR 1910.134 or European Standard EN149.

Hand/Skin protection

Wear protective gloves is recommended; wash hands and contaminated skin thoroughly after handling.

Eye protection

Wear appropriate protective eyeglasses or chemical safety goggles as described in OSHA eye and face regulation in 29 CFR 1910.133 or European Standard EN166.

9. PHYSICAL AND CHEMICAL PROPERTIES

a) Appearance: White free-flowing granular product
b) Odor: None
c) Odor threshold: N/A
d) pH: (as a 1% solution): 11.5 – 12.0
e) Melting point/freezing point: 1340 °C
f) Initial boiling point and boiling range: Undetermined.
g) Flash point: Undetermined
h) Evaporation rate: Undetermined.
i) Flammability (solid, gas) : Undetermined.
j) Upper/lower flammability or explosive limits: Undetermined.
k) Vapor pressure: Undetermined.
l) Vapor density: Undetermined.
m) Relative density: 2.54
n) Solubility(ies) : (g/100g $_{H2O}$): 5.4 @ 0 °C
14.5 @ 25 °C
23.3 @ 40 °C
54.3 @ 60 °C
94.6 @ 100 °C
o) Partition coefficient: n-octanol/water: Undetermined.
p) Auto-ignition temperature: Undetermined.
q) Decomposition temperature: Undetermined.
r) Viscosity: Undetermined.

Chemical Formula: Na_3PO_4

NOTE: These physical data are typical values based on material tested but may vary from sample to sample. Typical values should not be construed as a guaranteed analysis of any specific lot or as specifications for the product.

10. STABILITY AND REACTIVITY

Product is stable under normal conditions of storage and handling.

Conditions to avoid

Store product in dry areas away from moisture. This product could be corrosive to aluminum surfaces due to high pH. When wet, mild steel and brass may be corroded.

Materials to avoid

Incompatible with strong mineral acids, aluminum and moisture.

Hazardous decomposition

Oxides of sodium and phosphorus may form when heated to decomposition

11. TOXICOLOGICAL INFORMATION

Data from ICL Performance Products LP single-dose (acute) animal studies with this material are given below:

Oral - rat LD_{50}:	4,150 mg/kg; slightly toxic
Dermal - rabbit LD_{50}:	>7,940 mg/kg; practically nontoxic
Eye Irritation - rabbit:	corrosive
Skin Irritation - rabbit:	2.2/8.0 (24-hr. exp.); slightly irritating

This product produced no mutagenic effects is standard assays using fruit flies.

12. ECOLOGICAL INFORMATION

Environmental toxicity

The following data have been classified using the criteria adopted by the European Economic Community (EEC) for aquatic organism toxicity.

Invertebrate: 50-hr EC_{50} Daphnia magna:	177 mg/L; Practically Nontoxic
Warmwater fish: 96-hr LC_{50} Bluegill sunfish:	220 mg/L; Practically Nontoxic
Coldwater fish: 96-hr LC_{50} Rainbow trout:	120 mg/L; Practically Nontoxic

No definitive algal data was available for this material.

Environmental fate

Inorganic compounds in contact with the soil, sub-surface or surface waters may be taken up by plants and utilized as essential nutrients. Phosphates may also form precipitates, usually with calcium or magnesium. The resultant compounds are insoluble in water and become a part of the soil or sediment. The term biodegradability, as such, is not applicable to inorganic compounds.

13. DISPOSAL CONSIDERATIONS

This material when discarded is not a hazardous waste as that term is defined by the Resource, Conservation and Recovery Act (RCRA), 40 CFR 261. Dry material may be landfilled or recycled in accordance with local, state and federal regulations. Consult your attorney or appropriate regulatory officials for information on such disposal.

14. TRANSPORT INFORMATION

The data provided in this section is for information only. Please apply the appropriate regulations to properly classify your shipment for transportation.

Road/Rail, Sea and Air

IMDG/UN	Not regulated.
ICAO/IATA passenger aircraft	UN 3077, Environmentally hazardous substance, solid, n.o.s. (contains sodium phosphate, tribasic), 9, PG III*
RID/ADR	Not regulated.
Canadian TDG	Not regulated.
US DOT	UN 3077, Environmentally hazardous substance, solid, n.o.s. (contains sodium phosphate, tribasic), 9, PG III*

* Applies only to a package containing a Reportable Quantity (RQ) of 5000 lbs or more.

15. REGULATORY INFORMATION

Chemical Inventory

USA TSCA:	Listed	Australia	Listed
Canada DSL:	Listed	Korea	Listed
EC:	Listed	Philippines	Listed
Japan	Listed	China	Listed

Other information

Germany: WGK = 1

WHMIS Classification: D2(B) – Materials Causing Other Toxic Effects

SARA Hazard Notification

Hazard Categories under Title III Rules (40 CFR 370):	Immediate
Section 302 Extremely Hazardous Substances:	Not Applicable
Section 313 Toxic Chemical(s):	Not Applicable

CERCLA Reportable Quantity: 5,000 lb. RQ of sodium phosphate, tribasic

Release of more than 5000 pounds of sodium phosphate, tribasic to the environment in a 24-hour period requires notification to the National Response Center (800-424-8802 or 202-426-2675).

This product has been classified in accordance with the hazard criteria of the Canadian Controlled Products Regulation and the MSDS contain all the information required by the Canadian Controlled Products Regulation.

16. OTHER INFORMATION

	Health	Fire	Reactivity	Additional Information
Suggested NFPA Rating	3	0	0	
Suggested HMIS Rating	3	0	0	E E = safety glasses, gloves, dust respirator

Reason for revision: Section 14. Supersedes MSDS dated: May 21, 2015

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SAFETY DATA SHEET

According to US Regulation 29 CFR 1910.1200 (HazCom 2012)

1. Identification

Product identifier: Sodium Hydroxide, Solution

Other means of identification

Product No.: 0312, 0338, 0895, 3729, 400D, 4690, 5000, 5002, 5661, 5668, 5671, 5672, 5674, H385, 30400

Recommended restrictions

Recommended use: For Laboratory, Research or Manufacturing Use.
Restrictions on use: Not determined.

Details of the supplier of the safety data sheet

Manufacturer

Company Name:	Avantor Performance Materials, LLC.
Address:	3477 Corporate Parkway Center Valley, PA 18034
Telephone:	Customer Service: 855-282-6867
Fax:	610-573-2610
Contact Person:	Environmental Health & Safety
E-mail:	info@avantormaterials.com

Emergency telephone number:

CHEMTREC: 1-800-424-9300 within US and Canada

2. Hazard(s) identification

Hazard Classification

Physical Hazards

Corrosive to metal	Category 1

Health Hazards

Skin Corrosion/Irritation	Category 1A
Serious Eye Damage/Eye Irritation	Category 1
Specific Target Organ Toxicity - Single Exposure	Category 3[1.]

Target Organs

1. Respiratory tract irritation.

Unknown toxicity - Health

Acute toxicity, oral	0 %
Acute toxicity, dermal	0 %
Acute toxicity, inhalation, vapor	40 %
Acute toxicity, inhalation, dust or mist	40 %

Environmental Hazards

Acute hazards to the aquatic environment	Category 3

Unknown toxicity - Environment

Acute hazards to the aquatic environment	0 %
Chronic hazards to the aquatic environment	40 %

Label Elements

Hazard Symbol:



Signal Word: Danger

Hazard Statement:
May be corrosive to metals.
Causes severe skin burns and eye damage.
May cause respiratory irritation.
Harmful to aquatic life.

Precautionary Statements

Prevention: Keep only in original packaging. Do not breathe dust/mist/vapors. Use only outdoors or in a well-ventilated area. Wear protective gloves/protective clothing/eye protection/face protection. Wash thoroughly after handling. Avoid release to the environment.

Response: Absorb spillage to prevent material damage. IF SWALLOWED: Rinse mouth. Do NOT induce vomiting. IF ON SKIN (or hair): Take off immediately all contaminated clothing. Rinse skin with water [or shower]. Wash contaminated clothing before reuse. IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing. Immediately call a POISON CENTER/doctor. IF INHALED: Remove person to fresh air and keep comfortable for breathing. Specific treatment (see on this label). Collect spillage.

Storage: Store in a corrosion-resistant container with a resistant inner liner. Store in a well-ventilated place. Keep container tightly closed. Store locked up.

Disposal: Dispose of contents/container to an appropriate treatment and disposal facility in accordance with applicable laws and regulations, and product characteristics at time of disposal.

Hazard(s) not otherwise classified (HNOC): None.

3. Composition/information on ingredients

Mixtures

Chemical Identity	CAS number	Content in percent (%)*
Sodium hydroxide	1310-73-2	20 - 40%

* All concentrations are percent by weight unless ingredient is a gas. Gas concentrations are in percent by volume.

4. First-aid measures

General information: Get medical advice/attention if you feel unwell. Show this safety data sheet to the doctor in attendance.

Ingestion: Call a physician or poison control center immediately. Do NOT induce vomiting. If vomiting occurs, keep head low so that stomach content doesn't get into the lungs.

Inhalation: Move to fresh air. If breathing stops, provide artificial respiration. If breathing is difficult, give oxygen. Call a physician or poison control center immediately.

Skin Contact: Immediately flush with plenty of water for at least 15 minutes while removing contaminated clothing and shoes. Call a physician or poison control center immediately. Wash contaminated clothing before reuse. Destroy or thoroughly clean contaminated shoes.

Eye contact: Immediately flush with plenty of water for at least 15 minutes. If easy to do, remove contact lenses. Call a physician or poison control center immediately. In case of irritation from airborne exposure, move to fresh air. Get medical attention immediately.

Most important symptoms/effects, acute and delayed

Symptoms: Causes severe skin and eye burns. Causes digestive tract burns. Mist or vapor extremely irritating to eyes and respiratory tract.

Hazards: None known.

Indication of immediate medical attention and special treatment needed

Treatment: Symptoms may be delayed.

5. Fire-fighting measures

General Fire Hazards: The product is non-combustible. Product is highly caustic. Wear protective gear if spilled during fire fighting.

Suitable (and unsuitable) extinguishing media

Suitable extinguishing media: The product is non-combustible. Use fire-extinguishing media appropriate for surrounding materials.

Unsuitable extinguishing media: None known.

Specific hazards arising from the chemical: Product is highly caustic. Wear appropriate protective gear if spilled during firefighting. Contact with metals may evolve flammable hydrogen gas.

Special protective equipment and precautions for firefighters

Special fire fighting procedures: Move containers from fire area if you can do so without risk. Use water spray to keep fire-exposed containers cool.

Special protective equipment for fire-fighters: Firefighters must use standard protective equipment including flame retardant coat, helmet with face shield, gloves, rubber boots, and in enclosed spaces, SCBA.

6. Accidental release measures

Personal precautions, protective equipment and emergency procedures: Put on protective equipment before entering danger area. See Section 8 of the SDS for Personal Protective Equipment. Keep unauthorized personnel away. Keep upwind. Ventilate closed spaces before entering them. Do not touch damaged containers or spilled material unless wearing appropriate protective clothing.

Methods and material for containment and cleaning up: Neutralize spill area and washings with dilute acetic acid. Absorb spill with vermiculite or other inert material, then place in a container for chemical waste. Collect in a non-combustible container for prompt disposal. Dike far ahead of larger spill for later recovery and disposal.

Notification Procedures: Inform authorities if large amounts are involved.

Environmental Precautions: Do not contaminate water sources or sewer. Prevent further leakage or spillage if safe to do so. Avoid discharge into drains, water courses or onto the ground.

7. Handling and storage

Precautions for safe handling: Use personal protective equipment as required. Avoid breathing mists or vapors. Avoid contact with eyes, skin, and clothing. Do not taste or swallow. Wash hands thoroughly after handling. Do not eat, drink or smoke when using the product. See Section 8 of the SDS for Personal Protective Equipment.

Conditions for safe storage, including any incompatibilities: Do not store in metal containers. Keep container tightly closed. Store in a well-ventilated place. Store in a dry place.

8. Exposure controls/personal protection

Control Parameters

Occupational Exposure Limits

Chemical Identity	Type	Exposure Limit Values	Source
Sodium hydroxide	Ceiling	2 mg/m3	US. ACGIH Threshold Limit Values (2011)
	Ceil_Time	2 mg/m3	US. NIOSH: Pocket Guide to Chemical Hazards (2010)
	PEL	2 mg/m3	US. OSHA Table Z-1 Limits for Air Contaminants (29 CFR 1910.1000) (02 2006)
	Ceiling	2 mg/m3	US. OSHA Table Z-1-A (29 CFR 1910.1000) (1989)
	Ceiling	2 mg/m3	US. Tennessee. OELs. Occupational Exposure Limits, Table Z1A (06 2008)
	ST ESL	20 µg/m3	US. Texas. Effects Screening Levels (Texas Commission on Environmental Quality) (03 2014)
	AN ESL	2 µg/m3	US. Texas. Effects Screening Levels (Texas Commission on Environmental Quality) (03 2014)
	Ceiling	2 mg/m3	US. California Code of Regulations, Title 8, Section 5155. Airborne Contaminants (08 2010)

Appropriate Engineering Controls	No data available.

Individual protection measures, such as personal protective equipment

General information:	Good general ventilation (typically 10 air changes per hour) should be used. Ventilation rates should be matched to conditions. If applicable, use process enclosures, local exhaust ventilation, or other engineering controls to maintain airborne levels below recommended exposure limits. If exposure limits have not been established, maintain airborne levels to an acceptable level. An eye wash and safety shower must be available in the immediate work area.
Eye/face protection:	Wear safety glasses with side shields (or goggles) and a face shield.
Skin Protection	
Hand Protection:	Chemical resistant gloves
Other:	Wear suitable protective clothing and gloves.
Respiratory Protection:	In case of inadequate ventilation use suitable respirator.
Hygiene measures:	Provide eyewash station and safety shower. Always observe good personal hygiene measures, such as washing after handling the material and before eating, drinking, and/or smoking. Routinely wash work clothing and protective equipment to remove contaminants. Avoid contact with skin. Do not get in eyes. Wash contaminated clothing before reuse.

9. Physical and chemical properties

Appearance

Physical state:	Liquid
Form:	Liquid
Color:	Colorless
Odor:	Odorless
Odor threshold:	No data available.
pH:	14 (20 °C)
Melting point/freezing point:	1 °C
Initial boiling point and boiling range:	115 °C
Flash Point:	not applicable (water-based)
Evaporation rate:	As water
Flammability (solid, gas):	No data available.
Upper/lower limit on flammability or explosive limits	
Flammability limit - upper (%):	No data available.
Flammability limit - lower (%):	No data available.
Explosive limit - upper (%):	No data available.
Explosive limit - lower (%):	No data available.
Vapor pressure:	As water
Vapor density:	As water
Density:	1.26 g/ml (20 °C)
Relative density:	1.26 (20 °C)
Solubility(ies)	
Solubility in water:	Miscible with water.
Solubility (other):	No data available.

Partition coefficient (n-octanol/water):	No data available.
Auto-ignition temperature:	No data available.
Decomposition temperature:	No data available.
Viscosity:	No data available.

10. Stability and reactivity

Reactivity:	Reacts violently with strong acids.
Chemical Stability:	Material is stable under normal conditions.
Possibility of hazardous reactions:	Hazardous polymerization does not occur.
Conditions to avoid:	Avoid contact with oxidizing agents. Reacts violently with strong acids.
Incompatible Materials:	Oxidizing agents. Acids. Maleic Anhydride Halogens. Nitromethane. Contact with metals may evolve flammable hydrogen gas.
Hazardous Decomposition Products:	Sodium oxides

11. Toxicological information

Information on likely routes of exposure

Inhalation:	May cause damage to mucous membranes in nose, throat, lungs and bronchial system.
Skin Contact:	Causes severe skin burns.
Eye contact:	Causes serious eye damage.
Ingestion:	May cause burns of the gastrointestinal tract if swallowed.

Information on toxicological effects

Acute toxicity (list all possible routes of exposure)

Oral
Product: No data available.

Dermal
Product: No data available.

Inhalation
Product: No data available.

Repeated dose toxicity
Product: No data available.

Skin Corrosion/Irritation
Product: Causes severe skin burns.

Serious Eye Damage/Eye Irritation
Product: Causes serious eye damage.

Respiratory or Skin Sensitization
Product: Not a skin sensitizer.

Carcinogenicity
Product: This substance has no evidence of carcinogenic properties.

IARC Monographs on the Evaluation of Carcinogenic Risks to Humans:
No carcinogenic components identified

US. National Toxicology Program (NTP) Report on Carcinogens:
No carcinogenic components identified

US. OSHA Specifically Regulated Substances (29 CFR 1910.1001-1050):
No carcinogenic components identified

Germ Cell Mutagenicity

In vitro
Product: No mutagenic components identified

In vivo
Product: No mutagenic components identified

Reproductive toxicity
Product: No components toxic to reproduction

Specific Target Organ Toxicity - Single Exposure
Product: Respiratory tract irritation.

Specific Target Organ Toxicity - Repeated Exposure
Product: None known.

Target Organs
Specific Target Organ Toxicity - Single Exposure: Respiratory tract irritation.

Aspiration Hazard
Product: Not classified

Other effects: None known.

12. Ecological information

Ecotoxicity:

Acute hazards to the aquatic environment:

Fish
Product: No data available.

Specified substance(s):
Sodium hydroxide — LOAEL (Sander lucioperca, 24 h): >= 35 mg/l
LC 50 (Western mosquitofish (Gambusia affinis), 96 h): 125 mg/l
LC 50 (Lepomis macrochirus, 48 h): 99 mg/l

Aquatic Invertebrates
Product: No data available.

Specified substance(s):

Sodium hydroxide	LC 50 (Ophryotrocha diadema, 48 h): 33 - 100 mg/l LOAEL (Daphnia magna): 40 - 240 mg/l LC 50 (Cockle, 48 h): 330 - 1,000 mg/l EC 50 (Water flea (Ceriodaphnia dubia), 48 h): 34.59 - 47.13 mg/l EC 50 (Ceriodaphnia sp., 48 h): 40.4 mg/l

Chronic hazards to the aquatic environment:

Fish

Product: No data available.

Aquatic Invertebrates

Product: No data available.

Toxicity to Aquatic Plants

Product: No data available.

Persistence and Degradability

Biodegradation

Product: Expected to be readily biodegradable.

BOD/COD Ratio

Product: No data available.

Bioaccumulative potential

Bioconcentration Factor (BCF)

Product: No data available on bioaccumulation.

Partition Coefficient n-octanol / water (log Kow)

Product: No data available.

Mobility in soil: The product is water soluble and may spread in water systems.

Other adverse effects: Harmful to aquatic organisms. The product may affect the acidity (pH-factor) in water with risk of harmful effects to aquatic organisms.

13. Disposal considerations

Disposal instructions: Discharge, treatment, or disposal may be subject to national, state, or local laws. Since emptied containers retain product residue, follow label warnings even after container is emptied.

Contaminated Packaging: Since emptied containers retain product residue, follow label warnings even after container is emptied.

14. Transport information

DOT

UN Number:	UN 1824
UN Proper Shipping Name:	Sodium hydroxide solution
Transport Hazard Class(es)	
Class:	8
Label(s):	8
Packing Group:	II
Marine Pollutant:	No
Special precautions for user:	Not determined.

IMDG

UN Number:	UN 1824
UN Proper Shipping Name:	SODIUM HYDROXIDE SOLUTION
Transport Hazard Class(es)	
Class:	8
Label(s):	8
EmS No.:	F-A, S-B
Packing Group:	II
Marine Pollutant:	No
Special precautions for user:	Not determined.

IATA

UN Number:	UN 1824
Proper Shipping Name:	Sodium hydroxide solution
Transport Hazard Class(es):	
Class:	8
Label(s):	8
Packing Group:	II
Marine Pollutant:	No
Special precautions for user:	Not determined.

15. Regulatory information

US Federal Regulations

TSCA Section 12(b) Export Notification (40 CFR 707, Subpt. D)

None present or none present in regulated quantities.

US. OSHA Specifically Regulated Substances (29 CFR 1910.1001-1050)

None present or none present in regulated quantities.

CERCLA Hazardous Substance List (40 CFR 302.4):

Chemical Identity	Reportable quantity
Sodium hydroxide	1000 lbs.

Superfund Amendments and Reauthorization Act of 1986 (SARA)

Hazard categories

Corrosive to metal
Skin Corrosion or Irritation
Serious eye damage or eye irritation
Specific target organ toxicity (single or repeated exposure)

SARA 302 Extremely Hazardous Substance

None present or none present in regulated quantities.

SARA 304 Emergency Release Notification

Chemical Identity	Reportable quantity
Sodium hydroxide	1000 lbs.

SARA 311/312 Hazardous Chemical

Chemical Identity	Threshold Planning Quantity
Sodium hydroxide	10000 lbs.

SARA 313 (TRI Reporting)

None present or none present in regulated quantities.

Clean Air Act (CAA) Section 112(r) Accidental Release Prevention (40 CFR 68.130):

None present or none present in regulated quantities.

Clean Water Act Section 311 Hazardous Substances (40 CFR 117.3):

Chemical Identity	Reportable quantity
Sodium hydroxide	Reportable quantity: 1000 lbs.

US State Regulations

US. California Proposition 65

No ingredient regulated by CA Prop 65 present.

US. New Jersey Worker and Community Right-to-Know Act

Chemical Identity
Sodium hydroxide

US. Massachusetts RTK - Substance List

Chemical Identity
Sodium hydroxide

US. Pennsylvania RTK - Hazardous Substances

Chemical Identity
Sodium hydroxide

US. Rhode Island RTK

Chemical Identity
Sodium hydroxide

International regulations

Montreal protocol

not applicable

Stockholm convention

not applicable

Rotterdam convention

not applicable

Kyoto protocol

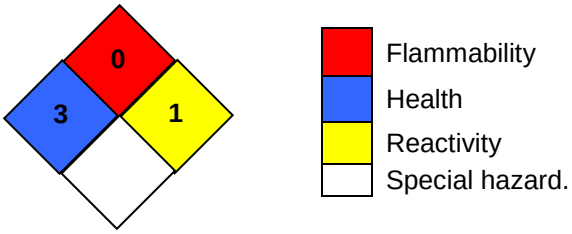
not applicable

Inventory Status:

Australia AICS:	On or in compliance with the inventory
Canada DSL Inventory List:	On or in compliance with the inventory
EINECS, ELINCS or NLP:	On or in compliance with the inventory
Japan (ENCS) List:	On or in compliance with the inventory
Korea Existing Chemicals Inv. (KECI):	On or in compliance with the inventory
Philippines PICCS:	On or in compliance with the inventory
US TSCA Inventory:	On or in compliance with the inventory
New Zealand Inventory of Chemicals:	On or in compliance with the inventory
China Inv. Existing Chemical Substances:	On or in compliance with the inventory
Mexico INSQ:	On or in compliance with the inventory
Taiwan Chemical Substance Inventory:	On or in compliance with the inventory

16.Other information, including date of preparation or last revision

NFPA Hazard ID



Hazard rating: 0 - Minimal; 1 - Slight; 2 - Moderate; 3 - Serious; 4 - Severe; RNP - Rating not possible

Issue Date:	02-23-2018
Revision Information:	Not relevant.
Version #:	1.2
Source of information:	Sources of information used in preparing this SDS included one or more of the following: results from in house or supplier toxicology studies, information from the Toxicology Data Network (TOXNET), European Chemical Agency (ECHA) substance dossiers, IARC Monographs, US National Toxicology Program data, the Agency for Toxic Substances and Disease Registry, other manufacturer's SDSs and other sources, as appropriate.
Further Information:	No data available.

Disclaimer:

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SAFETY DATA SHEET
Hydrazine Solution- Catalyzed

Printed: 09/13/2018
Revision: 08/25/2018
Supersedes Revision: 08/25/2014

1. Product and Company Identification

Product Code: B172C
Product Name: Hydrazine Solution- Catalyzed
Trade Name: B-172C

Company Name: GC3 Specialty Chemicals, Inc.
733 Heights Blvd.
Houston, TX 77007

Phone Number: (713)802-1761

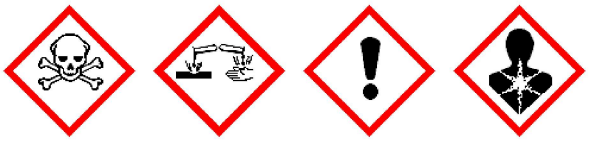
Web site address: www.gc3.com

Emergency Contact: CHEMTREC: 800-424-9300
Information: 713-802-1761

Synonyms: Hydrazine hydrate

2. Hazards Identification

Acute Toxicity: Oral, Category 3
Acute Toxicity: Skin, Category 3
Skin Corrosion/Irritation, Category 1B
Skin Sensitization, Category 1
Acute Toxicity: Inhalation, Category 3
Carcinogenicity, Category 1B



Danger **Danger** **Warning** **Danger**

GHS Hazard Phrases:
H226 - Flammable liquid and vapor.
H301 - Toxic if swallowed.
H311 - Toxic in contact with skin.
H314 - Causes severe skin burns and eye damage.
H317 - May cause an allergic skin reaction.
H331 - Toxic if inhaled.
H350 - May cause cancer .

GHS Precaution Phrases:
P233 - Keep container tightly closed.
P210 - Keep away from heat/sparks/open flames/hot surfaces. - No smoking.
P280 - Wear protective gloves/protective clothing/eye protection/face protection.
P240 - Ground/bond container and receiving equipment.
P241 - Use explosion-proof electrical/ventilating/lighting/.../ equipment.
P243 - Take precautionary measures against static discharge.
P242 - Use only non-sparking tools.
P264 - Wash hands thoroughly after handling.
P270 - Do not eat, drink or smoke when using this product.
P361+364 - Take off immediately all contaminated clothing and wash it before reuse.
P260 - Do not breathe dust/fume/gas/mist/vapours/spray.
P261 - Avoid breathing dust/fume/gas/mist/vapours/spray.
P272 - Contaminated work clothing should not be allowed out of the workplace.
P362+364 - Take off contaminated clothing and wash it before reuse.
P271 - Use only outdoors or in a well-ventilated area.
P201 - Obtain special instructions before use.
P202 - Do not handle until all safety precautions have been read and understood.
P281 - Use personal protective equipment as required.
P273 - Avoid release to the environment.

GHS Response Phrases:
P370+378 - In case of fire, use ... to extinguish.

	P303+361+353 - IF ON SKIN (or hair): Remove/take off immediately all contaminated clothing. Rinse skin with water/shower. P301+310 - IF SWALLOWED: Immediately call a POISON CENTER or doctor/physician. P330 - Rinse mouth. P321 - Specific treatment see First Aid Measures on Safety Data Sheet. P302+352 - IF ON SKIN: Wash with plenty of soap and water. P312 - Call a POISON CENTER/doctor/... if you feel unwell. P363 - Wash contaminated clothing before reuse. P305+351+338 - IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing. P301+330+331 - IF SWALLOWED: Rinse mouth. Do NOT induce vomiting. P304+340 - IF INHALED: Remove victim to fresh air and keep at rest in a position comfortable for breathing. P310 - Immediately call a POISON CENTER/doctor/... P333+313 - If skin irritation or rash occurs, seek medical advice/attention. P311 - Call a POISON CENTER/doctor/... P322 - Specific measures see ... on this label. P308+313 - IF exposed or concerned: Get medical attention/advice. P391 - Collect spillage. P310 - Immediately call a POISON CENTER or doctor/physician. P361 - Remove/Take off immediately all contaminated clothing.
GHS Storage and Disposal Phrases:	P403+235 - Store in cool/well-ventilated place. P501 - Dispose of contents/container in accordance with local/regional/national/international regulations. P405 - Store locked up. P403+233 - Store container tightly closed in well-ventilated place - if product is as volatile as to generate hazardous atmosphere.
OSHA Regulatory Status:	This material is classified as hazardous under OSHA regulations.
Potential Health Effects (Acute and Chronic):	Chronic: Repeated inhalation may cause chronic bronchitis. May cause cancer according to animal studies. Repeated exposure may cause sensitization dermatitis. May cause reproductive and fetal effects.
Inhalation:	Harmful if inhaled. Irritation may lead to chemical pneumonitis and pulmonary edema. May cause liver and kidney damage. Causes severe irritation of upper respiratory tract with coughing, burns, breathing difficulty, and possible coma. Vapors may cause dizziness, nausea, itching, burning, and swelling of the eyes.
Skin Contact:	May be fatal if absorbed through the skin. Prolonged and/or repeated contact may cause irritation and/or dermatitis. May cause skin sensitization, an allergic reaction, which becomes evident upon re-exposure to this material. Contact with liquid is corrosive and causes severe burns and ulceration. Contact with the skin may dissolve hair.
Eye Contact:	May cause irreversible eye injury. Exposure to the vapors or liquid may cause temporary blindness. Causes severe eye irritation and burns.
Ingestion:	Harmful if swallowed. Causes gastrointestinal irritation with nausea, vomiting and diarrhea. May cause liver and kidney damage. Causes digestive tract burns with immediate pain, swelling of the throat, convulsions, and possible coma. Exposure may cause anemia and other blood abnormalities.

3. Composition/Information on Ingredients

CAS #	Hazardous Components (Chemical Name)	Concentration
302-01-2	Hydrazine	35.0 %
123-31-9	Hydroquinone	< 1.0 %

4. First Aid Measures

Emergency and First Aid Procedures:

In Case of Inhalation: Get medical aid immediately. Remove from exposure and move to fresh air immediately. If breathing is difficult, give oxygen. Do NOT use mouth-to-mouth resuscitation. If breathing has ceased apply artificial respiration using oxygen and a suitable mechanical device such as a bag and a mask.

In Case of Skin Contact: Get medical aid immediately. Flush skin with plenty of water for at least 15 minutes while removing contaminated clothing and shoes. Discard contaminated clothing in a manner which limits further exposure.

In Case of Eye Contact: Flush eyes with plenty of water for at least 15 minutes, occasionally lifting the upper and lower eyelids. Get medical aid immediately. Do NOT allow victim to rub eyes or keep eyes closed.

In Case of Ingestion: Do NOT induce vomiting. If victim is conscious and alert, give 2-4 cupfuls of milk or water. Never give anything by mouth to an unconscious person. Get medical aid immediately.

Note to Physician: Treat symptomatically and supportively.

5. Fire Fighting Measures

Flash Pt: > 100.00 C (212.0 F) Method Used: Estimate

Explosive Limits: LEL: 9.3 UEL: 83.4

Autoignition Pt: > 310.00 C (590.0 F)

Suitable Extinguishing Media: For large fires, use water spray, fog, or alcohol-resistant foam. Use water spray to cool fire-exposed containers. Do NOT get water inside containers. For small fires, use dry chemical, carbon dioxide, or water spray. Cool containers with flooding quantities of water until well after fire is out.

Fire Fighting Instructions: As in any fire, wear a self-contained breathing apparatus in pressure-demand, MSHA/NIOSH (approved or equivalent), and full protective gear. Vapors can travel to a source of ignition and flash back. Use water spray to keep fire-exposed containers cool. Flammable liquid and vapor. Autoignition temperature varies based upon contact surface. Vapors may be heavier than air. They can spread along the ground and collect in low or confined areas. May be ignited by heat, sparks, and flame. Vapors may form explosive mixtures with air.

Flammable Properties and Hazards: No data available.

Hazardous Combustion Products: No data available.

6. Accidental Release Measures

Steps To Be Taken In Case Material Is Released Or Spilled: Use proper personal protective equipment as indicated in Section 8. Spills/Leaks: Remove all sources of ignition. Absorb spill using an absorbent, non-combustible material such as earth, sand, or vermiculite. Do not use combustible materials such as sawdust. Do not get water inside containers. Approach spill from upwind. Use water spray to cool and disperse vapors, protect personnel, and dilute spills to form nonflammable mixtures. Control runoff and isolate discharged material for proper disposal.

7. Handling and Storage

Precautions To Be Taken in Handling: Wash thoroughly after handling. Remove contaminated clothing and wash before reuse. Ground and bond containers when transferring material. Use spark-proof tools and explosion proof equipment. Do not get in eyes, on skin, or on clothing. Empty containers retain product residue, (liquid and/or vapor), and can be dangerous. Keep container tightly closed. Do not ingest or inhale. Do not pressurize, cut, weld, braze, solder, drill, grind, or expose empty containers to heat, sparks or open flames. Keep away from heat, sparks and flame. Use only with adequate ventilation or respiratory protection.

Precautions To Be Taken in Storing: Keep away from heat, sparks and flame. Keep away from sources of ignition. Do not store in direct sunlight. Store in a cool, dry, well-ventilated area away from incompatible substances. Flammables-area. Storage under a nitrogen blanket has been recommended. Isolate from oxidizing materials and acids.

8. Exposure Controls/Personal Protection

CAS #	Partial Chemical Name	OSHA TWA	ACGIH TWA	Other Limits
302-01-2	Hydrazine	PEL: 1 ppm	TLV: 0.01 ppm	No data.
123-31-9	Hydroquinone	PEL: 2 mg/m3	TLV: 2 mg/m3	No data.

Respiratory Equipment (Specify Type): Follow the OSHA respirator regulations found in 29 CFR 1910.134 or European Standard EN 149. Use a NIOSH/MSHA or European Standard EN 149 approved respirator if exposure limits are exceeded or if irritation or other symptoms are experienced.

Eye Protection: Wear chemical splash goggles and face shield.

Protective Gloves: Wear appropriate protective gloves to prevent skin exposure.

Other Protective Clothing: Wear appropriate protective clothing to prevent skin exposure.

Engineering Controls (Ventilation etc.): Facilities storing or utilizing this material should be equipped with an eyewash facility and a safety shower. Use adequate general or local explosion-proof ventilation to keep airborne levels to acceptable levels.

9. Physical and Chemical Properties

Physical States: [ ] Gas [X] Liquid [ ] Solid

Appearance and Odor: Clear.
ammonia-like.

pH: > 12

Freezing Point: ~ -65.00 C (-85.0 F)

Boiling Point: ~ 109.30 C (228.7 F)

Flash Pt: > 100.00 C (212.0 F) Method Used: Estimate

Evaporation Rate: No data.

Flammability (solid, gas): No data available.

Explosive Limits: LEL: 9.3 UEL: 83.4

Vapor Pressure (vs. Air or mm Hg): 15 MBAR at 20.0 C (68.0 F)

Vapor Density (vs. Air = 1):	No data.
Specific Gravity (Water = 1):	1.01 - 1.03 at 20.0 C (68.0 F)
Solubility in Water:	soluble
Octanol/Water Partition Coefficient:	No data.
Percent Volatile:	100.0 % by weight.
Autoignition Pt:	> 310.00 C (590.0 F)
Decomposition Temperature:	No data.
Viscosity:	~ 1.26

10. Stability and Reactivity

Stability:	Unstable [ ] Stable [X]
Conditions To Avoid - Instability:	Light, ignition sources, Moisture.
Incompatibility - Materials To Avoid:	acids, Oxidizing agents.
Hazardous Decomposition or Byproducts:	oxides of nitrogen, ammonia and/or derivatives.
Possibility of Hazardous Reactions:	Will occur [ ] Will not occur [X]
Conditions To Avoid - Hazardous Reactions:	No data available.

11. Toxicological Information

Toxicological Information:

CAS# 302-01-2: Reproductive Effects:, TCLo, Inhalation, Rat, 4.000 MG/M3, 2 H, female 7-20 day(s) after conception. Result: Effects on Fertility: Post-implantation mortality (e.g., dead and/or resorbed implants per total number of implants). ; Gigiena i Sanitariya, Mezhdunarodnaya Kniga, ul. B. Yakimanka, 39, 113095, Moscow 113095 Russia, Vol/p/yr: 39(10),23, 1974

Reproductive Effects:, TCLo, Inhalation, Rat, 1.000 MG/M3, 24 H, female 1-11 day(s) after conception. Result: Effects on Embryo or Fetus: Fetotoxicity (except death, e.g., stunted fetus). Effects on Embryo or Fetus: Fetal death. ; Gigiena i Sanitariya, Mezhdunarodnaya Kniga, ul. B. Yakimanka, 39, 113095, Moscow 113095 Russia, Vol/p/yr: 39(10),23, 1974

Reproductive Effects:, TDLo, Skin, Rat, 50.00 MG/KG, female 9 day(s) after conception. Result: Effects on Fertility: Post-implantation mortality (e.g., dead and/or resorbed implants per total number of implants). ; National Technical Information Service, Vol/p/yr: AD-A119-70,

Acute toxicity, LD50, Oral, Rat, 60.00 MG/KG; Medycyna Pracy. Industrial Medicine., Ars-Polona, POB 1001, 00-068, Warsaw 1 Poland, Vol/p/yr: 24,71, 1973

Acute toxicity, LC50, Inhalation, Rat, 570.0 PPM, 4 H. Result: Sense Organs and Special Senses (Nose, Eye, Ear, and Taste):Eye:Other. Behavioral: Convulsions or effect on seizure threshold. Lungs, Thorax, or Respiration:Dyspnea. ; AMA Archives of Industrial Health., For publisher information, see AEHLAU, Chicago, IL, Vol/p/yr: 12,609, 1955

Acute toxicity, LD50, Skin, Species: Rabbit, 91.00 MG/KG; AMA Archives of Industrial Hygiene and Occupational Medicine., For publisher information, see AEHLAU, Chicago, IL, Vol/p/yr: 9,199, 1954

Tumorigenic Effects:, TDLo, Oral, Rat, 900.0 MG/KG, 2 Y. Result: Tumorigenic: Neoplastic by RTECS criteria. Liver: Tumors. ; Experimental Pathology, Elsevier Scientific Pub. Ireland Ltd., POB 85, Limerick Ireland, Vol/p/yr: 33,133, 1988

Tumorigenic Effects:, TCLo, Inhalation, Rat, 5.000 PPM, 6 Y. Result: Tumorigenic: Carcinogenic by RTECS criteria. Endocrine:Thyroid tumors. ; Fundamental and Applied

Toxicology., Academic Press, Inc., 1 E. First St., Duluth, MN 55802, Vol/p/yr: 5,1050, 1985
Tumorigenic Effects:, Patch test (humans): negative., Inhalation, Rat, 5.000 PPM, 6 Y. Result: Tumorigenic: Equivocal tumorigenic agent by RTECS criteria. Sense Organs and Special Senses (Nose, Eye, Ear, and Taste):Olfaction:Tumors. ; Proceedings of the American Association for Cancer Research., Waverly Press, 428 E. Preston St., Baltimore, MD 21202, Vol/p/yr: 21,74, 1980
Tumorigenic Effects:, Patch test (humans): negative., Inhalation, Rat, 1.000 PPM, 6 Y. Result: Tumorigenic: Equivocal tumorigenic agent by RTECS criteria. Sense Organs and Special Senses (Nose, Eye, Ear, and Taste):Olfaction:Tumors. ; Proceedings of the American Association for Cancer Research., Waverly Press, 428 E. Preston St., Baltimore, MD 21202, Vol/p/yr: 21,74, 1980
Tumorigenic Effects:, Patch test (humans): negative., Inhalation, Species: Hamster, 5.000 PPM, 6 Y. Result: Tumorigenic: Equivocal tumorigenic agent by RTECS criteria. Sense Organs and Special Senses (Nose, Eye, Ear, and Taste):Olfaction:Tumors. ; Proceedings of the American Association for Cancer Research., Waverly Press, 428 E. Preston St., Baltimore, MD 21202, Vol/p/yr: 21,74, 1980

Carcinogenicity/Other Information: CAS# 302-01-2: ACGIH: A3 - Confirmed animal carcinogen with unknown relevance to humans.
California: carcinogen, initial date 1/1/88. NTP: Suspect carcinogen.

Carcinogenicity: NTP? Unknown IARC Monographs? Unknown OSHA Regulated? No

CAS #	Hazardous Components (Chemical Name)	NTP	IARC	ACGIH	OSHA
302-01-2	Hydrazine	Possible	2B	A3	n.a.
123-31-9	Hydroquinone	n.a.	3	A3	n.a.

12. Ecological Information

General Ecological Information: Environmental: Biodegradation is not expected to be significant when large amounts of hydrazine are released due to the high microbial toxicity of hydrazine; at lower concentrations, however, hydrazine biodegradation could be important. Volatilization of hydrazine should not be important from moist soil surfaces given an estimated Henry's Law constant of 6.1X10-7 atm-cu m/mole, calculated from experimental values for vapor pressure and water solubility.
Physical: No information available.
Other: Bioconcentration in guppies was studied using a hydrazine concentration in water of 0. After 96 hours, the concentration of hydrazine in guppies was about 144 ug/g. These values give a bioconcentration factor of 316. An estimated BCF value of 0.01 was calculated for hydrazine, using a measured log Kow of -2.07(2) and a recommended regression-derived equation.
CAS# 302-01-2: LC50, Fathead Minnow (Pimephales promelas), 5980. UG/L, 96 H, Mortality, Water temperature: 20.00 C (68.0 F) C, pH: 6.95; Acute Toxicity of Hydrazine Hydrate to the Fathead Minnow (Pimephales promelas) and Daphnid (Daphnia pulex), Velte, J.S., 1984
LC50, Fathead Minnow (Pimephales promelas), 2840. UG/L, 96 H, Mortality, Water temperature: 22.80 C (73.0 F) C, pH: 7.34, Hardness: 51.00 MG/L; Report of the Flow-Through and Static Acute Test Comparisons with Fathead Minnows and Acute Tests with an Amphipod and a Cladoceran, Brooke, L., 1987
Effective concentration to 50% of test organisms., Water Flea (Daphnia pulex), larva(e), 160.0 UG/L, 48 H, Intoxication,, Water temperature: 20.00 C (68.0 F) C, pH: 7.10; Acute Toxicity of Hydrazine Hydrate to the Fathead Minnow (Pimephales promelas) and Daphnid (Daphnia pulex), Velte, J.S., 1984

13. Disposal Considerations

Waste Disposal Method: Chemical waste generators must determine whether a discarded chemical is classified as a hazardous waste. US EPA guidelines for the classification determination are listed in 40 CFR Parts 261. Additionally, waste generators must consult state and local hazardous waste regulations to ensure complete and accurate classification.
RCRA P-Series: None listed.
RCRA U-Series:
CAS# 302-01-2: waste number U133 (Reactive waste, Toxic waste).

14. Transport Information

LAND TRANSPORT (US DOT):

DOT Proper Shipping Name: Hydrazine, aqueous solution.
DOT Hazard Class: 6.1 POISON
UN/NA Number: 3293 **Packing Group:** III





MARINE TRANSPORT (IMDG/IMO):

IMDG/IMO Shipping Name:
UN Number: 3293 **Packing Group:** III
Hazard Class: 6.1 - POISON
IMDG MFAG Number:
IMDG EMS Page: **Marine Pollutant:** Yes

15. Regulatory Information

EPA SARA (Superfund Amendments and Reauthorization Act of 1986) Lists

CAS #	Hazardous Components (Chemical Name)	S. 302 (EHS)	S. 304 RQ	S. 313 (TRI)
302-01-2	Hydrazine	Yes 1000 LB	Yes 1 LB	Yes
123-31-9	Hydroquinone	Yes 500 LB	Yes 100 LB	Yes

This material meets the EPA 'Hazard Categories' defined for SARA Title III Sections 311/312 as indicated:

[ ] Yes [X] No	Explosive	[X] Yes [ ] No	Acute toxicity (any route of exposure)
[ ] Yes [X] No	Flammable (gases, aerosols, liquid, or solid)	[X] Yes [ ] No	Skin Corrosion or Irritation
[ ] Yes [X] No	Oxidizer (liquid, solid or gas)	[ ] Yes [X] No	Serious eye damage or eye irritation
[ ] Yes [X] No	Self-reactive	[X] Yes [ ] No	Respiratory or Skin Sensitization
[ ] Yes [X] No	Pyrophoric (liquid or solid)	[ ] Yes [X] No	Germ cell mutagenicity
[ ] Yes [X] No	Pyrophoric gas	[X] Yes [ ] No	Carcinogenicity
[ ] Yes [X] No	Self-heating	[ ] Yes [X] No	Reproductive toxicity
[ ] Yes [X] No	Organic peroxide	[ ] Yes [X] No	Specific target organ toxicity (single or repeated exposure)
[ ] Yes [X] No	Corrosive to metal	[ ] Yes [X] No	Aspiration Hazard
[ ] Yes [X] No	Gas under pressure (compressed gas)	[ ] Yes [X] No	Simple Asphyxiant
[ ] Yes [X] No	In contact with water emits flammable gas	[X] Yes [ ] No	(Health) Hazard Not Otherwise Classified (HNOC)
[ ] Yes [X] No	Combustible Dust		
[ ] Yes [X] No	(Physical) Hazard Not Otherwise Classified (HNOC)		

CAS #	Hazardous Components (Chemical Name)	Other US EPA or State Lists
302-01-2	Hydrazine	CWA NPDES: No; TSCA: Yes - Inventory; CA PROP.65: Yes: Canc.; CA TAC, Title 8: TAC: Cat. IIa, Title 8; MA Oil/HazMat: Yes; MI CMR, Part 5: Part 5; NC TAP: Yes: NC TAP; NJ EHS: Yes - 1006; NY Part 597: Yes: AHS; PA HSL: Yes - B; SC TAP: Yes; WI Air: Yes
123-31-9	Hydroquinone	CWA NPDES: No; TSCA: Yes - Inventory; CA PROP.65: No; CA TAC, Title 8: TAC: Cat. IVa, Title 8; MA Oil/HazMat: Yes; MI CMR, Part 5: Part 5; NC TAP: Yes: US HAP; NJ EHS: Yes

- 1019; NY Part 597: Yes: HS; PA HSL: Yes - E; SC TAP: Yes; WI Air: Yes

16. Other Information

Revision Date:	08/25/2018
Additional Information About This Product:	No data available.
Company Policy or Disclaimer:	The information presented herein is based on the content of a Safety Data Sheet provided by one or more manufacturers, raw material suppliers, or other responsible parties. Although the information provided herein is an accurate presentation of the original Safety Data Sheet safety information, no warranty or representation, expressed or implied, is made as to the accuracy or completeness of the foregoing data and safety information. The informaton in this document is based on the present state of our knowledge and is applicable to the product with regard to appropriate safety precautions. It does not represent any guarantees of the properties of the product.

1. Product and Company Identification

Product Code: AA19

Product Name: Aqua Ammonia 19% (Ammonium Hydroxide)

Trade Name: Aqua Ammonia 19%

Company Name: GC3 Specialty Chemicals, Inc.
733 Heights Blvd.
Houston, TX 77007

Phone Number: (713)802-1761

Web site address: www.gc3.com

Emergency Contact: CHEMTREC: 800-424-9300
Information: 713-802-1761

Synonyms: 19% ammonia in water (39.1% ammonium hydroxide) is a 20.5 degree Baume ammonia solution.

2. Hazards Identification

Skin Corrosion/Irritation, Category 1B
Aquatic Toxicity (Acute), Category 1
Acute Toxicity: Inhalation, Category 3
Acute Toxicity: Oral, Category 4
Serious Eye Damage/Eye Irritation, Category 1



Danger **Warning** **Danger**

GHS Hazard Phrases:
H302 - Harmful if swallowed.
H314 - Causes severe skin burns and eye damage.
H318 - Causes serious eye damage.
H331 - Toxic if inhaled.
H400 - Very toxic to aquatic life.

GHS Precaution Phrases:
P261 - Avoid breathing dust/fume/gas/mist/vapours/spray.
P264 - Wash hands thoroughly after handling.
P270 - Do not eat, drink or smoke when using this product.
P271 - Use only outdoors or in a well-ventilated area.
P273 - Avoid release to the environment.
P280 - Wear protective gloves/protective clothing/eye protection/face protection.

GHS Response Phrases:
P301+312 - IF SWALLOWED: Call a POISON CENTER or doctor/physician if you feel unwell.
P303+361+353 - IF ON SKIN (or hair): Remove/take off immediately all contaminated clothing. Rinse skin with water/shower.
P304+340 - IF INHALED: Remove victim to fresh air and keep at rest in a position comfortable for breathing.
P305+351+338 - IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.
P310 - Immediately call a POISON CENTER or doctor/physician.
P321 - Specific treatment see First Aid Measures on Safety Data Sheet.
P330 - Rinse mouth.
P363 - Wash contaminated clothing before reuse.
P391 - Collect spillage.

GHS Storage and Disposal Phrases:
P403+233 - Store container tightly closed in well-ventilated place - if product is as volatile as to generate hazardous atmosphere.
P405 - Store locked up.

GHS format

P501 - Dispose of contents/container in accordance with local/regional/national/international regulations.

Potential Health Effects (Acute and Chronic):

Inhalation: Material is extremely destructive to the tissue of the mucous membranes and upper respiratory tract. May be harmful if inhaled.

Skin Contact: Causes burns. Skin Absorption: May be harmful if absorbed through the skin.

Eye Contact: Causes burns. Lachrymator.

Ingestion: May be harmful if swallowed.

3. Composition/Information on Ingredients

CAS #	Hazardous Components (Chemical Name)	Concentration
1336-21-6	Ammonium hydroxide	39.1 %

4. First Aid Measures

Emergency and First Aid Procedures:

In Case of Inhalation: If inhaled, remove to fresh air. If not breathing, give artificial respiration. If breathing is difficult, give oxygen.

In Case of Skin Contact: In case of skin contact, flush with copious amounts of water for at least 15 minutes. Remove contaminated clothing and shoes. Call a physician.

In Case of Eye Contact: In case of contact with eyes, flush with copious amounts of water for at least 15 minutes. Assure adequate flushing by separating the eyelids with fingers. Call a physician.

In Case of Ingestion: If swallowed, wash out mouth with water provided person is conscious. Call a physician. Do NOT induce vomiting.

Signs and Symptoms Of Exposure: Material is extremely destructive to tissue of the mucous membranes and upper respiratory tract, eyes, and skin. Inhalation may result in spasm, inflammation and edema of the larynxand bronchi, chemical pneumonitis, and pulmonary edema. Symptoms of exposure may include burning sensation, coughing, wheezing, laryngitis, shortness of breath, headache, nausea, and vomiting.

Note to Physician: Pneumonitis should be anticipated after severe inhalation or ingestion. If severe exposure is suspected, observe for 48-72 hours for delayed pulmonary edema.

5. Fire Fighting Measures

Flash Pt: No data. Method Used: Not Applicable

Explosive Limits: LEL: 15.5 UEL: 27

Autoignition Pt: 651.00 C (1203.8 F)

Suitable Extinguishing Media: Suitable: Water spray or fog.

Fire Fighting Instructions: Protective Equipment: Wear self-contained breathing apparatus and protective clothing to prevent contact with skin and eyes. Specific Hazard(s): Containers can build up pressure if exposed to heat (fire). Use water spray to keep fire-exposed containers cool. If a portable container (drum, IBC tote) can be safely moved from the fire area, do so to prevent the pressure relief valve from discharging or the container from failing.

Flammable Properties and Hazards: The mixture will not burn but escaping NH3 gas can burn or form an explosive mixture in the range of 15.5-27.0% in air. Heating above ambient temperature causes vapor pressure to increase rapidly.

6. Accidental Release Measures

Protective Precautions, Protective Equipment and Emergency Procedures: Use personal protective equipment. Positive pressure self-contained breathing apparatus (SCBA) and structural firefighters' protective clothing will provide adequate protection. Stay upwind, and use water spray downwind of container to absorb the evolved gas.

Environmental Precautions: Contain spill and runoff from entering drains, sewers, streams, lakes and water systems by utilizing methods such as diking, containment, and absorption.

Steps To Be Taken In Case Material Is Released Or Spilled: PROCEDURE TO BE FOLLOWED IN CASE OF LEAK OR SPILL. Evacuate area. Leave the area by moving lateral and upwind.
PROCEDURE(S) OF PERSONAL PRECAUTION(S)
Methods for cleaning up.
To adjust the pH, add a weak acid to the spilled material at a controlled rate to avoid excessive ammonia liberation.

7. Handling and Storage

Precautions To Be Taken in Handling: User Exposure: Do not breathe vapor. Do not get in eyes, on skin, on clothing.

Precautions To Be Taken in Storing: Containers should have safety relief valves. Post readily visible warning signs in the storage area listing emergency measures. Provide adequate ventilation. Store away from incompatible material. Water hoses should be readily available to knock down vapors from spill.

8. Exposure Controls/Personal Protection

CAS #	Partial Chemical Name	OSHA TWA	ACGIH TWA	Other Limits
1336-21-6	Ammonium hydroxide	No data.	No data.	No data.

Respiratory Equipment (Specify Type): Use respirators and components tested and approved under appropriate government standards such as NIOSH (US) or CEN (EU). Where risk assessment shows air-purifying respirators are appropriate use a full-face respirator with multi- purpose combination (US) or type ABEK (EN 14387) respirator cartridges as a backup to engineering controls. If the respirator is the sole means of protection, use a full-face supplied air respirator.

Eye Protection: Chemical safety goggles. Other: Faceshield (8-inch minimum).

Protective Gloves: No data available.

Other Protective Clothing: No data available.

Engineering Controls (Ventilation etc.): Safety shower and eye bath. Use process enclosures, local exhaust ventilation, or other engineering controls to control airborne levels below recommended exposure limits.

Work/Hygienic/Maintenance Practices: Wash contaminated clothing before reuse. Discard contaminated shoes. Wash thoroughly after handling.

9. Physical and Chemical Properties

Physical States:	[ ] Gas [X] Liquid [ ] Solid
Appearance and Odor:	Appearance: Clear. Liquid. Odor: pungent odor.
pH:	~ 12
Melting Point:	-33.00 C (-27.4 F)
Boiling Point:	38.00 C (100.4 F) - 100.00 C (212.0 F)
Flash Pt:	No data. Method Used: Not Applicable
Evaporation Rate:	No data.
Flammability (solid, gas):	Ammonia vapor in air is flammable in certain ranges: LEL/UEL 15.5 -27%. Auto ignition temperature of ammonia vapor is 1570 degrees F.
Explosive Limits:	LEL: 15.5 UEL: 27
Vapor Pressure (vs. Air or mm Hg):	5.8 PSIA at 20.0 C (68.0 F)
Vapor Density (vs. Air = 1):	0.6 at 0.0 C (32.0 F)
Specific Gravity (Water = 1):	.92 - .93 at 15.0 C (59.0 F)
Solubility in Water:	Complete
Percent Volatile:	100.0 % by weight.
Autoignition Pt:	651.00 C (1203.8 F)
Molecular Formula & Weight:	NH4OH and H2O 35.05

10. Stability and Reactivity

Stability:	Unstable [ ] Stable [X]
Conditions To Avoid - Instability:	This material is considered stable under normal temperatures and pressures.
Incompatibility - Materials To Avoid:	Copper, Copper alloys, Galvanized iron, Zinc, Reacts with chlorine, bromine, mercury, silver solder, and hypochlorite to form explosive compounds.
Hazardous Decomposition or Byproducts:	Ammonia vapor will be released if heated. Hydrogen is released on heating ammonia above 850° F (454° C). The decomposition temperature may be lowered to 575° F (300° C) by contact with certain metals such as nickel. At 1290° F (690° C) or in the presence of electric spark ammonia decomposes into nitrogen and hydrogen gases, which may form a flammable mixture in the air.
Possibility of Hazardous Reactions:	Will occur [ ] Will not occur [X]
Conditions To Avoid - Hazardous Reactions:	No data available.

11. Toxicological Information

Toxicological Information: CAS# 1336-21-6: Acute toxicity, LD50, Oral, Rat, 350.0 MG/KG. Results: Gastrointestinal:Other changes. Liver: Other changes. Kidney, Ureter, Bladder:Other changes. ; Journal of Industrial Hygiene and Toxicology, Vol/p/yr: 23,259, 1941

Carcinogenicity: NTP? No IARC Monographs? No OSHA Regulated? No

CAS #	Hazardous Components (Chemical Name)	NTP	IARC	ACGIH	OSHA
1336-21-6	Ammonium hydroxide	n.a.	n.a.	n.a.	n.a.

12. Ecological Information

General Ecological Information: Ammonia is harmful to aquatic life in very low concentrations and may be hazardous if it enters water intakes.
Local health and wildlife authorities, as well as operators of water intakes in the vicinity, should be notified of water releases.
Waterfowl toxicity may occur at elevated concentrations.
Ammonia does not concentrate in the food chain.
The conversion of ammonia to nitrites/nitrates by bacteria in aquatic systems can reduce the concentration of dissolved oxygen (referred to as nitrogenous oxygen demand).
Effect on water treatment process: Chlorination will produce chloramines, which are more readily detected by taste and odor.
CAS# 1336-21-6: LC50, Fathead Minnow (Pimephales promelas), 7000. UG/L, 48 H, Mortality, pH: 8.20, Water Hardness: 125.00 MG/L; Industrial Waste Guide - By-Product Coke, Black, H.H., G.N. McDermott, C. Henderson, W.A. Moore, and H.R. Pahren, 1957
LC50, Water Flea (Daphnia magna), 20.00 MG/L, 100 H, Mortality, Water temperature: 21.00 C (69.8 F) - 25.00 C (77.0 F) C; Toxicity of Selected Chemicals to Certain Animals, Dowden, B.F., and H.J. Bennett, 1965

Persistence and Degradability: Ammonia dissipates relatively quickly in ambient air and rapidly returns to the soil via combination with sulfate ions or washout by rainfall. Ammonia strongly adsorbs to soil, sediment particles and colloids in water under aerobic conditions. Biodegradation of ammonia to nitrate occurs in water under aerobic conditions resulting in a biological oxygen demand (BOD).

Bioaccumulative Potential: Biodegradable in soil.

13. Disposal Considerations

Waste Disposal Method: APPROPRIATE METHOD OF DISPOSAL OF SUBSTANCE OR PREPARATION. Contact a licensed professional waste disposal service to dispose of this material.

Waste Disposal Method: D002

14. Transport Information

LAND TRANSPORT (US DOT):

DOT Proper Shipping Name: Ammonia solutions, (more than 10 percent but not more than 35 percent ammonia)
DOT Hazard Class: 8 CORROSIVE
UN/NA Number: UN2672 **Packing Group:** III



15. Regulatory Information

EPA SARA (Superfund Amendments and Reauthorization Act of 1986) Lists

CAS #	Hazardous Components (Chemical Name)	S. 302 (EHS)	S. 304 RQ	S. 313 (TRI)
1336-21-6	Ammonium hydroxide	No	Yes 1000 LB	No

This material meets the EPA	[X] Yes [ ] No	Acute (immediate) Health Hazard
'Hazard Categories' defined	[ ] Yes [X] No	Chronic (delayed) Health Hazard
for SARA Title III Sections	[ ] Yes [X] No	Fire Hazard
311/312 as indicated:	[ ] Yes [X] No	Sudden Release of Pressure Hazard
	[ ] Yes [X] No	Reactive Hazard

CAS #	Hazardous Components (Chemical Name)	Other US EPA or State Lists
1336-21-6	Ammonium hydroxide	TSCA: Yes - Inventory; CA PROP.65: No; CA TAC, Title 8: Title 8; MA Oil/HazMat: Yes; MI CMR, Part 5: Part 5; NC TAP: No; NJ EHS: Yes - 0103; NY Part 597: Yes; PA HSL: Yes - E; SC TAP: No; WI Air: No

16. Other Information

Revision Date: 07/11/2014

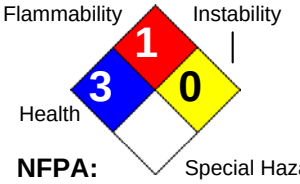
Preparer Name: SRP 713-802-1761

Hazard Rating System:

HMIS:

HEALTH	3
FLAMMABILITY	1
PHYSICAL	0
PPE	

NFPA:



Additional Information About This Product: No data available.

SAFETY DATA SHEET

Version 5.2
Revision Date 07/02/2014
Print Date 09/04/2016

1. PRODUCT AND COMPANY IDENTIFICATION

1.1 Product identifiers

Product name : 3-Methoxypropylamine

Product Number : M25007
Brand : Aldrich

CAS-No. : 5332-73-0

1.2 Relevant identified uses of the substance or mixture and uses advised against

Identified uses : Laboratory chemicals, Manufacture of substances

1.3 Details of the supplier of the safety data sheet

Company : Sigma-Aldrich
3050 Spruce Street
SAINT LOUIS MO 63103
USA

Telephone : +1 800-325-5832
Fax : +1 800-325-5052

1.4 Emergency telephone number

Emergency Phone # : (314) 776-6555

2. HAZARDS IDENTIFICATION

2.1 Classification of the substance or mixture

GHS Classification in accordance with 29 CFR 1910 (OSHA HCS)
Flammable liquids (Category 3), H226
Skin corrosion (Category 1B), H314
Serious eye damage (Category 1), H318

For the full text of the H-Statements mentioned in this Section, see Section 16.

2.2 GHS Label elements, including precautionary statements

Pictogram



Signal word Danger

Hazard statement(s)
H226 Flammable liquid and vapour.
H314 Causes severe skin burns and eye damage.

Precautionary statement(s)
P210 Keep away from heat/sparks/open flames/hot surfaces. - No smoking.
P233 Keep container tightly closed.
P240 Ground/bond container and receiving equipment.
P241 Use explosion-proof electrical/ ventilating/ lighting/ equipment.
P242 Use only non-sparking tools.
P243 Take precautionary measures against static discharge.
P264 Wash skin thoroughly after handling.
P280 Wear protective gloves/ protective clothing/ eye protection/ face protection.

P301 + P330 + P331	IF SWALLOWED: rinse mouth. Do NOT induce vomiting.
P303 + P361 + P353	IF ON SKIN (or hair): Remove/ Take off immediately all contaminated clothing. Rinse skin with water/ shower.
P304 + P340	IF INHALED: Remove victim to fresh air and keep at rest in a position comfortable for breathing.
P305 + P351 + P338	IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.
P310	Immediately call a POISON CENTER or doctor/ physician.
P321	Specific treatment (see supplemental first aid instructions on this label).
P363	Wash contaminated clothing before reuse.
P370 + P378	In case of fire: Use dry sand, dry chemical or alcohol-resistant foam for extinction.
P403 + P235	Store in a well-ventilated place. Keep cool.
P405	Store locked up.
P501	Dispose of contents/ container to an approved waste disposal plant.

2.3 Hazards not otherwise classified (HNOC) or not covered by GHS - none

3. COMPOSITION/INFORMATION ON INGREDIENTS

3.1 Substances

Synonyms : 1-Amino-3-methoxypropane

Formula : $C_4H_{11}NO$

Molecular Weight : 89.14 g/mol

CAS-No. : 5332-73-0

EC-No. : 226-241-3

Hazardous components

Component	Classification	Concentration
3-Methoxypropylamine		
	Flam. Liq. 3; Skin Corr. 1B; Eye Dam. 1; H226, H314	-

For the full text of the H-Statements mentioned in this Section, see Section 16.

4. FIRST AID MEASURES

4.1 Description of first aid measures

General advice
Consult a physician. Show this safety data sheet to the doctor in attendance.Move out of dangerous area.

If inhaled
If breathed in, move person into fresh air. If not breathing, give artificial respiration. Consult a physician.

In case of skin contact
Take off contaminated clothing and shoes immediately. Wash off with soap and plenty of water. Consult a physician.

In case of eye contact
Rinse thoroughly with plenty of water for at least 15 minutes and consult a physician.Continue rinsing eyes during transport to hospital.

If swallowed
Do NOT induce vomiting. Never give anything by mouth to an unconscious person. Rinse mouth with water. Consult a physician.

4.2 Most important symptoms and effects, both acute and delayed
The most important known symptoms and effects are described in the labelling (see section 2.2) and/or in section 11

4.3 Indication of any immediate medical attention and special treatment needed
no data available

5. FIREFIGHTING MEASURES

5.1 Extinguishing media

Suitable extinguishing media
For small (incipient) fires, use media such as "alcohol" foam, dry chemical, or carbon dioxide. For large fires, apply water from as far as possible. Use very large quantities (flooding) of water applied as a mist or spray; solid streams of water may be ineffective. Cool all affected containers with flooding quantities of water.

5.2 Special hazards arising from the substance or mixture
Carbon oxides, nitrogen oxides (NOx)

5.3 Advice for firefighters
Wear self contained breathing apparatus for fire fighting if necessary.

5.4 Further information
Use water spray to cool unopened containers.

6. ACCIDENTAL RELEASE MEASURES

6.1 Personal precautions, protective equipment and emergency procedures
Use personal protective equipment. Avoid breathing vapours, mist or gas. Ensure adequate ventilation. Remove all sources of ignition. Evacuate personnel to safe areas. Beware of vapours accumulating to form explosive concentrations. Vapours can accumulate in low areas.
For personal protection see section 8.

6.2 Environmental precautions
Prevent further leakage or spillage if safe to do so. Do not let product enter drains.

6.3 Methods and materials for containment and cleaning up
Contain spillage, and then collect with an electrically protected vacuum cleaner or by wet-brushing and place in container for disposal according to local regulations (see section 13).

6.4 Reference to other sections
For disposal see section 13.

7. HANDLING AND STORAGE

7.1 Precautions for safe handling
Avoid inhalation of vapour or mist.
Keep away from sources of ignition - No smoking.Take measures to prevent the build up of electrostatic charge.
For precautions see section 2.2.

7.2 Conditions for safe storage, including any incompatibilities
Store in cool place. Keep container tightly closed in a dry and well-ventilated place. Containers which are opened must be carefully resealed and kept upright to prevent leakage.

Air sensitive.

7.3 Specific end use(s)
Apart from the uses mentioned in section 1.2 no other specific uses are stipulated

8. EXPOSURE CONTROLS/PERSONAL PROTECTION

8.1 Control parameters

Components with workplace control parameters

Component	CAS-No.	Value	Control parameters	Basis
3-Methoxypropylamine	5332-73-0	TWA	5 ppm	USA. Workplace Environmental Exposure Levels (WEEL)
		STEL	15 ppm	USA. Workplace Environmental Exposure Levels (WEEL)

8.2 Exposure controls

Appropriate engineering controls
Handle in accordance with good industrial hygiene and safety practice. Wash hands before breaks and at the end of workday.

Personal protective equipment

Eye/face protection
Tightly fitting safety goggles. Faceshield (8-inch minimum). Use equipment for eye protection tested and approved under appropriate government standards such as NIOSH (US) or EN 166(EU).

Skin protection
Handle with gloves. Gloves must be inspected prior to use. Use proper glove removal technique (without touching glove's outer surface) to avoid skin contact with this product. Dispose of contaminated gloves after use in accordance with applicable laws and good laboratory practices. Wash and dry hands.

Splash contact
Material: butyl-rubber
Minimum layer thickness: 0.3 mm
Break through time: 260 min
Material tested:Butoject® (KCL 897 / Aldrich Z677647, Size M)

data source: KCL GmbH, D-36124 Eichenzell, phone +49 (0)6659 87300, e-mail sales@kcl.de, test method: EN374
If used in solution, or mixed with other substances, and under conditions which differ from EN 374, contact the supplier of the CE approved gloves. This recommendation is advisory only and must be evaluated by an industrial hygienist and safety officer familiar with the specific situation of anticipated use by our customers. It should not be construed as offering an approval for any specific use scenario.

Body Protection
Complete suit protecting against chemicals, Flame retardant antistatic protective clothing, The type of protective equipment must be selected according to the concentration and amount of the dangerous substance at the specific workplace.

Respiratory protection
Where risk assessment shows air-purifying respirators are appropriate use a full-face respirator with multi-purpose combination (US) or type ABEK (EN 14387) respirator cartridges as a backup to engineering controls. If the respirator is the sole means of protection, use a full-face supplied air respirator. Use respirators and components tested and approved under appropriate government standards such as NIOSH (US) or CEN (EU).

Control of environmental exposure
Prevent further leakage or spillage if safe to do so. Do not let product enter drains.

9. PHYSICAL AND CHEMICAL PROPERTIES

9.1 Information on basic physical and chemical properties

a)	Appearance	Form: liquid
b)	Odour	no data available
c)	Odour Threshold	no data available
d)	pH	11.5 at 100 g/l at 20 °C (68 °F)
e)	Melting point/freezing point	Melting point/range: < -70 °C (< -94 °F)
f)	Initial boiling point and boiling range	117 - 118 °C (243 - 244 °F) at 977 hPa (733 mmHg) - lit.
g)	Flash point	27 °C (81 °F) - closed cup

h)	Evapouration rate	no data available
i)	Flammability (solid, gas)	no data available
j)	Upper/lower flammability or explosive limits	Upper explosion limit: 12.3 %(V) Lower explosion limit: 2.3 %(V)
k)	Vapour pressure	16 hPa (12 mmHg) at 20 °C (68 °F)
l)	Vapour density	3.08 - (Air = 1.0)
m)	Relative density	0.874 g/mL at 25 °C (77 °F)
n)	Water solubility	completely miscible
o)	Partition coefficient: n-octanol/water	log Pow: -0.5
p)	Auto-ignition temperature	no data available
q)	Decomposition temperature	no data available
r)	Viscosity	no data available
s)	Explosive properties	no data available
t)	Oxidizing properties	no data available

9.2 Other safety information

Relative vapour density 3.08 - (Air = 1.0)

10. STABILITY AND REACTIVITY

10.1 Reactivity
no data available

10.2 Chemical stability
Stable under recommended storage conditions.

10.3 Possibility of hazardous reactions
Vapours may form explosive mixture with air.

10.4 Conditions to avoid
Heat, flames and sparks.

10.5 Incompatible materials
Strong oxidizing agents, Acid chlorides, Acid anhydrides, Strong acids

10.6 Hazardous decomposition products
Other decomposition products - no data available
In the event of fire: see section 5

11. TOXICOLOGICAL INFORMATION

11.1 Information on toxicological effects

Acute toxicity
Inhalation: no data available

Dermal: no data available

LD50 Intravenous - mouse - 180 mg/kg

Skin corrosion/irritation
no data available

Serious eye damage/eye irritation
no data available

Respiratory or skin sensitisation
no data available

Germ cell mutagenicity
no data available

Carcinogenicity

IARC: No component of this product present at levels greater than or equal to 0.1% is identified as probable, possible or confirmed human carcinogen by IARC.

ACGIH: No component of this product present at levels greater than or equal to 0.1% is identified as a carcinogen or potential carcinogen by ACGIH.

NTP: No component of this product present at levels greater than or equal to 0.1% is identified as a known or anticipated carcinogen by NTP.

OSHA: No component of this product present at levels greater than or equal to 0.1% is identified as a carcinogen or potential carcinogen by OSHA.

Reproductive toxicity
no data available

no data available

Specific target organ toxicity - single exposure
no data available

Specific target organ toxicity - repeated exposure
no data available

Aspiration hazard
no data available

Additional Information
RTECS: UI3335000

Material is extremely destructive to tissue of the mucous membranes and upper respiratory tract, eyes, and skin., Cough, Shortness of breath, Headache, Nausea

12. ECOLOGICAL INFORMATION

12.1 Toxicity
no data available

12.2 Persistence and degradability
no data available

12.3 Bioaccumulative potential
no data available

12.4 Mobility in soil
no data available

12.5 Results of PBT and vPvB assessment
PBT/vPvB assessment not available as chemical safety assessment not required/not conducted

12.6 Other adverse effects

no data available

13. DISPOSAL CONSIDERATIONS

13.1 Waste treatment methods

Product
Burn in a chemical incinerator equipped with an afterburner and scrubber but exert extra care in igniting as this material is highly flammable. Offer surplus and non-recyclable solutions to a licensed disposal company. Contact a licensed professional waste disposal service to dispose of this material.

Contaminated packaging
Dispose of as unused product.

14. TRANSPORT INFORMATION

DOT (US)
UN number: 2734 Class: 8 (3) Packing group: II
Proper shipping name: Amine, liquid, corrosive, flammable n.o.s. (3-Methoxypropylamine)
Marine pollutant: No
Poison Inhalation Hazard: No

IMDG
UN number: 2734 Class: 8 (3) Packing group: II EMS-No: F-E, S-C
Proper shipping name: AMINES, LIQUID, CORROSIVE, FLAMMABLE, N.O.S. (3-Methoxypropylamine)
Marine pollutant: No

IATA
UN number: 2734 Class: 8 (3) Packing group: II
Proper shipping name: Amines, liquid, corrosive, flammable, n.o.s. (3-Methoxypropylamine)

15. REGULATORY INFORMATION

SARA 302 Components
SARA 302: No chemicals in this material are subject to the reporting requirements of SARA Title III, Section 302.

SARA 313 Components
SARA 313: This material does not contain any chemical components with known CAS numbers that exceed the threshold (De Minimis) reporting levels established by SARA Title III, Section 313.

SARA 311/312 Hazards
Fire Hazard, Acute Health Hazard

Massachusetts Right To Know Components

	CAS-No.	Revision Date
3-Methoxypropylamine	5332-73-0	1993-04-24

Pennsylvania Right To Know Components

	CAS-No.	Revision Date
3-Methoxypropylamine	5332-73-0	1993-04-24

New Jersey Right To Know Components

	CAS-No.	Revision Date
3-Methoxypropylamine	5332-73-0	1993-04-24

California Prop. 65 Components
This product does not contain any chemicals known to State of California to cause cancer, birth defects, or any other reproductive harm.

16. OTHER INFORMATION

Full text of H-Statements referred to under sections 2 and 3.

Eye Dam.	Serious eye damage
Flam. Liq.	Flammable liquids
H226	Flammable liquid and vapour.
H314	Causes severe skin burns and eye damage.
H318	Causes serious eye damage.
Skin Corr.	Skin corrosion

HMIS Rating
Health hazard: 3
Chronic Health Hazard:
Flammability: 3

Physical Hazard	0

NFPA Rating

Health hazard:	3
Fire Hazard:	3
Reactivity Hazard:	0

Further information

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The above information is believed to be correct but does not purport to be all inclusive and shall be used only as a guide. The information in this document is based on the present state of our knowledge and is applicable to the product with regard to appropriate safety precautions. It does not represent any guarantee of the properties of the product. Sigma-Aldrich Corporation and its Affiliates shall not be held liable for any damage resulting from handling or from contact with the above product. See www.sigma-aldrich.com and/or the reverse side of invoice or packing slip for additional terms and conditions of sale.

Preparation Information

Sigma-Aldrich Corporation
Product Safety – Americas Region
1-800-521-8956

Version: 5.2 Revision Date: 07/02/2014 Print Date: 09/04/2016

SAFETY DATA SHEET
STEAMATE* HRSG04

1. Identification

Product identifier	**STEAMATE HRSG04**
Other means of identification	None.
Recommended use	Steam condensate treatment.
Recommended restrictions	None known.

Company/undertaking identification

SUEZ WTS USA, Inc.
4636 Somerton Road
Trevose, PA 19053
T 215 355 3300, F 215 953 5524

Emergency telephone

(800) 877 1940

2. Hazard(s) identification

Physical hazards	Flammable liquids	Category 3
Health hazards	Acute toxicity, oral	Category 4
	Acute toxicity, dermal	Category 4
	Skin corrosion/irritation	Category 1B
	Serious eye damage/eye irritation	Category 1
	Reproductive toxicity (fertility)	Category 2
	Specific target organ toxicity, single exposure	Category 3 respiratory tract irritation
	Specific target organ toxicity, repeated exposure (oral)	Category 1 (systemic toxicity)

OSHA defined hazards Not classified.

Label elements



Signal word Danger

Hazard statement Flammable liquid and vapor. Harmful if swallowed. Harmful in contact with skin. Causes severe skin burns and eye damage. May cause respiratory irritation. Suspected of damaging fertility. Causes damage to organs (systemic toxicity) through prolonged or repeated exposure by ingestion.

Precautionary statement

Prevention Obtain special instructions before use. Do not handle until all safety precautions have been read and understood. Keep away from heat/sparks/open flames/hot surfaces. - No smoking. Keep container tightly closed. Ground/bond container and receiving equipment. Use explosion-proof electrical/ventilating/lighting equipment. Use only non-sparking tools. Take precautionary measures against static discharge. Do not breathe mist or vapor. Wash thoroughly after handling. Do not eat, drink or smoke when using this product. Use only outdoors or in a well-ventilated area. Wear protective gloves/protective clothing/eye protection/face protection.

Response	If swallowed: Immediately call a poison center/doctor. If swallowed: Rinse mouth. Do NOT induce vomiting. If on skin (or hair): Take off immediately all contaminated clothing. Rinse skin with water/shower. If inhaled: Remove person to fresh air and keep comfortable for breathing. If in eyes: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing. Immediately call a poison center/doctor. Take off contaminated clothing and wash before reuse. In case of fire: Use appropriate media to extinguish.
Storage	Store in a well-ventilated place. Keep container tightly closed. Store away from incompatible materials. Store locked up.
Disposal	Dispose of contents/container in accordance with local/regional/national/international regulations.
Hazard(s) not otherwise classified (HNOC)	None known.
Supplemental information	None.

3. Composition/information on ingredients

Mixtures

Components	CAS #	Percent
Cyclohexylamine	108-91-8	10 - 20
Ethanolamine	141-43-5	10 - 20
Alkyl diaminopropane	7173-62-8	2.5 - 10
Oleylamine	112-90-3	1 - 2.5

Composition comments Information for specific product ingredients as required by the U.S. OSHA HAZARD COMMUNICATION STANDARD is listed. Refer to additional sections of this SDS for our assessment of the potential hazards of this formulation.

4. First-aid measures

Inhalation	Remove victim to fresh air and keep at rest in a position comfortable for breathing. Call a POISON CENTER or doctor/physician if you feel unwell.
Skin contact	Take off immediately all contaminated clothing. Rinse skin with water/shower. Call a physician or poison control center immediately. Chemical burns must be treated by a physician. Wash contaminated clothing before reuse.
Eye contact	Immediately flush eyes with plenty of water for at least 15 minutes. Remove contact lenses, if present and easy to do. Continue rinsing. Call a physician or poison control center immediately.
Ingestion	Call a physician or poison control center immediately. Rinse mouth. Do not induce vomiting. If vomiting occurs, keep head low so that stomach content doesn't get into the lungs.
Most important symptoms/effects, acute and delayed	Burning pain and severe corrosive skin damage. Causes serious eye damage. Symptoms may include stinging, tearing, redness, swelling, and blurred vision. Permanent eye damage including blindness could result. May cause respiratory irritation. Prolonged exposure may cause chronic effects.
Indication of immediate medical attention and special treatment needed	Provide general supportive measures and treat symptomatically. Thermal burns: Flush with water immediately. While flushing, remove clothes which do not adhere to affected area. Call an ambulance. Continue flushing during transport to hospital. Chemical burns: Flush with water immediately. While flushing, remove clothes which do not adhere to affected area. Call an ambulance. Continue flushing during transport to hospital. Keep victim warm. Keep victim under observation. Symptoms may be delayed.
General information	Take off all contaminated clothing immediately. IF exposed or concerned: Get medical advice/attention. If you feel unwell, seek medical advice (show the label where possible). Ensure that medical personnel are aware of the material(s) involved, and take precautions to protect themselves. Show this safety data sheet to the doctor in attendance. Wash contaminated clothing before reuse.

5. Fire-fighting measures

Suitable extinguishing media	Alcohol resistant foam. Water fog. Carbon dioxide (CO2). Dry chemical powder.
Unsuitable extinguishing media	Do not use water jet as an extinguisher, as this will spread the fire.
Specific hazards arising from the chemical	Vapors may form explosive mixtures with air. Vapors may travel considerable distance to a source of ignition and flash back. During fire, gases hazardous to health may be formed.
Special protective equipment and precautions for firefighters	Wear full protective clothing, including helmet, self-contained positive pressure or pressure demand breathing apparatus, protective clothing and face mask.
Fire fighting equipment/instructions	In case of fire and/or explosion do not breathe fumes. Move containers from fire area if you can do so without risk. Use standard firefighting procedures and consider the hazards of other involved materials. Cool containers / tanks with water spray.

Specific methods	Use standard firefighting procedures and consider the hazards of other involved materials.
General fire hazards	Flammable liquid and vapor.

6. Accidental release measures

Personal precautions, protective equipment and emergency procedures	Keep unnecessary personnel away. Keep people away from and upwind of spill/leak. Eliminate all ignition sources (no smoking, flares, sparks, or flames in immediate area). Wear appropriate protective equipment and clothing during clean-up. Do not breathe mist or vapor. Do not touch damaged containers or spilled material unless wearing appropriate protective clothing. Ventilate closed spaces before entering them. Local authorities should be advised if significant spillages cannot be contained. For personal protection, see section 8 of the SDS.
Methods and materials for containment and cleaning up	Use water spray to reduce vapors or divert vapor cloud drift. Eliminate all ignition sources (no smoking, flares, sparks, or flames in immediate area). Keep combustibles (wood, paper, oil, etc.) away from spilled material. Take precautionary measures against static discharge. Use only non-sparking tools. Large Spills: Stop the flow of material, if this is without risk. Dike the spilled material, where this is possible. Cover with plastic sheet to prevent spreading. Use a non-combustible material like vermiculite, sand or earth to soak up the product and place into a container for later disposal. Following product recovery, flush area with water. Small Spills: Absorb with earth, sand or other non-combustible material and transfer to containers for later disposal. Wipe up with absorbent material (e.g. cloth, fleece). Clean surface thoroughly to remove residual contamination. Never return spills to original containers for re-use. For waste disposal, see section 13 of the SDS.
Environmental precautions	Avoid discharge into drains, water courses or onto the ground. Water contaminated with this product may be sent to a sanitary sewer treatment facility, or a permitted waste treatment facility, in accordance with any local agreements.

7. Handling and storage

Precautions for safe handling	Do not handle until all safety precautions have been read and understood. Do not handle, store or open near an open flame, sources of heat or sources of ignition. Protect material from direct sunlight. Explosion-proof general and local exhaust ventilation. Take precautionary measures against static discharges. All equipment used when handling the product must be grounded. Use non-sparking tools and explosion-proof equipment. Do not breathe mist or vapor. Do not get in eyes, on skin, or on clothing. Do not taste or swallow. Avoid prolonged exposure. When using, do not eat, drink or smoke. Pregnant or breastfeeding women must not handle this product. Should be handled in closed systems, if possible. Wear appropriate personal protective equipment. Wash hands thoroughly after handling. Wash contaminated clothing before reuse. Observe good industrial hygiene practices.
Conditions for safe storage, including any incompatibilities	Store locked up. Keep away from heat, sparks and open flame. Prevent electrostatic charge build-up by using common bonding and grounding techniques. Store in a cool, dry place out of direct sunlight. Store in a well-ventilated place. Keep in an area equipped with sprinklers. Store away from incompatible materials (see Section 10 of the SDS). Store in accordance with local/regional/national/international regulation. Do not freeze. If frozen, thaw completely and mix thoroughly prior to use. Keep container tightly closed.

8. Exposure controls/personal protection

Occupational exposure limits

The following constituents are the only constituents of the product which have a PEL, TLV or other recommended exposure limit. At this time, the other constituents have no known exposure limits.

US. OSHA Table Z-1 Limits for Air Contaminants (29 CFR 1910.1000)

Components	Type	Value
Ethanolamine (CAS 141-43-5)	PEL	6 mg/m3
		3 ppm

US. ACGIH Threshold Limit Values

Components	Type	Value
Cyclohexylamine (CAS 108-91-8)	TWA	10 ppm
Ethanolamine (CAS 141-43-5)	STEL	6 ppm
	TWA	3 ppm

US. NIOSH: Pocket Guide to Chemical Hazards

Components	Type	Value
Cyclohexylamine (CAS 108-91-8)	TWA	40 mg/m3
		10 ppm
Ethanolamine (CAS 141-43-5)	STEL	15 mg/m3
		6 ppm
	TWA	8 mg/m3
		3 ppm

Biological limit values No biological exposure limits noted for the ingredient(s).

Appropriate engineering controls Explosion-proof general and local exhaust ventilation. Eye wash facilities and emergency shower must be available when handling this product.

Individual protection measures, such as personal protective equipment

Eye/face protection Wear safety glasses with side shields (or goggles) and a face shield.

Skin protection

Hand protection Wear appropriate chemical resistant gloves. The choice of an appropriate glove does not only depend on its material but also on other quality features and is different from one producer to the other. Glove selection must take into account any solvents and other hazards present.

Other Wear appropriate chemical resistant clothing. Use of an impervious apron is recommended.

Respiratory protection If engineering controls do not maintain airborne concentrations below recommended exposure limits (where applicable) or to an acceptable level (in countries where exposure limits have not been established), an approved respirator must be worn. A RESPIRATORY PROTECTION PROGRAM THAT MEETS OSHA'S 29 CFR 1910.134 AND ANSI Z88.2 REQUIREMENTS MUST BE FOLLOWED WHENEVER WORKPLACE CONDITIONS WARRANT A RESPIRATOR'S USE.

Thermal hazards Wear appropriate thermal protective clothing, when necessary.

General hygiene considerations Observe any medical surveillance requirements. When using, do not eat, drink or smoke. Always observe good personal hygiene measures, such as washing after handling the material and before eating, drinking, and/or smoking. Routinely wash work clothing and protective equipment to remove contaminants.

9. Physical and chemical properties

Appearance

Color Light yellow

Physical state Liquid

Odor Amine odor

Odor threshold Not available.

pH (concentrated product) 12.8 Neat

pH in aqueous solution 11.8 (5% Emulsion)

Melting point/freezing point 4 °F (-16 °C)

Initial boiling point and boiling range Not available.

Flash point 133 °F (56 °C) P-M(CC)

Evaporation rate Slower than Ether

Flammability (solid, gas) Not applicable.

Upper/lower flammability or explosive limits

Flammability limit - lower (%) Not available.

Flammability limit - upper (%) Not available.

Explosive limit - lower (%) Not available.

Explosive limit - upper (%) Not available.

Vapor pressure 18 mmHg

Vapor pressure temp. 70 °F (21 °C)

Vapor density < 1

Relative density 0.98

Relative density temperature	70 °F (21 °C)
Solubility(ies)	
Solubility (water)	Not available.
Partition coefficient (n-octanol/water)	Not available.
Auto-ignition temperature	Not available.
Decomposition temperature	Not available.
Viscosity	24 mPa.s
Viscosity temperature	70 °F (21 °C)
Other information	
Explosive properties	Not explosive.
Oxidizing properties	Not oxidizing.
Specific gravity	0.978
VOC	40 % ESTIMATED

10. Stability and reactivity

Reactivity	The product is stable and non-reactive under normal conditions of use, storage and transport.
Chemical stability	Material is stable under normal conditions.
Possibility of hazardous reactions	Hazardous polymerization does not occur.
Conditions to avoid	Avoid heat, sparks, open flames and other ignition sources. Avoid temperatures exceeding the flash point.
Incompatible materials	Strong acids. Strong oxidizing agents.
Hazardous decomposition products	Oxides of carbon and nitrogen evolved in fire.

11. Toxicological information

Information on likely routes of exposure

Inhalation	May cause irritation to the respiratory system.
Skin contact	Causes severe skin burns. Harmful in contact with skin. Prolonged or repeated exposure may cause liver and kidney damage. These effects have not been observed in humans.
Eye contact	Causes serious eye damage.
Ingestion	Causes digestive tract burns. Harmful if swallowed. May cause damage to organs through prolonged or repeated exposure by ingestion.
Symptoms related to the physical, chemical and toxicological characteristics	Burning pain and severe corrosive skin damage. Causes serious eye damage. Symptoms may include stinging, tearing, redness, swelling, and blurred vision. Permanent eye damage including blindness could result. May cause respiratory irritation.

Information on toxicological effects

Acute toxicity Harmful in contact with skin. Harmful if swallowed. May cause respiratory irritation.

Product	Species	Test Results
STEAMATE HRSG04 (CAS Mixture)		
Acute		
Dermal		
LD50	Rabbit	1097 mg/kg, (Calculated according to GHS additivity formula)
Oral		
LD50	Rat	638 mg/kg, (Calculated according to GHS additivity formula)

Components	Species	Test Results
Alkyl diaminopropane (CAS 7173-62-8)		
Acute		
Oral		
LD50	Rat	500 mg/kg
Cyclohexylamine (CAS 108-91-8)		
Acute		
Dermal		
LD50	Rabbit	277 mg/kg
Oral		
LD50	Rat	156 mg/kg
Ethanolamine (CAS 141-43-5)		
Acute		
Dermal		
LD50	Rabbit	1025 mg/kg
Inhalation		
LC50	Rat	> 1.5 mg/l, 4 Hour
Oral		
LD50	Rat	1720 mg/kg
Oleylamine (CAS 112-90-3)		
Acute		
Oral		
LD50	Rat	1950 mg/kg

* Estimates for product may be based on additional component data not shown.

Skin corrosion/irritation Causes severe skin burns and eye damage.

Serious eye damage/eye irritation Causes serious eye damage.

Respiratory or skin sensitization

Respiratory sensitization This product is not expected to cause respiratory sensitization.

Skin sensitization This product is not expected to cause skin sensitization.

Germ cell mutagenicity No data available to indicate product or any components present at greater than 0.1% are mutagenic or genotoxic.

Carcinogenicity Not classified.

IARC Monographs. Overall Evaluation of Carcinogenicity

Not listed.

OSHA Specifically Regulated Substances (29 CFR 1910.1001-1050)

Not regulated.

US. National Toxicology Program (NTP) Report on Carcinogens

Not listed.

Reproductive toxicity Suspected of damaging fertility.

Specific target organ toxicity - single exposure May cause respiratory irritation.

Specific target organ toxicity - repeated exposure Causes damage to organs (systemic toxicity) through prolonged or repeated exposure by ingestion.

Aspiration hazard Based on available data, the classification criteria are not met.

12. Ecological information

Ecotoxicity

Product	Species	Test Results
STEAMATE HRSG04 (CAS Mixture)		
IC25	Mysid Shrimp	0.616 mg/l, Static Renewal Bioassay, 7 day

Product		Species	Test Results
	LC50	Fathead Minnow	1.4 mg/l, Static Renewal Bioassay, 96 hour
		Mysid Shrimp	0.575 mg/l, Static Renewal Bioassay, 96 hour
	NOEL	Fathead Minnow	1 mg/l, Static Renewal Bioassay, 96 hour
		Mysid Shrimp	0.5 mg/l, Static Renewal Bioassay, 7 day
			0.25 mg/l, Static Renewal Bioassay, 96 hour
Aquatic			
Crustacea	LC50	Daphnia magna	1.4 mg/l, Static Renewal Bioassay, 48 hour
	NOEL	Daphnia magna	1 mg/l, Static Renewal Bioassay, 48 hour
Fish	LC50	Rainbow Trout	1.5 mg/l, Static Renewal Bioassay, 96 hour
	NOEL	Rainbow Trout	1 mg/l, Static Renewal Bioassay, 96 hour

Bioaccumulative potential

Partition coefficient n-octanol / water (log Kow)

Cyclohexylamine	1.49
Ethanolamine	-1.31

Bioconcentration factor (BCF)

Ethanolamine	3

Mobility in soil No data available.

Other adverse effects Not available.

Persistence and degradability

13. Disposal considerations

Disposal instructions Collect and reclaim or dispose in sealed containers at licensed waste disposal site. Incinerate the material under controlled conditions in an approved incinerator. Do not incinerate sealed containers. If discarded, this product is considered a RCRA ignitable waste, D001. Dispose of contents/container in accordance with local/regional/national/international regulations.

Local disposal regulations Dispose in accordance with all applicable regulations.

Hazardous waste code D001: Waste Flammable material with a flash point <140 F
D002: Waste Corrosive material [pH <=2 or =>12.5, or corrosive to steel]
The waste code should be assigned in discussion between the user, the producer and the waste disposal company.

Waste from residues / unused products Dispose of in accordance with local regulations. Empty containers or liners may retain some product residues. This material and its container must be disposed of in a safe manner (see: Disposal instructions).

Contaminated packaging Empty containers should be taken to an approved waste handling site for recycling or disposal. Since emptied containers may retain product residue, follow label warnings even after container is emptied.

14. Transport information

DOT

UN number UN2734

UN proper shipping name Amines, liquid, corrosive, flammable, n.o.s. (MONOETHANOLAMINE, CYCLOHEXYLAMINE)

Transport hazard class(es)

Class 8

Subsidiary risk 3

Packing group II

Special precautions for user Read safety instructions, SDS and emergency procedures before handling.

ERG number 132

Some containers may be exempt from Dangerous Goods/Hazmat Transport Regulations, please check BOL for exact container classification.

IATA

UN number	UN2734
UN proper shipping name	Amines, liquid, corrosive, flammable, n.o.s. (MONOETHANOLAMINE, CYCLOHEXYLAMINE)
Transport hazard class(es)	
Class	8
Subsidiary risk	3
Packing group	II
Environmental hazards	Yes
ERG Code	132
Special precautions for user	Read safety instructions, SDS and emergency procedures before handling.

IMDG

UN number	UN2734
UN proper shipping name	AMINES, LIQUID, CORROSIVE, FLAMMABLE, N.O.S. (MONOETHANOLAMINE, CYCLOHEXYLAMINE), MARINE POLLUTANT
Transport hazard class(es)	
Class	8
Subsidiary risk	3
Packing group	II
Environmental hazards	
Marine pollutant	Yes
EmS	F-E, S-C
Special precautions for user	Read safety instructions, SDS and emergency procedures before handling.

DOT



IATA; IMDG



Marine pollutant



15. Regulatory information

US federal regulations This product is a "Hazardous Chemical" as defined by the OSHA Hazard Communication Standard, 29 CFR 1910.1200.

TSCA Section 12(b) Export Notification (40 CFR 707, Subpt. D)

Not regulated.

CERCLA Hazardous Substance List (40 CFR 302.4)

Not listed.

SARA 304 Emergency release notification

Cyclohexylamine (CAS 108-91-8) 10000 LBS

OSHA Specifically Regulated Substances (29 CFR 1910.1001-1050)

Not regulated.

Superfund Amendments and Reauthorization Act of 1986 (SARA)

Hazard categories
Immediate Hazard - Yes
Delayed Hazard - Yes
Fire Hazard - Yes
Pressure Hazard - No
Reactivity Hazard - No

SARA 302 Extremely hazardous substance

Chemical name	CAS number	Reportable quantity (pounds)	Threshold planning quantity (pounds)	Threshold planning quantity, lower value (pounds)	Threshold planning quantity, upper value (pounds)
Cyclohexylamine	108-91-8	10000	10000		

SARA 311/312 Hazardous chemical Yes

SARA 313 (TRI reporting)

Not regulated.

Other federal regulations

Clean Air Act (CAA) Section 112 Hazardous Air Pollutants (HAPs) List

Not regulated.

Clean Air Act (CAA) Section 112(r) Accidental Release Prevention (40 CFR 68.130)

Cyclohexylamine (CAS 108-91-8)

Safe Drinking Water Act (SDWA) Not regulated.

Inventory status

Country(s) or region	Inventory name	On inventory (yes/no)*
Canada	Domestic Substances List (DSL)	No
Canada	Non-Domestic Substances List (NDSL)	Yes
United States & Puerto Rico	Toxic Substances Control Act (TSCA) Inventory	Yes

*A "Yes" indicates that all components of this product comply with the inventory requirements administered by the governing country(s)
A "No" indicates that one or more components of the product are not listed or exempt from listing on the inventory administered by the governing country(s).

US state regulations

US - California Proposition 65 - CRT: Listed date/Carcinogenic substance

Aniline (CAS 62-53-3) Listed: January 1, 1990

US - California Proposition 65 - CRT: Listed date/Developmental toxin

No ingredient listed.

US - California Proposition 65 - CRT: Listed date/Female reproductive toxin

No ingredient listed.

US - California Proposition 65 - CRT: Listed date/Male reproductive toxin

No ingredient listed.

US - Massachusetts RTK - Substance List

Cyclohexylamine (CAS 108-91-8)
Ethanolamine (CAS 141-43-5)

US - Pennsylvania RTK - Hazardous Substances

Cyclohexylamine (CAS 108-91-8) Listed.
Ethanolamine (CAS 141-43-5) Listed.

US - Rhode Island RTK

Cyclohexylamine (CAS 108-91-8)
Ethanolamine (CAS 141-43-5)

US. New Jersey Worker and Community Right-to-Know Act

Cyclohexylamine (CAS 108-91-8)	Listed.
Ethanolamine (CAS 141-43-5)	Listed.

US. Pennsylvania Worker and Community Right-to-Know Law

Ethanolamine (CAS 141-43-5)	Hazardous substance

US. California Proposition 65

WARNING: This product contains a chemical known to the State of California to cause cancer.

16. Other information, including date of preparation or last revision

Issue date	Oct-22-2015
Revision date	Jun-13-2018
Version #	10.3
List of abbreviations	CAS: Chemical Abstract Service Registration Number TSRN indicates a Trade Secret Registry Number is used in place of the CAS number. ACGIH: American Conference of Governmental Industrial Hygienists NOEL: No Observed Effect Level STEL: Short Term Exposure Limit LC50: Lethal Concentration, 50% TWA: Time Weighted Average BOD: Biochemical Oxygen Demand COD: Chemical Oxygen Demand TOC: Total Organic Carbon IATA: International Air Transport Association IMDG: International Maritime Dangerous Goods Code LD50: Lethal Dose, 50%
References:	No data available
Disclaimer	The information provided in this Safety Data Sheet is correct to the best of our knowledge, information and belief at the date of its publication. The information given is designed only as a guidance for safe handling, use, processing, storage, transportation, disposal and release and is not to be considered a warranty or quality specification. The information relates only to the specific material designated and may not be valid for such material used in combination with any other materials or in any process, unless specified in the text.
Revision information	Hazard(s) identification: Hazard statement Toxicological information: Specific target organ toxicity - repeated exposure Regulatory information: US state regulations
Prepared by	This SDS has been prepared by SUEZ Regulatory Department (1-215-355-3300).

* Trademark of SUEZ. May be registered in one or more countries.

Univar USA Inc Safety Data Sheet

3075 Highland Pkwy, Ste 200, Downers Grove, IL 60515
(425) 889 3400

Emergency Assistance

For emergency assistance involving chemicals call
Chemtrec - (800) 424-9300

Univar
3075 Highland Pkwy STE 200
Downers Grove, IL 60515
425-889-3400

SAFETY DATA SHEET

1. Identification

Product identifier: SODIUM HYPOCHLORITE 10-16%

Other means of identification

Synonyms Liquichlor, Bleach

CAS NUMBERS: 7681-52-9

SDS number: 000100001054

Recommended use and restriction on use

Recommended use: Reserved for industrial and professional use.

Restrictions on use: Not known.

Emergency telephone number:For emergency assistance Involving chemicals

call CHEMTREC day or night at: 1-800-424-9300. CHEMTREC INTERNATIONAL Tel# 703-527-3887

2. Hazard(s) identification

Hazard classification

Physical hazards

Corrosive to metals	Category 1

Health hazards

Acute toxicity (Oral)	Category 4
Skin corrosion/irritation	Category 1
Serious eye damage/eye irritation	Category 1
Environmental hazards Acute hazards to the aquatic environment	Category 1

Label elements

Hazard symbol



Signal word	Danger
Hazard statement	May be corrosive to metals. Causes severe skin burns and eye damage. Causes serious eye damage. Very toxic to aquatic life.
Precautionary statement	
Prevention	Wash thoroughly after handling. Do not eat, drink or smoke when using this product. Do not breathe dust or mists. Wear protective gloves/protective clothing/eye protection/face protection.
Response	IF INHALED: Remove person to fresh air and keep comfortable for breathing. If in eyes: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing. IF ON SKIN (or hair): Take off immediately all contaminated clothing. Rinse skin with water/shower. IF SWALLOWED: Call a POISON CENTER/doctor/ if you feel unwell. Rinse mouth. Do NOT induce vomiting. Immediately call a POISON CENTER/doctor. Specific treatment (see this label). Wash contaminated clothing before reuse.
Storage	Store locked up.

Disposal	Dispose of contents/container to an appropriate treatment and disposal facility in accordance with applicable laws and regulations, and product characteristics at time of disposal.
Other hazards which do not result in GHS classification	None.

3. Composition/information on ingredients

Substances

Chemical identity	Common name and synonyms	CAS number	Content in percent (%)*
Sodium hypochlorite		7681-52-9	10 - 16%
Sodium hydroxide		1310-73-2	0.3 - 5%
Water		7732-18-5	80 - 89.7%

* All concentrations are percent by weight unless ingredient is a gas. Gas concentrations are in percent by volume.

4. First-aid measures

Ingestion:	Do NOT induce vomiting. Never give liquid to an unconscious person. Get medical attention immediately.
Inhalation:	Call a physician or poison control center immediately. If breathing stops, provide artificial respiration. Move to fresh air. If breathing is difficult, give oxygen.
Skin contact:	Immediately flush with plenty of water for at least 15 minutes while removing contaminated clothing and shoes.
Eye contact:	If in eyes, hold eyes open, flood with water for at least 15 minutes and see a doctor.

Most important symptoms/effects, acute and delayed

Symptoms: No data available.

Indication of immediate medical attention and special treatment needed

Treatment: Symptoms may be delayed.

5. Fire-fighting measures

General fire hazards:	No unusual fire or explosion hazards noted.

Suitable (and unsuitable) extinguishing media

Suitable extinguishing media:	Use: Foam. Carbon dioxide or dry powder.
Unsuitable extinguishing media:	No data available.
Specific hazards arising from the chemical:	During fire, gases hazardous to health may be formed.

Special protective equipment and precautions for firefighters

Special fire fighting procedures:	No data available.
Special protective equipment for fire-fighters:	Self-contained breathing apparatus and full protective clothing must be worn in case of fire.

6. Accidental release measures

Personal precautions, protective equipment and emergency procedures:	Do not touch damaged containers or spilled material unless wearing appropriate protective clothing. Keep unauthorized personnel away.
Methods and material for containment and cleaning up:	Absorb spillage with non-combustible, absorbent material.
Notification Procedures:	Dike for later disposal. Prevent entry into waterways, sewer, basements or confined areas. Stop the flow of material, if this is without risk.
Environmental precautions:	Do not contaminate water sources or sewer. Avoid release to the environment.

7. Handling and storage

Precautions for safe handling:	Do not taste or swallow. Wash hands thoroughly after handling. Do not get in eyes. Do not get in eyes, on skin, on clothing.
Conditions for safe storage, including any incompatibilities:	Store locked up.

8. Exposure controls/personal protection

Control parameters

Occupational exposure limits

Chemical identity	Type	Exposure Limit values	Source
Sodium hydroxide	Ceiling	2 mg/m3	US. Tennessee. OELs. Occupational Exposure Limits, Table Z1A (06 2008)
Sodium hydroxide - Particulate.	ST ESL	20 µg/m3	US. Texas. Effects Screening Levels (Texas Commission on Environmental Quality) (02 2013)
	AN ESL	2 µg/m3	US. Texas. Effects Screening Levels (Texas Commission on Environmental Quality) (02 2013)
Sodium hydroxide	Ceiling	2 mg/m3	US. California Code of Regulations, Title 8, Section 5155. Airborne Contaminants (02 2012)
	Ceiling	2 mg/m3	US. ACGIH Threshold Limit Values (03 2013)
	Ceil_Time	2 mg/m3	US. NIOSH: Pocket Guide to Chemical Hazards (2010)
	PEL	2 mg/m3	US. OSHA Table Z-1 Limits for Air Contaminants (29 CFR 1910.1000) (02 2006)
	Ceiling	2 mg/m3	US. OSHA Table Z-1-A (29 CFR 1910.1000) (1989)

Appropriate engineering controls No data available.

Individual protection measures, such as personal protective equipment

General information: Provide easy access to water supply and eye wash facilities. Use personal protective equipment as required. Always observe good personal hygiene measures, such as washing after handling the material and before eating, drinking, and/or smoking. Routinely wash work clothing to remove contaminants. Discard contaminated footwear that cannot be cleaned.

Eye/face protection: Wear a full-face respirator, if needed. Wear safety glasses with side shields (or goggles) and a face shield.

Skin protection

Hand protection: Chemical resistant gloves

Other: Wear chemical-resistant gloves, footwear, and protective clothing

	appropriate for the risk of exposure. Contact health and safety professional or manufacturer for specific information.
Respiratory protection:	In case of inadequate ventilation use suitable respirator.
Hygiene measures:	Do not eat, drink or smoke when using the product. Wash hands after handling. Do not get in eyes. Observe good industrial hygiene practices. Wash contaminated clothing before reuse. Do not get this material in contact with skin. Wash hands before breaks and immediately after handling the product.

9. Physical and chemical properties

Physical state:	Liquid
Form:	No data available.
Color:	Pale yellow-green
Odor:	Odor of chlorine
Odor threshold:	No data available.
pH:	11.2
Melting point/freezing point:	-20 °C
Initial boiling point and boiling range:	> 100 °C
Flash Point:	No data available.
Evaporation rate:	No data available.
Flammability (solid, gas):	No data available.
Upper/lower limit on flammability or explosive limits	
Flammability limit - upper (%):	No data available.
Flammability limit - lower (%):	No data available.
Explosive limit - upper (%):	No data available.
Explosive limit - lower (%):	No data available.
Vapor pressure:	No data available.
Vapor density:	No data available.
Relative density:	1.224
Solubility(ies)	
Solubility in water:	No data available.
Solubility (other):	No data available.
Partition coefficient (n-octanol/water):	No data available.

Auto-ignition temperature:	No data available.
Decomposition temperature:	No data available.
Viscosity:	No data available.

10. Stability and reactivity

Reactivity:	No data available.
Chemical stability:	Material is stable under normal conditions.
Possibility of hazardous reactions:	No data available.
Conditions to avoid:	Avoid heat or contamination.
Incompatible materials:	Oxidizers, acids
Hazardous decomposition products:	No data available.

11. Toxicological information

Symptoms related to the physical, chemical and toxicological characteristics

Ingestion:	No data available.
Inhalation:	No data available.
Skin contact:	No data available.
Eye contact:	No data available.

Information on toxicological effects

Acute toxicity (list all possible routes of exposure)

Oral

Product: ATEmix (): 325 mg/kg

Dermal

Product:

Not classified for acute toxicity based on available data.

Inhalation

Product: May be harmful if inhaled.

Repeated dose toxicity

Product: No data available.

Skin corrosion/irritation

Product: Causes severe skin burns.

Serious eye damage/eye irritation

Product: Causes serious eye damage.

Respiratory or skin sensitization

Product: No data available.

Carcinogenicity

Product: No data available.

IARC Monographs on the Evaluation of Carcinogenic Risks to Humans:
No carcinogenic components identified

US. National Toxicology Program (NTP) Report on Carcinogens:
No carcinogenic components identified

US. OSHA Specifically Regulated Substances (29 CFR 1910.1001-1050):
No carcinogenic components identified

Germ cell mutagenicity

In vitro

Product: No data available.

In vivo

Product: No data available.

Reproductive toxicity

Product: No data available.

Specific target organ toxicity - single exposure

Product: No data available.

Specific target organ toxicity - repeated exposure

Product: No data available.

Aspiration hazard

Product: No data available.

Other effects: No data available.

12. Ecological information

Ecotoxicity:

Acute hazards to the aquatic environment:

Fish

Product: No data available.

Specified substance(s):

Sodium hypochlorite	LC 50 (Bluegill (Lepomis macrochirus), 96 h): 2.2 - 2.64 mg/l Mortality
Sodium hydroxide	LC 50 (Western mosquitofish (Gambusia affinis), 96 h): 125 mg/l Mortality LC 50 (Western mosquitofish (Gambusia affinis), 24 h): 125 mg/l Mortality LC 50 (Guppy (Poecilia reticulata), 24 h): 145 mg/l Mortality LC 50 (Western mosquitofish (Gambusia affinis), 48 h): 125 mg/l Mortality LC 50 (Goldfish (Carassius auratus), 24 h): 160 mg/l Mortality

Aquatic invertebrates

Product: No data available.

Specified substance(s):

Sodium hydroxide	LC 50 (Cockle (Cerastoderma edule), 48 h): 330 - 1,000 mg/l Mortality EC 50 (Water flea (Ceriodaphnia dubia), 48 h): 34.59 - 47.13 mg/l Intoxication LC 50 (Common shrimp, sand shrimp (Crangon crangon), 48 h): 33 - 100 mg/l Mortality

Chronic hazards to the aquatic environment:

Fish

Product: No data available.

Aquatic invertebrates

Product: No data available.

Toxicity to Aquatic Plants

Product: No data available.

Specified substance(s):

Sodium hypochlorite	LC 50 (Green algae (Dunaliella primolecta)): 0.4 mg/l Mortality LC 50 (Red algae (Porphyra yezoensis), 10 d): 2.3 mg/l Mortality

Persistence and degradability

Biodegradation

Product: No data available.

BOD/COD ratio

Product: No data available.

Bioaccumulative potential

Bioconcentration factor (BCF)

Product: No data available.

Partition coefficient n-octanol / water (log Kow)

Product: No data available.

Mobility in soil: No data available.

Known or predicted distribution to environmental compartments

Sodium hypochlorite	No data available.
Sodium hydroxide	No data available.
Water	No data available.

Known or predicted distribution to environmental compartments

Water	No data available.

13. Disposal considerations

Disposal instructions: Discharge, treatment, or disposal may be subject to national, state, or local laws.

Contaminated packaging: Since emptied containers retain product residue, follow label warnings even after container is emptied.

14. Transport information

DOT

UN number:	UN 1791
UN proper shipping name:	Hypochlorite solutions
Transport hazard class(es)	
Class:	8
Label(s):	8
Packing group:	III
Marine Pollutant:	Marine Pollutant
Special precautions for user:	–

IMDG

UN number:	UN 1791
UN proper shipping name:	HYPOCHLORITE SOLUTION
Transport hazard class(es)	
Class:	8
Label(s):	8
EmS No.:	F-A, S-B
Packing group:	III
Marine Pollutant:	Marine Pollutant
Special precautions for user:	–

15. Regulatory information

US federal regulationsUS. OSHA Specifically Regulated Substances (29 CFR 1910.1001-1050)

None present or none present in regulated quantities.

CERCLA Hazardous Substance List (40 CFR 302.4):

Sodium hypochlorite	Reportable quantity: 100 lbs.
Sodium hydroxide	Reportable quantity: 1000 lbs.

Superfund amendments and reauthorization act of 1986 (SARA)

Hazard categories

Not listed.

SARA 302 Extremely hazardous substance

None present or none present in regulated quantities.

SARA 304 Emergency release notification

Chemical identity	RQ
Sodium hypochlorite	100 lbs.
Sodium hydroxide	1000 lbs.

SARA 311/312 Hazardous chemical

Chemical identity	Threshold Planning Quantity
Sodium hypochlorite	500 lbs
Sodium hydroxide	500 lbs

SARA 313 (TRI reporting)

None present or none present in regulated quantities.

Clean Water Act Section 311 Hazardous Substances (40 CFR 117.3)

Sodium hypochlorite	Reportable quantity: 100 lbs.
Sodium hydroxide	Reportable quantity: 1000 lbs.

Clean Air Act (CAA) Section 112(r) Accidental Release Prevention (40 CFR 68.130):

None present or none present in regulated quantities.

US state regulations

US. California Proposition 65

No ingredient regulated by CA Prop 65 present.

US. New Jersey Worker and Community Right-to-Know Act

Sodium hypochlorite	Listed
Sodium hydroxide	Listed

US. Massachusetts RTK - Substance List

Sodium hypochlorite	Listed
Sodium hydroxide	Listed

US. Pennsylvania RTK - Hazardous Substances

Sodium hypochlorite	Listed
Sodium hydroxide	Listed

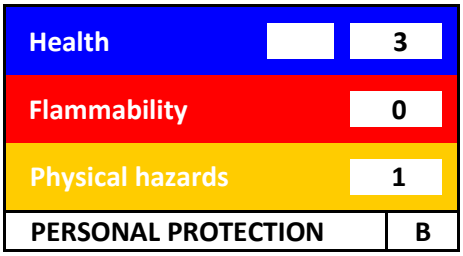
US. Rhode Island RTK

Sodium hypochlorite	Listed
Sodium hydroxide	Listed

Inventory Status: Australia AICS:	Not in compliance with the inventory.
Canada DSL Inventory List:	Not in compliance with the inventory.
EU EINECS List:	Not in compliance with the inventory.
EU ELINCS List:	Not in compliance with the inventory.
Japan (ENCS) List:	Not in compliance with the inventory.
EU No Longer Polymers List:	Not in compliance with the inventory.
China Inv. Existing Chemical Substances:	Not in compliance with the inventory.
Korea Existing Chemicals Inv. (KECI):	Not in compliance with the inventory.
Canada NDSL Inventory:	Not in compliance with the inventory.
Philippines PICCS:	Not in compliance with the inventory.
New Zealand Inventory of Chemicals:	Not in compliance with the inventory.
Japan ISHL Listing:	Not in compliance with the inventory.
Japan Pharmacopoeia Listing:	Not in compliance with the inventory.
US TSCA Inventory:	On or in compliance with the inventory

16.Other information, including date of preparation or last revision

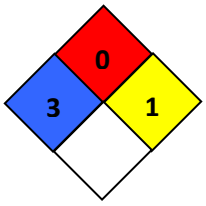
HMIS Hazard ID

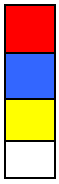


B - Safety Glasses & Gloves

Hazard rating: 0 - Minimal; 1 - Slight; 2 - Moderate; 3 - Serious; 4 - Severe; *Chronic health effect

NFPA Hazard ID





Hazard rating: 0 - Minimal; 1 - Slight; 2 - Moderate; 3 - Serious; 4 - Severe

Issue date:	08/29/2016
Revision date:	No data available.
Version #:	1.6
Further information:	No data available.

Univar USA Inc Safety Data Sheet

For Additional Information contact SDS Coordinator during business hours, Pacific time: (425) 889-3400

Notice

Univar USA Inc. (”Univar”) expressly disclaims all express or implied warranties of merchantability and fitness for a particular purpose, with respect to the product or information provided herein, and shall under no circumstances be liable for incidental or consequential damages.

Do not use ingredient information and/or ingredient percentages in this SDS as a product specification. For product specification information refer to a product specification sheet and/or a certificate of analysis. These can be obtained from your local Univar sales office.

All information appearing herein is based upon data obtained from the manufacturer and/or recognized technical sources. While the information is believed to be accurate, Univar makes no representations as to its accuracy or sufficiency. Conditions of use are beyond Univar's control and therefore users are responsible to verify this data under their own operating conditions to determine whether the product is suitable for their particular purposes and they assume all risks of their use, handling, and disposal of the product, or from the publication or use of, or reliance upon, information contained herein.

This information relates only to the product designated herein, and does not relate to its use in combination with any other material or in any other process

SAFETY DATA SHEET

Issuing Date 13 April 2015 **Revision Date** 13 April 2015 **Revision Number 0**

1. IDENTIFICATION OF THE SUBSTANCE/PREPARATION AND THE COMPANY/UNDERTAKING

GHS product identifier

Product Name **Sodium Bromide Solution**

Other means of identification

Chemical Family Inorganic Salt

Recommended use of the chemical and restrictions on use

Recommended Use Oilfield additive

Uses advised against No information available

Supplier's details

Manufacturer Address
TETRA Technologies, Inc.
24955 Interstate 45 North
The Woodlands, TX 77380
TEL: 281-367-1983 (Non-Emergency Number)

Emergency telephone number

Emergency Telephone Number CHEMTREC: 1-800-424-9300 for US/ 703-527-3887 outside US

2. HAZARDS IDENTIFICATION

Classification

This chemical is not considered hazardous according to the OSHA Hazard Communication Standard 2012 (29 CFR 1910.1200).

Not classified

GHS Label elements, including precautionary statements

Emergency Overview

Signal Word **None**

Hazard Statements
• None

The product contains no substances which at their given concentration are considered to be hazardous to health.

Precautionary Statements

Prevention
• None

General Advice
• None

Storage
• None

Disposal
• None

Hazard Not Otherwise Classified (HNOC)

Not applicable

Other information
May cause irritation to skin, eyes and respiratory system. Do not ingest.

3. COMPOSITION/INFORMATION ON INGREDIENTS

Chemical Name	CAS-No	Weight %
Sodium Bromide	7647-15-6	1 - 48

4. FIRST AID MEASURES

Description of necessary first-aid measures

Eye Contact Immediately flush eyes thoroughly with large amounts of water for 15-20 minutes. Hold eyelids open during flushing. Get medical attention immediately.

Skin Contact Remove contaminated clothing and shoes immediately. Wash affected area with soap or mild detergent, and large amounts of water. In cases of burns, cover lightly with sterile, dry dressing. Get medical attention immediately.

Inhalation Remove from exposure area to fresh air. Obtain medical attention immediately.

Ingestion Do not attempt to give anything by mouth to an unconscious person. Get medical attention immediately.

Protection of First-aiders Use personal protective equipment.

Most important symptoms/effects, acute and delayed

Most Important Symptoms/Effects No information available.

Indication of immediate medical attention and special treatment needed, if necessary

Notes to Physician Treat symptomatically.

5. FIRE-FIGHTING MEASURES

Suitable Extinguishing Media
Negligible fire Hazard. Use extinguishing measures that are appropriate to local circumstances and the surrounding environment.

Unsuitable Extinguishing Media None

Specific Hazards Arising from the Chemical
None

Explosion Data
Sensitivity to Mechanical Impact None.
Sensitivity to Static Discharge None.

Protective Equipment and Precautions for Firefighters
As in any fire, wear self-contained breathing apparatus pressure-demand, MSHA/NIOSH (approved or equivalent) and full protective gear.

6. ACCIDENTAL RELEASE MEASURES

Personal precautions, protective equipment and emergency procedures

Personal Precautions Avoid contact with the skin and the eyes. Use personal protective equipment.

Environmental Precautions

Environmental Precautions Prevent product from entering drains. Prevent entry into waterways, sewers, basements or confined areas.

Methods and materials for containment and cleaning up

Methods for Containment For small spills, take up with sand or other absorbent material and place into containers for later reclamation or disposal. For larger spills, dike far ahead of spill for later disposal.

Methods for Cleaning Up Take up and collect in suitable container for disposal. Use personal protective equipment.

7. HANDLING AND STORAGE

Precautions for safe handling

Handling Ensure adequate ventilation. Wear personal protective equipment. Avoid contact with skin and eyes. Wash thoroughly after handling.

Conditions for safe storage, including any incompatibilities

Storage Keep container tightly closed in a dry and well-ventilated place. Keep in properly labeled containers. Keep in a dry place.

Incompatible Products Strong oxidizing agents

8. EXPOSURE CONTROLS / PERSONAL PROTECTION

Control parameters
None established.

Appropriate engineering controls

Engineering Measures Provide local exhaust ventilations system. When there is a potential for exposure, an emergency eyewash and safety shower should be provided within the immediate work area.

Individual protection measures, such as personal protective equipment

Eye/Face Protection Wear safety glasses with non-flexible side shields or chemical goggles

Skin and Body Protection Wear appropriate protective, impervious clothing.

Respiratory Protection A respirator is not indicated under normal operating conditions. Use of respirator should be based on contamination levels in the workplace.

Hygiene Measures When using, do not eat, drink or smoke. Remove and wash contaminated clothing before re-use. Provide regular cleaning of equipment, work area and clothing.

9. PHYSICAL AND CHEMICAL PROPERTIES

Information on basic physical and chemical properties

Physical State	Liquid	**Appearance**	Clear
Odor	Odorless	**Odor Threshold**	No information available

Property	**Values**
pH	5.5 – 8.5 @ 5% solution
Melting Point/Range	No data available
Boiling Point/Boiling Range	No data available
Flash Point	Not applicable
Molecular Weight	No data available
Flammability (solid, gas)	No data available
Flammability Limits in Air	
upper flammability limit	No data available
lower flammability limit	No data available
Vapor Pressure	Not applicable
Vapor Density	Not applicable
Specific Gravity	1.01 – 1.53 @ 68°F (20°C)
Water Solubility	Completely
Solubility in other solvents	Slightly soluble in alcohol
Partition coefficient: n-octanol/water	No data available
Autoignition Temperature	No data available
Decomposition Temperature	No data available
Viscosity	Not applicable

Flammable Properties Not flammable

Explosive Properties No data available
Oxidizing Properties No data available

Other information

VOC Content (%) Not applicable.

10. STABILITY AND REACTIVITY

Reactivity

No data available.

Chemical stability

Stable under recommended storage conditions.

Possibility of hazardous reactions

None under normal conditions.

Hazardous Polymerization

Hazardous polymerization does not occur.

Conditions to avoid

None.

Incompatible materials

Strong oxidizing agents.

Hazardous decomposition products

May generate bromine gas in the presence of strong oxidizing agents.

11. TOXICOLOGICAL INFORMATION

Information on likely routes of exposure

Product Information

Inhalation Vapor inhalation may cause irritation to mucous membranes and respiratory system. Additional effects may include coughing and shortness of breath.

Eye Contact May cause irritation of eyes with redness and/or pain and superficial injury. Additional effects may include tearing and eye discharge.

Skin Contact Single, short exposure not likely to cause significant skin irritation. However, direct contact with solution may cause irritation.

Ingestion Ingestion may cause vomiting, digestive disorders, high blood pressure, headache, kidney damage, paralysis and coma.

Component Information

Chemical Name	LD50 Oral	LD50 Dermal	LC50 Inhalation
Sodium Bromide	= 3500 mg/kg, (rat)	>2000 mg/kg (rabbit)	-

Symptoms related to the physical, chemical and toxicological characteristics

Symptoms Eye, mucous membrane and skin irritant.

Delayed and immediate effects and also chronic effects from short and long term exposure

Eye damage/irritation May be irritating to eyes.
Sensitization No information available.
Mutagenic Effects No information available.
Carcinogenicity Contains no ingredients above reportable quantities listed as a carcinogen.

Reproductive Toxicity No information available.
STOT - single exposure No information available.
STOT - repeated exposure No information available.
Chronic Toxicity No information available.
Aspiration Hazard No information available.

Numerical measures of toxicity - Product
No information available

12. ECOLOGICAL INFORMATION

Ecotoxicity
The environmental impact of this product has not been fully investigated. Avoid release to the environment.

Persistence and Degradability Product is not biodegradable.

Bioaccumulation Does not bioaccumulate.

Other Adverse Effects
No information available.

13. DISPOSAL CONSIDERATIONS

Waste Disposal Methods This material, as supplied, is not a hazardous waste according to Federal regulations (40 CFR 261). This material could become a hazardous waste if it is mixed with or otherwise comes in contact with a hazardous waste, if chemical additions are made to this material, or if the material is processed or otherwise altered. Consult 40 CFR 261 to determine whether the altered material is a hazardous waste. Consult the appropriate state, regional, or local regulations for additional requirements.

Contaminated Packaging No information available.

14. TRANSPORT INFORMATION

DOT Not regulated

IMDG Not regulated

ICAO / IATA Not regulated

15. REGULATORY INFORMATION

International Inventories

TSCA	Complies
DSL	Complies

Legend
TSCA - United States Toxic Substances Control Act Section 8(b) Inventory
DSL/NDSL - Canadian Domestic Substances List/Non-Domestic Substances List

U.S. Federal Regulations

Section 313 of Title III of the Superfund Amendments and Reauthorization Act of 1986 (SARA). This product does not contain any chemicals which are subject to the reporting requirements of the Act and Title 40 of the Code of Federal Regulations, Part 372.

SARA 311/312 Hazard Categories

Acute Health Hazard	Yes
Chronic Health Hazard	No
Fire Hazard	No
Sudden Release of Pressure Hazard	No
Reactive Hazard	No

Clean Water Act
This product does not contain any substances regulated as pollutants pursuant to the Clean Water Act (40 CFR 122.21 and 40 CFR 122.42).

CERCLA
This material, as supplied, does not contain any substances regulated as hazardous substances under the Comprehensive Environmental Response Compensation and Liability Act (CERCLA) (40 CFR 302) or the Superfund Amendments and Reauthorization Act (SARA) (40 CFR 355). There may be specific reporting requirements at the local, regional, or state level pertaining to releases of this material.

U.S. State Regulations

California Proposition 65
This product does not contain any Proposition 65 chemicals.

U.S. EPA Label Information

EPA Pesticide Registration Number Not applicable

16. OTHER INFORMATION

NFPA **Health Hazard** 1 **Flammability** 0 **Instability** 0 **Physical and Chemical Hazards** -

Prepared By	TETRA Technologies, Inc. sds@tetratec.com
Issuing Date	13 April 2015
Revision Date	13 April 2015
Revision Note	Initial GHS format

General Disclaimer

The information provided on this SDS is correct to the best of our knowledge, information and belief at the date of its publication. The information given is designed only as a guide for safe handling, use, processing, storage, transportation, disposal and release and is not to be considered as a warranty or quality specification. The information relates only to the specific material designated and may not be valid for such material used in combination with any other material or in any process, unless specified in the text.

End of Safety Data Sheet

1. Product and Company Identification

Product Code: D281CPS
Product Name: Inhibitor/Dispersant
Trade Name: D-281CPS

Company Name: GC3 Specialty Chemicals, Inc.
733 Heights Blvd.
Houston, TX 77007

Phone Number: (713)802-1761

Web site address: www.gc3.com
Emergency Contact: CHEMTREC: 800-424-9300
Information: 713-802-1761

2. Hazards Identification

Serious Eye Damage/Eye Irritation, Category 1
Corrosive To Metals, Category 1
Skin Corrosion/Irritation, Category 1A



Danger

GHS Hazard Phrases:
H290 - May be corrosive to metals.
H314 - Causes severe skin burns and eye damage.
H318 - Causes serious eye damage.

GHS Precaution Phrases:
P234 - Keep only in original container.
P260 - Do not breathe dust/fume/gas/mist/vapours/spray.
P264 - Wash hands thoroughly after handling.
P280 - Wear protective gloves/protective clothing/eye protection/face protection.

GHS Response Phrases:
P301+330+331 - IF SWALLOWED: Rinse mouth. Do NOT induce vomiting.
P303+361+353 - IF ON SKIN (or hair): Remove/take off immediately all contaminated clothing. Rinse skin with water/shower.
P304+340 - IF INHALED: Remove victim to fresh air and keep at rest in a position comfortable for breathing.
P305+351+338 - IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.
P310 - Immediately call a POISON CENTER or doctor/physician.
P321 - Specific treatment see First Aid Measures on Safety Data Sheet.
P363 - Wash contaminated clothing before reuse.
P390 - Absorb spillage to prevent material damage.

GHS Storage and Disposal Phrases:
P405 - Store locked up.
P501 - Dispose of contents/container in accordance with local/regional/national/international regulations.

Potential Health Effects (Acute and Chronic):
Hazards not otherwise classified (HNOC) or not covered by GHS. None.

Prolonged or repeated skin contact may cause dermatitis.

Chronic: Effects may be delayed.

Inhalation:
Irritation may lead to chemical pneumonitis and pulmonary edema. Causes severe irritation of upper respiratory tract with coughing, burns, breathing difficulty, and possible coma. Causes chemical burns to the respiratory tract.

Skin Contact:	Causes skin burns. May cause deep, penetrating ulcers of the skin. May cause skin rash (in milder cases), and cold and clammy skin with cyanosis or pale color.
Eye Contact:	Causes eye burns. May cause chemical conjunctivitis and corneal damage.
Ingestion:	May cause severe and permanent damage to the digestive tract. Causes gastrointestinal tract burns. Causes severe pain, nausea, vomiting, diarrhea, and shock. May cause corrosion and permanent tissue destruction of the esophagus and digestive tract. May cause systemic effects.

3. Composition/Information on Ingredients

CAS #	Hazardous Components (Chemical Name)	Concentration
9003-01-4	Polyacrylic acid	5.0 -20.0 %
37971-36-1	2-Phosphonobutane-1,2,4-tricarboxylic acid	5.0 -20.0 %
26099-09-2	Polymaleic acid	1.0 -10.0 %
1310-73-2	Sodium hydroxide	0.0 -5.0 %

4. First Aid Measures

Emergency and First Aid Procedures:	Consult a physician. Show this safety data sheet to the doctor in attendance. Move out of dangerous area.
In Case of Inhalation:	If breathed in, move person into fresh air. Consult a physician. If inhaled, remove to fresh air. If breathing is difficult, give oxygen.
In Case of Skin Contact:	Wash off with soap and plenty of water. Consult a physician. Flush skin with plenty of water for at least 15 minutes while removing contaminated clothing and shoes. Get medical aid immediately. Wash clothing before reuse.
In Case of Eye Contact:	In case of contact, immediately flush eyes with plenty of water for a t least 15 minutes. Get medical aid immediately.
In Case of Ingestion:	Never give anything by mouth to an unconscious person. Rinse mouth with water. Consult a physician. Get medical aid immediately. If victim is fully conscious, give a cupful of water.
Signs and Symptoms Of Exposure:	The most important known symptoms and effects are described in the labelling (see section 2.2) and/or in section 11
Note to Physician:	Treat symptomatically and supportively.

5. Fire Fighting Measures

Flash Pt:	No data.
Explosive Limits:	LEL: No data. UEL: No data.
Autoignition Pt:	No data.
Suitable Extinguishing Media:	Use water spray, dry chemical, carbon dioxide, or alcohol-resistant foam. Substance is noncombustible; use agent most appropriate to extinguish surrounding fire. Do NOT get water inside containers.
Fire Fighting Instructions:	Wear self contained breathing apparatus for fire fighting if necessary. Further information. As in any fire, wear a self-contained breathing apparatus in pressure-demand, MSHA/NIOSH (approved or equivalent), and full protective gear. Use water spray to keep fire-exposed containers cool. Use water with caution and in flooding amounts. Contact with moisture or water may generate sufficient heat to ignite nearby combustible materials. Contact with metals may evolve flammable hydrogen gas.
Flammable Properties and Hazards:	No data available.

Hazardous Combustion Products:	oxides of phosphorus, Carbon oxides.

6. Accidental Release Measures

Protective Precautions, Protective Equipment and Emergency Procedures:	Use personal protective equipment. Avoid breathing vapors, mist or gas. Ensure adequate ventilation. Evacuate personnel to safe areas. For personal protection see section 8.
Environmental Precautions:	Prevent further leakage or spillage if safe to do so. Do not let product enter drains.
Steps To Be Taken In Case Material Is Released Or Spilled:	Sweep up and shovel. Keep in suitable, closed containers for disposal. Use proper personal protective equipment as indicated in Section 8. Spills/Leaks: Vacuum or sweep up material and place into a suitable disposal container. Avoid runoff into storm sewers and ditches which lead to waterways. Clean up spills immediately, observing precautions in the Protective Equipment section. Avoid generating dusty conditions. Provide ventilation. Do not get water on spilled substances or inside containers.

7. Handling and Storage

Precautions To Be Taken in Handling:	Avoid formation of dust and aerosols. Wash thoroughly after handling. Do not get in eyes, on skin, or on clothing. Keep container tightly closed. Avoid ingestion and inhalation. Discard contaminated shoes. Use only with adequate ventilation.
Precautions To Be Taken in Storing:	Store in a tightly closed container. Store in a cool, dry, well-ventilated area away from incompatible substances. Keep away from metals. Corrosives area.

8. Exposure Controls/Personal Protection

CAS #	Partial Chemical Name	OSHA TWA	ACGIH TWA	Other Limits
9003-01-4	Polyacrylic acid	No data.	No data.	No data.
37971-36-1	2-Phosphonobutane-1,2,4-tricarboxylic acid	No data.	No data.	No data.
26099-09-2	Polymaleic acid	No data.	No data.	No data.
1310-73-2	Sodium hydroxide	PEL: 2 mg/m3	CEIL: 2 mg/m3	No data.

Respiratory Equipment (Specify Type):	Where risk assessment shows air-purifying respirators are appropriate use a full-face particle respirator type N100 (US) or type P3 (EN 143) respirator cartridges as a backup to engineering controls. If the respirator is the sole means of protection, use a full-face supplied air respirator. Use respirators and components tested and approved under appropriate government standards such as NIOSH (US) or CEN (EU).
Eye Protection:	Safety glasses with side-shields conforming to EN166. Wear chemical splash goggles.
Protective Gloves:	Wear appropriate protective gloves to prevent skin exposure.
Other Protective Clothing:	Impervious clothing. Wear appropriate protective clothing to prevent skin exposure.
Engineering Controls (Ventilation etc.):	Facilities storing or utilizing this material should be equipped with an eyewash facility and a safety shower. Use adequate general or local exhaust ventilation to keep airborne concentrations below the permissible exposure limits.
Work/Hygienic/Maintenance Practices:	Handle in accordance with good industrial hygiene and safety practice. Wash hands before breaks and at the end of workday.
Environmental Exposure Controls:	Prevent further leakage or spillage if safe to do so. Do not let product enter drains.

9. Physical and Chemical Properties

Physical States:	[ ] Gas [X] Liquid [X] Solid
Appearance and Odor:	Clear straw to amber liquid. characteristic odor.
pH:	2 - 4
Freezing Point:	~ 4.00 C (39.2 F)
Boiling Point:	~ 100.00 C (212.0 F)
Flash Pt:	No data.
Evaporation Rate:	No data.
Flammability (solid, gas):	No data available.
Explosive Limits:	LEL: No data. UEL: No data.
Vapor Pressure (vs. Air or mm Hg):	No data.
Vapor Density (vs. Air = 1):	No data.
Specific Gravity (Water = 1):	1.12 - 1.3
Solubility in Water:	soluble
Octanol/Water Partition Coefficient:	No data.
Autoignition Pt:	No data.
Decomposition Temperature:	No data.
Viscosity:	No data.

10. Stability and Reactivity

Stability:	Unstable [ ] Stable [X]
Conditions To Avoid - Instability:	This material is considered stable under normal temperatures and pressures.
Incompatibility - Materials To Avoid:	Strong oxidizing agents. Metals. Aluminum, Zinc, flammable liquids, organic halogens.
Hazardous Decomposition or Byproducts:	Other decomposition products: No data available. In the event of fire: see section 5. Toxic fumes of sodium oxide.
Possibility of Hazardous Reactions:	Will occur [ ] Will not occur [X]
Conditions To Avoid - Hazardous Reactions:	No data available.

11. Toxicological Information

Toxicological Information: Reproductive toxicity.
Aspiration hazard: Epidemiology: No information found.
Teratogenicity: No information available. Reproductive Effects: See actual entry in RTECS for complete information.
Neurotoxicity:
CAS# 26099-09-2: Acute toxicity, LD50, Oral, Rat, 15000. MG/KG.

Irritation or Corrosion: Skin corrosion/irritation. No data available.
Serious eye damage/eye irritation:

Sensitization: No data available.

Chronic Toxicological Effects: Specific target organ toxicity - single exposure:
Specific target organ toxicity - repeated exposure:

CAS #	Hazardous Components (Chemical Name)	NTP	IARC	ACGIH	OSHA
9003-01-4	Polyacrylic acid	n.a.	3	n.a.	n.a.
37971-36-1	2-Phosphonobutane-1,2,4-tricarboxylic acid	n.a.	n.a.	n.a.	n.a.
26099-09-2	Polymaleic acid	n.a.	n.a.	n.a.	n.a.
1310-73-2	Sodium hydroxide	n.a.	n.a.	n.a.	n.a.

12. Ecological Information

General Ecological Information: No data available.
CAS# 26099-09-2: LC50, Bluegill (Lepomis macrochirus), > 2500. MG/KG.
Effective concentration to 50% of test organisms., Water Flea (Daphnia magna), > 1000. MG/KG.
LC50, Brown Shrimp (Penaeus aztecus), > 580.0 MG/KG.

Results of PBT and vPvB assessment: No data available.

Persistence and Degradability: No data available.

Bioaccumulative Potential: No data available.

Mobility in Soil: No data available.

13. Disposal Considerations

Waste Disposal Method: Product.
Offer surplus and non-recyclable solutions to a licensed disposal company. Contact a licensed professional waste disposal service to dispose of this material. Dissolve or mix the material with a combustible solvent and burn in a chemical incinerator equipped with an afterburner and scrubber.
Contaminated packaging. Chemical waste generators must determine whether a discarded chemical is classified as a hazardous waste. US EPA guidelines for the classification determination are listed in 40 CFR Parts 261. Additionally, waste generators must consult state and local hazardous waste regulations to ensure complete and accurate classification.
RCRA P-Series: None listed.
RCRA U-Series: None listed.

14. Transport Information

LAND TRANSPORT (US DOT):

DOT Proper Shipping Name: Corrosive liquid, acidic, organic, n.o.s. (2-Phosphonobutane-1,2,4-tricarboxylic acid)
DOT Hazard Class: 8 CORROSIVE
UN/NA Number: UN3265 **Packing Group:** III



LAND TRANSPORT (Canadian TDG):

TDG Shipping Name: Corrosive liquid, acidic, organic, n.o.s.

LAND TRANSPORT (European ADR/RID):

ADR/RID Shipping Name: Corrosive liquid, acidic, organic, n.o.s.

MARINE TRANSPORT (IMDG/IMO):

IMDG/IMO Shipping Name: Corrosive liquid, acidic, organic, n.o.s.

AIR TRANSPORT (ICAO/IATA):

ICAO/IATA Shipping Name: Corrosive liquid, acidic, organic, n.o.s.

15. Regulatory Information

EPA SARA (Superfund Amendments and Reauthorization Act of 1986) Lists

CAS #	Hazardous Components (Chemical Name)	S. 302 (EHS)	S. 304 RQ	S. 313 (TRI)
9003-01-4	Polyacrylic acid	No	No	No
37971-36-1	2-Phosphonobutane-1,2,4-tricarboxylic acid	No	No	No
26099-09-2	Polymaleic acid	No	No	No
1310-73-2	Sodium hydroxide	No	Yes 1000 LB	No

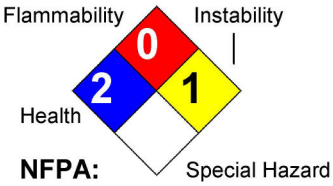
This material meets the EPA	[X] Yes [ ] No	Acute (immediate) Health Hazard
'Hazard Categories' defined	[X] Yes [ ] No	Chronic (delayed) Health Hazard
for SARA Title III Sections	[ ] Yes [X] No	Fire Hazard
311/312 as indicated:	[X] Yes [ ] No	Sudden Release of Pressure Hazard
	[ ] Yes [X] No	Reactive Hazard

CAS #	Hazardous Components (Chemical Name)	Other US EPA or State Lists
9003-01-4	Polyacrylic acid	TSCA: Yes - Inventory; CA PROP.65: No; CA TAC, Title 8: No; MA Oil/HazMat: No; MI CMR, Part 5: No; NC TAP: No; NJ EHS: No; NY Part 597: No; PA HSL: No; SC TAP: No; WI Air: No
37971-36-1	2-Phosphonobutane-1,2,4-tricarboxylic acid	TSCA: Yes - Inventory; CA PROP.65: No; CA TAC, Title 8: No; MA Oil/HazMat: No; MI CMR, Part 5: No; NC TAP: No; NJ EHS: No; NY Part 597: No; PA HSL: No; SC TAP: No; WI Air: No
26099-09-2	Polymaleic acid	TSCA: Yes - Inventory; CA PROP.65: No; CA TAC, Title 8: No; MA Oil/HazMat: No; MI CMR, Part 5: No; NC TAP: No; NJ EHS: No; NY Part 597: No; PA HSL: No; SC TAP: No; WI Air: No
1310-73-2	Sodium hydroxide	TSCA: Yes - Inventory; CA PROP.65: No; CA TAC, Title 8: TAC, Title 8; MA Oil/HazMat: Yes; MI CMR, Part 5: Part 5; NC TAP: No; NJ EHS: Yes - 1706; NY Part 597: Yes; PA HSL: Yes - E; SC TAP: Yes; WI Air: Yes

16. Other Information

Revision Date: 04/20/2015

Hazard Rating System:



Additional Information About This Product: No data available.

Company Policy or Disclaimer: The information presented herein is based on the content of a Safety Data Sheet provided by one or more manufacturers, raw material suppliers, or other responsible parties. Although the information provided herein is an accurate presentation of the original Safety Data Sheet safety information, no warranty or representation, expressed or implied, is made as to the accuracy or completeness of the foregoing data and safety information. The informaton in this document is based on the present state of our knowledge and is applicable to the product with regard to appropriate safety precautions. It does not represent any guarantees of the properties of the product.

1. Product and Company Identification

Product Code: D-282CPS
Product Name: Antiscalant and Dispersant
Trade Name: D-282CPS

Company Name: GC3 Specialty Chemicals, Inc.
733 Heights Blvd.
Houston, TX 77007

Phone Number: (713)802-1761

Web site address: www.gc3.com
Emergency Contact: CHEMTREC: 800-424-9300
Information: 713-802-1761

2. Hazards Identification

Acute Toxicity: Oral, Category 5
Skin Corrosion/Irritation, Category 1A-1C
Serious Eye Damage/Eye Irritation, Category 1
Specific Target Organ Toxicity (single exposure), Category 2



Danger **Warning**

GHS Hazard Phrases:
H303 - May be harmful if swallowed.
H314 - Causes severe skin burns and eye damage.
H318 - Causes serious eye damage.
H371 - May cause damage to organs .

GHS Precaution Phrases:
P260 - Do not breathe dust/fume/gas/mist/vapours/spray.
P264 - Wash hands thoroughly after handling.
P270 - Do not eat, drink or smoke when using this product.
P280 - Wear protective gloves/protective clothing/eye protection/face protection.

GHS Response Phrases:
P301+330+331 - IF SWALLOWED: Rinse mouth. Do NOT induce vomiting.
P303+361+353 - IF ON SKIN (or hair): Remove/take off immediately all contaminated clothing. Rinse skin with water/shower.
P304+340 - IF INHALED: Remove victim to fresh air and keep at rest in a position comfortable for breathing.
P305+351+338 - IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.
P309+311 - Call a POISON CENTER or doctor/physician if exposed or you feel unwell.
P310 - Immediately call a POISON CENTER or doctor/physician.
P363 - Wash contaminated clothing before reuse.

GHS Storage and Disposal Phrases:
P405 - Store locked up.
P501 - Dispose of contents/container in accordance with local/regional/national/international regulations.

Potential Health Effects (Acute and Chronic):

Inhalation: Material is irritating to mucous membranes and upper respiratory tract. May be harmful if inhaled.

Skin Contact: Causes skin irritation.

Skin Absorption: May be harmful if absorbed through the skin. May be harmful if absorbed through the skin. Causes skin burns.

Eye Contact: Causes severe eye irritation. Causes eye burns.

Ingestion: Harmful if swallowed. Causes burns.

3. Composition/Information on Ingredients

CAS #	Hazardous Components (Chemical Name)	Concentration
2809-21-4	1-Hydroxyethylidene-1,1-diphosphonic acid	20.0 -21.0 %
9003-04-7	Sodium polyacrylate	5.0 -10.0 %
NA	Acrylic terpolymer	3.0 -5.0 %
1310-73-2	Sodium hydroxide	1.0 -3.0 %

4. First Aid Measures

Emergency and First Aid Procedures:

In Case of Inhalation: If inhaled, remove to fresh air. If breathing is difficult, give oxygen.

In Case of Skin Contact: In case of skin contact, flush with copious amounts of water for at least 15 minutes. Remove contaminated clothing and shoes. Call a physician. Wash off with soap and plenty of water. Consult a physician.

In Case of Eye Contact: In case of contact with eyes, flush with copious amounts of water for at least 15 minutes. Assure adequate flushing by separating the eyelids with fingers. Call a physician. Continue rinsing eyes during transport to hospital. Rinse thoroughly with plenty of water for at least 15 minutes and consult a physician.

In Case of Ingestion: If swallowed, wash out mouth with water provided person is conscious. Call a physician. Do NOT induce vomiting. Never give anything by mouth to an unconscious person. Rinse mouth with water. Consult a physician.

Signs and Symptoms Of Exposure: The chemical, physical, and toxicological properties of this product have not been thoroughly investigated.

Note to Physician: Consult a physician. Show this safety data sheet to the doctor in attendance. Move out of dangerous area.

5. Fire Fighting Measures

Flammability Classification: Non flammable

Flash Pt: NE

Explosive Limits: LEL: No data. UEL: No data.

Autoignition Pt: No data.

Suitable Extinguishing Media: Suitable: Use water spray, dry chemical, carbon dioxide, or alcohol-resistant foam.

Fire Fighting Instructions: Protective Equipment: Wear self-contained breathing apparatus and protective clothing to prevent contact with skin and eyes. Specific Hazard(s): Wear self contained breathing apparatus for fire fighting if necessary.

Flammable Properties and Hazards: No data available.

No data available.

6. Accidental Release Measures

Steps To Be Taken In Case Material Is Released Or Spilled: PROCEDURE TO BE FOLLOWED IN CASE OF LEAK OR SPILL. Evacuate area.
PROCEDURE(S) OF PERSONAL PRECAUTION(S)
Wear respirator, chemical safety goggles, rubber boots, and heavy rubber gloves.
Methods for cleaning up.
Absorb spill using an absorbent, non-combustible material such as earth, sand, or vermiculite. Dike to collect large liquid spills. Use personal protective equipment. Ensure adequate ventilation.
Environmental precautions.
Do not let product enter drains.
Keep in suitable, closed containers for disposal.

7. Handling and Storage

Precautions To Be Taken in Handling: User Exposure: Avoid contact with eyes, skin, and clothing. Avoid formation of dust and aerosols.

Precautions To Be Taken in Storing: Suitable: Keep container tightly closed in a dry and well-ventilated place.

8. Exposure Controls/Personal Protection

CAS #	Partial Chemical Name	OSHA TWA	ACGIH TWA	Other Limits
2809-21-4	1-Hydroxyethylidene-1,1-diphosphonic acid	No data.	No data.	No data.
9003-04-7	Sodium polyacrylate	No data.	No data.	No data.
NA	Acrylic terpolymer	No data.	No data.	No data.
1310-73-2	Sodium hydroxide	PEL: 2 mg/m3	CEIL: 2 mg/m3	No data.

Respiratory Equipment (Specify Type): Use respirators and components tested and approved under appropriate government standards such as NIOSH (US) or CEN (EU). Where risk assessment shows air-purifying respirators are appropriate use a dust mask type N95 (US) or type P1 (EN 143) respirator. Where risk assessment shows air-purifying respirators are appropriate use a full-face particle respirator type N100 (US) or type P3 (EN 143) respirator cartridges as a backup to engineering controls.
(US) or type P2 (EN 143) respirator cartridges as a backup to engineering controls. If the respirator is the sole means of protection, use a full-face supplied air respirator.

Eye Protection: Face shield and safety glasses.

Protective Gloves: Hand: Compatible chemical-resistant gloves. Eyes:

Other Protective Clothing: Choose body protection according to the amount and concentration of the dangerous

	substance at the work place.
Engineering Controls (Ventilation etc.):	Safety shower and eye bath. Mechanical exhaust required.
Work/Hygienic/Maintenance Practices:	Wash thoroughly after handling. Handle in accordance with good industrial hygiene and safety practice. Wash hands before breaks and at the end of workday.

9. Physical and Chemical Properties

Physical States:	[ ] Gas [X] Liquid [ ] Solid
Appearance and Odor:	Colorless to pale yellow. characteristic odor.
pH:	< 3 - 4
Freezing Point:	~ -22.00 C (-7.6 F)
Boiling Point:	108.00 C (226.4 F)
Flash Pt:	NE
Evaporation Rate:	No data.
Flammability (solid, gas):	No data available.
Explosive Limits:	LEL: No data. UEL: No data.
Vapor Pressure (vs. Air or mm Hg):	No data.
Vapor Density (vs. Air = 1):	No data.
Specific Gravity (Water = 1):	~ 1.18 - 1.22 at 25.0 C (77.0 F)
Solubility in Water:	soluble
Percent Volatile:	No data.
Autoignition Pt:	No data.
Viscosity:	< 100 cP

10. Stability and Reactivity

Stability:	Unstable [ ] Stable [X]
Conditions To Avoid - Instability:	No data available.
Incompatibility - Materials To Avoid:	Strong bases, Oxidizing agents, Metals.
Hazardous Decomposition or Byproducts:	Thermal decomposition may produce toxic fumes of phosphorus oxides and/or phosphine. Carbon dioxide, formed under fire conditions. Nature of decomposition products unknown.
Possibility of Hazardous Reactions:	Will occur [ ] Will not occur [X]
Conditions To Avoid - Hazardous Reactions:	No data available.

11. Toxicological Information

Toxicological Information: CAS# 2809-21-4: Acute toxicity, LD50, Oral, Mouse, 1800. MG/KG; Angewandte Chemie, International Edition in English., VCH Pub., Inc., 303 NW 12th Ave., Deerfield Beach, FL 33441, Vol/p/yr: 14,94, 1975
CAS# 9003-04-7: Acute toxicity, LD50, Oral, Rat, > 5000. MG/KG; Proceedings of the Scientific Section of the Toilet Goods Association., Vol/p/yr: 20,16, 1953
Acute toxicity, LD50, Dermal, Rabbit, > 5000. MG/KG.

Irritation or Corrosion: No data available.

Sensitization: No data available.

Chronic Toxicological Effects: IARC: No component of this product present at levels greater than or equal to 0.1% is identified as probable, possible or confirmed human carcinogen by IARC.
ACGIH: No component of this product present at levels greater than or equal to 0.1% is identified as a carcinogen or potential carcinogen by ACGIH.

NTP: No component of this product present at levels greater than or equal to 0.1% is identified as a known or anticipated carcinogen by NTP.
OSHA: No component of this product present at levels greater than or equal to 0.1% is identified as a carcinogen or potential carcinogen by OSHA.

CAS #	Hazardous Components (Chemical Name)	NTP	IARC	ACGIH	OSHA
2809-21-4	1-Hydroxyethylidene-1,1-diphosphonic acid	n.a.	n.a.	n.a.	n.a.
9003-04-7	Sodium polyacrylate	n.a.	n.a.	n.a.	n.a.
NA	Acrylic terpolymer	n.a.	n.a.	n.a.	n.a.
1310-73-2	Sodium hydroxide	n.a.	n.a.	n.a.	n.a.

12. Ecological Information

General Ecological Information: May be harmful to aquatic organisms due to the shift of the pH.
CAS# 2809-21-4: LC50, Bluegill (Lepomis macrochirus), 868.0 MG/L, 96 H.
LC50, Rainbow Trout (Oncorhynchus mykiss), 368.0 MG/L, 96 H.
Effective concentration to 50% of test organisms., Water Flea (Daphnia magna), 527.0 MG/L, 48 H.
CAS# 9003-04-7: LC50, Bluegill (Lepomis macrochirus), > 1000. MG/L, 96 H.
LC50, Rainbow Trout (Oncorhynchus mykiss), > 1000. MG/L, 96 H.
Effective concentration to 50% of test organisms., Water Flea (Daphnia magna), > 1000. MG/L, 48 H.

13. Disposal Considerations

Waste Disposal Method: APPROPRIATE METHOD OF DISPOSAL OF SUBSTANCE OR PREPARATION.
Contact a licensed professional waste disposal service to dispose of this material.
Dissolve or mix the material with a combustible solvent and burn in a chemical incinerator equipped with an afterburner and scrubber. Product.
Observe all federal, state, and local environmental regulations. Contaminated packaging.
Dispose of as unused product.

14. Transport Information

LAND TRANSPORT (US DOT):

DOT Proper Shipping Name: Corrosive liquid, acidic, organic, n.o.s. (Hydroxy Ethylidene Diphosphonic Acid)
DOT Hazard Class: 8 CORROSIVE
UN/NA Number: UN3265 **Packing Group:** III



AIR TRANSPORT (ICAO/IATA):

ICAO/IATA Shipping Name: Phosphorous acid. mixture.

15. Regulatory Information

EPA SARA (Superfund Amendments and Reauthorization Act of 1986) Lists

CAS #	Hazardous Components (Chemical Name)	S. 302 (EHS)	S. 304 RQ	S. 313 (TRI)
2809-21-4	1-Hydroxyethylidene-1,1-diphosphonic acid	No	No	No
9003-04-7	Sodium polyacrylate	No	No	No
NA	Acrylic terpolymer	No	No	No
1310-73-2	Sodium hydroxide	No	Yes 1000 LB	No

This material meets the EPA	[X] Yes [ ] No	Acute (immediate) Health Hazard
'Hazard Categories' defined	[ ] Yes [X] No	Chronic (delayed) Health Hazard
for SARA Title III Sections	[ ] Yes [X] No	Fire Hazard
311/312 as indicated:	[ ] Yes [X] No	Sudden Release of Pressure Hazard
	[ ] Yes [X] No	Reactive Hazard

CAS #	Hazardous Components (Chemical Name)	Other US EPA or State Lists
2809-21-4	1-Hydroxyethylidene-1,1-diphosphonic acid	TSCA: Yes - Inventory; CA PROP.65: No; CA TAC, Title 8: No; MA Oil/HazMat: No; MI CMR, Part 5: No; NC TAP: No; NJ EHS: No; NY Part 597: No; PA HSL: No; SC TAP: No; WI Air: No
9003-04-7	Sodium polyacrylate	TSCA: Yes - Inventory; CA PROP.65: No; CA TAC, Title 8: No; MA Oil/HazMat: No; MI CMR, Part 5: No; NC TAP: No; NJ EHS: No; NY Part 597: No; PA HSL: No; SC TAP: No; WI Air: No
NA	Acrylic terpolymer	TSCA: No; CA PROP.65: No; CA TAC, Title 8: No; MA Oil/HazMat: No; MI CMR, Part 5: No; NC TAP: No; NJ EHS: No; NY Part 597: No; PA HSL: No; SC TAP: No; WI Air: No
1310-73-2	Sodium hydroxide	TSCA: Yes - Inventory; CA PROP.65: No; CA TAC, Title 8: TAC, Title 8; MA Oil/HazMat: Yes; MI CMR, Part 5: Part 5; NC TAP: No; NJ EHS: Yes - 1706; NY Part 597: Yes; PA HSL: Yes - E; SC TAP: Yes; WI Air: Yes

16. Other Information

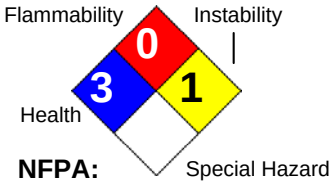
Revision Date: 03/20/2015

Hazard Rating System:

HMIS:

HEALTH	3
FLAMMABILITY	0
PHYSICAL	1
PPE	F

NFPA:



Additional Information About This Product: No data available.

Buckman

SAFETY DATA SHEET

BULAB 7145

Section 1. Identification

GHS product identifier : BULAB 7145

Other means of identification : Not available.

Product type : Liquid.

Relevant identified uses of the substance or mixture and uses advised against

See label and/or technical data sheet, if available.

Supplier's details : Buckman Laboratories, Inc.
1256 North McLean Boulevard
Memphis, TN 38108
Phone 1-800-282-5626

Emergency telephone number (with hours of operation) : 24 Hour Emergency Phone (901) 767-2722

Section 2. Hazards identification

OSHA/HCS status : This material is considered hazardous by the OSHA Hazard Communication Standard (29 CFR 1910.1200).

Classification of the substance or mixture : SKIN CORROSION - Category 1B
SERIOUS EYE DAMAGE - Category 1
SKIN SENSITIZATION - Category 1

Percentage of the mixture consisting of ingredient(s) of unknown toxicity: 10%

GHS label elements

Hazard pictograms :



Signal word : Danger

Hazard statements : Causes severe skin burns and eye damage.
May cause an allergic skin reaction.

Precautionary statements

Prevention : Wear protective gloves. Wear eye or face protection. Wear protective clothing. Avoid breathing vapor. Wash hands thoroughly after handling. Contaminated work clothing must not be allowed out of the workplace.

Response : IF INHALED: Remove person to fresh air and keep comfortable for breathing. Immediately call a POISON CENTER or physician. IF SWALLOWED: Immediately call a POISON CENTER or physician. Rinse mouth. Do NOT induce vomiting. IF ON SKIN (or hair): Take off immediately all contaminated clothing. Rinse skin with water or shower. Wash contaminated clothing before reuse. Immediately call a POISON CENTER or physician. IF ON SKIN: Wash with plenty of soap and water. Wash contaminated clothing before reuse. If skin irritation or rash occurs: Get medical attention. IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing. Immediately call a POISON

Section 2. Hazards identification

CENTER or physician.

Storage : Store locked up.

Disposal : Dispose of contents and container in accordance with all local, regional, national and international regulations.

Hazards not otherwise classified : None known.

Section 3. Composition/information on ingredients

Substance/mixture : Mixture

Other means of identification : Not available.

Product code : BLB7145

Ingredient name	%	CAS number
Organic phosphonate Maleic acid	Proprietary <1	- 110-16-7

Any concentration shown as a range is to protect confidentiality or is due to batch variation.

While some substances are claimed as trade secret in accordance with the provision of OSHA 29 CFR 1910.1200(i), all known hazards are clearly communicated within this document.

Per Appendix D 1910.1200 OSHA, ranges can be used when there is batch-to-batch variability in a mixture or a trade secret claim.

There are no additional ingredients present which, within the current knowledge of the supplier and in the concentrations applicable, are classified as hazardous to health or the environment and hence require reporting in this section.

Section 4. First aid measures

Description of necessary first aid measures

Eye contact : Get medical attention immediately. Call a poison center or physician. Immediately flush eyes with plenty of water, occasionally lifting the upper and lower eyelids. Check for and remove any contact lenses. Continue to rinse for at least 10 minutes. Chemical burns must be treated promptly by a physician.

Inhalation : Get medical attention immediately. Call a poison center or physician. Remove victim to fresh air and keep at rest in a position comfortable for breathing. If it is suspected that fumes are still present, the rescuer should wear an appropriate mask or self-contained breathing apparatus. If not breathing, if breathing is irregular or if respiratory arrest occurs, provide artificial respiration or oxygen by trained personnel. It may be dangerous to the person providing aid to give mouth-to-mouth resuscitation. If unconscious, place in recovery position and get medical attention immediately. Maintain an open airway. Loosen tight clothing such as a collar, tie, belt or waistband.

Skin contact : Get medical attention immediately. Call a poison center or physician. Wash with plenty of soap and water. Remove contaminated clothing and shoes. Wash contaminated clothing thoroughly with water before removing it, or wear gloves. Continue to rinse for at least 10 minutes. Chemical burns must be treated promptly by a physician. In the event of any complaints or symptoms, avoid further exposure. Wash clothing before reuse. Clean shoes thoroughly before reuse.

Ingestion : Get medical attention immediately. Call a poison center or physician. Wash out mouth with water. Remove dentures if any. Remove victim to fresh air and keep at rest in a position comfortable for breathing. If material has been swallowed and the exposed person is conscious, give small quantities of water to drink. Stop if the exposed person feels sick as vomiting may be dangerous. Do not induce vomiting unless directed to do so by medical personnel. If vomiting occurs, the head should be kept low so that vomit does not enter the lungs. Chemical burns must be treated promptly by a physician.

Section 4. First aid measures

Never give anything by mouth to an unconscious person. If unconscious, place in recovery position and get medical attention immediately. Maintain an open airway. Loosen tight clothing such as a collar, tie, belt or waistband.

Most important symptoms/effects, acute and delayed

Potential acute health effects

Eye contact : Causes serious eye damage.

Inhalation : No known significant effects or critical hazards.

Skin contact : Causes severe burns. May cause an allergic skin reaction.

Ingestion : No known significant effects or critical hazards.

Over-exposure signs/symptoms

Eye contact : Adverse symptoms may include the following:
pain
watering
redness

Inhalation : No specific data.

Skin contact : Adverse symptoms may include the following:
pain or irritation
redness
blistering may occur

Ingestion : Adverse symptoms may include the following:
stomach pains

Indication of immediate medical attention and special treatment needed, if necessary

Notes to physician : Treat symptomatically. Contact poison treatment specialist immediately if large quantities have been ingested or inhaled.

Specific treatments : No specific treatment.

Protection of first-aiders : No action shall be taken involving any personal risk or without suitable training. If it is suspected that fumes are still present, the rescuer should wear an appropriate mask or self-contained breathing apparatus. It may be dangerous to the person providing aid to give mouth-to-mouth resuscitation. Wash contaminated clothing thoroughly with water before removing it, or wear gloves.

See toxicological information (Section 11)

Section 5. Fire-fighting measures

Extinguishing media

Suitable extinguishing media : Use an extinguishing agent suitable for the surrounding fire.

Unsuitable extinguishing media : None known.

Specific hazards arising from the chemical : In a fire or if heated, a pressure increase will occur and the container may burst.

Hazardous thermal decomposition products : Decomposition products may include the following materials:
carbon dioxide
carbon monoxide
phosphorus oxides

Section 5. Fire-fighting measures

Special protective actions for fire-fighters : Promptly isolate the scene by removing all persons from the vicinity of the incident if there is a fire. No action shall be taken involving any personal risk or without suitable training.

Special protective equipment for fire-fighters : Fire-fighters should wear appropriate protective equipment and self-contained breathing apparatus (SCBA) with a full face-piece operated in positive pressure mode.

Section 6. Accidental release measures

Personal precautions, protective equipment and emergency procedures

For non-emergency personnel : No action shall be taken involving any personal risk or without suitable training. Evacuate surrounding areas. Keep unnecessary and unprotected personnel from entering. Do not touch or walk through spilled material. Do not breathe vapor or mist. Provide adequate ventilation. Wear appropriate respirator when ventilation is inadequate. Put on appropriate personal protective equipment.

For emergency responders : If specialized clothing is required to deal with the spillage, take note of any information in Section 8 on suitable and unsuitable materials. See also the information in "For non-emergency personnel".

Environmental precautions : Avoid dispersal of spilled material and runoff and contact with soil, waterways, drains and sewers. Inform the relevant authorities if the product has caused environmental pollution (sewers, waterways, soil or air).

Methods and materials for containment and cleaning up

Small spill : Stop leak if without risk. Move containers from spill area. Dilute with water and mop up if water-soluble. Alternatively, or if water-insoluble, absorb with an inert dry material and place in an appropriate waste disposal container. Dispose of via a licensed waste disposal contractor.

Large spill : Stop leak if without risk. Move containers from spill area. Approach release from upwind. Prevent entry into sewers, water courses, basements or confined areas. Wash spillages into an effluent treatment plant or proceed as follows. Contain and collect spillage with non-combustible, absorbent material e.g. sand, earth, vermiculite or diatomaceous earth and place in container for disposal according to local regulations (see Section 13). Dispose of via a licensed waste disposal contractor. Contaminated absorbent material may pose the same hazard as the spilled product. Note: see Section 1 for emergency contact information and Section 13 for waste disposal.

Section 7. Handling and storage

Precautions for safe handling

Protective measures : Put on appropriate personal protective equipment (see Section 8). Do not get in eyes or on skin or clothing. Do not breathe vapor or mist. Do not ingest. If during normal use the material presents a respiratory hazard, use only with adequate ventilation or wear appropriate respirator. Keep in the original container or an approved alternative made from a compatible material, kept tightly closed when not in use. Empty containers retain product residue and can be hazardous. Do not reuse container.

Advice on general occupational hygiene : Eating, drinking and smoking should be prohibited in areas where this material is handled, stored and processed. Workers should wash hands and face before eating, drinking and smoking. Remove contaminated clothing and protective equipment before entering eating areas. See also Section 8 for additional information on hygiene measures.

Section 7. Handling and storage

Conditions for safe storage, including any incompatibilities : Store in accordance with local regulations. Store in original container protected from direct sunlight in a dry, cool and well-ventilated area, away from incompatible materials (see Section 10) and food and drink. Store locked up. Keep container tightly closed and sealed until ready for use. Containers that have been opened must be carefully resealed and kept upright to prevent leakage. Do not store in unlabeled containers. Use appropriate containment to avoid environmental contamination.

Satisfactory Materials of Construction : Not available.

Section 8. Exposure controls/personal protection

Control parameters

Occupational exposure limits

None.

Appropriate engineering controls : If user operations generate dust, fumes, gas, vapor or mist, use process enclosures, local exhaust ventilation or other engineering controls to keep worker exposure to airborne contaminants below any recommended or statutory limits.

Environmental exposure controls : Emissions from ventilation or work process equipment should be checked to ensure they comply with the requirements of environmental protection legislation. In some cases, fume scrubbers, filters or engineering modifications to the process equipment will be necessary to reduce emissions to acceptable levels.

Individual protection measures

Hygiene measures : Wash hands, forearms and face thoroughly after handling chemical products, before eating, smoking and using the lavatory and at the end of the working period. Appropriate techniques should be used to remove potentially contaminated clothing. Contaminated work clothing should not be allowed out of the workplace. Wash contaminated clothing before reusing. Ensure that eyewash stations and safety showers are close to the workstation location.

Eye/face protection : Safety eyewear complying with an approved standard should be used when a risk assessment indicates this is necessary to avoid exposure to liquid splashes, mists, gases or dusts. If contact is possible, the following protection should be worn, unless the assessment indicates a higher degree of protection: chemical splash goggles and/or face shield. If inhalation hazards exist, a full-face respirator may be required instead.

Skin protection

Hand protection : Chemical-resistant, impervious gloves complying with an approved standard should be worn at all times when handling chemical products if a risk assessment indicates this is necessary. Considering the parameters specified by the glove manufacturer, check during use that the gloves are still retaining their protective properties. It should be noted that the time to breakthrough for any glove material may be different for different glove manufacturers. In the case of mixtures, consisting of several substances, the protection time of the gloves cannot be accurately estimated.

Body protection : Personal protective equipment for the body should be selected based on the task being performed and the risks involved and should be approved by a specialist before handling this product.

Other skin protection : Appropriate footwear and any additional skin protection measures should be selected based on the task being performed and the risks involved and should be approved by a specialist before handling this product.

Respiratory protection : Based on the hazard and potential for exposure, select a respirator that meets the appropriate standard or certification. Respirators must be used according to a respiratory protection program to ensure proper fitting, training, and other important aspects of use.

Section 9. Physical and chemical properties

Appearance

Physical state : Liquid.

Color : Clear. Straw.

Odor : Sweet.

Odor threshold : Not available.

pH : <4 [Conc. (% w/w): 1%]

Melting point : -2.5°C (27.5°F)

Boiling point : Not available.

Flash point : Closed cup: >100°C (>212°F) [Pensky-Martens.]

Evaporation rate : Not available.

Flammability (solid, gas) : Not available.

Lower and upper explosive (flammable) limits : Not available.

Vapor pressure : Not available.

Vapor density : Not available.

Relative density : 1.18 to 1.22

Dispersibility properties : Not available.

Solubility : Soluble in the following materials: cold water and hot water.

Partition coefficient: n-octanol/water : Not available.

Auto-ignition temperature : Not available.

Decomposition temperature : Not available.

Viscosity : Not available.

VOC : 0 % (w/w) [Method 24]

Aerosol product

Section 10. Stability and reactivity

Reactivity : No specific test data related to reactivity available for this product or its ingredients.

Chemical stability : The product is stable.

Possibility of hazardous reactions : Under normal conditions of storage and use, hazardous reactions will not occur.

Conditions to avoid : No specific data.

Incompatible materials : Strong oxidizer
strong alkalis
acid reactive salts such as nitrites and sulfur

Hazardous decomposition products : Under normal conditions of storage and use, hazardous decomposition products should not be produced.

Section 11. Toxicological information

Information on toxicological effects

Acute toxicity

Not available.

Conclusion/Summary : Not tested

Irritation/Corrosion

Product/ingredient name	Result	Species	Score	Exposure	Observation
Maleic acid	Eyes - Severe irritant	Rabbit	-	2 minutes 1 Percent	-

Conclusion/Summary

Skin : Irritant, corrosive.

Eyes : Irritant, corrosive.

Respiratory : Irritation/Corrosive.

Sensitization

Product/ingredient name	Route of exposure	Species	Result
Maleic acid	skin	Guinea pig	Sensitizing

Mutagenicity

Not available.

Carcinogenicity

This product has not been tested unless noted in summary results.

Reproductive toxicity

Not available.

Teratogenicity

Not available.

Specific target organ toxicity (single exposure)

Not available.

Specific target organ toxicity (repeated exposure)

Not available.

Aspiration hazard

Not available.

Information on the likely routes of exposure : Routes of entry anticipated: Dermal, Inhalation.
Routes of entry not anticipated: Oral.

Potential acute health effects

Eye contact : Causes serious eye damage.

Inhalation : No known significant effects or critical hazards.

Skin contact : Causes severe burns. May cause an allergic skin reaction.

Ingestion : No known significant effects or critical hazards.

Symptoms related to the physical, chemical and toxicological characteristics

Section 11. Toxicological information

Eye contact : Adverse symptoms may include the following:
pain
watering
redness

Inhalation : No specific data.

Skin contact : Adverse symptoms may include the following:
pain or irritation
redness
blistering may occur

Ingestion : Adverse symptoms may include the following:
stomach pains

Delayed and immediate effects and also chronic effects from short and long term exposure

Short term exposure

Potential immediate effects : Not available.

Potential delayed effects : Not available.

Long term exposure

Potential immediate effects : Not available.

Potential delayed effects : Not available.

Potential chronic health effects

Not available.

Conclusion/Summary : The effects from chronic exposure to this product have not been evaluated.

General : Once sensitized, a severe allergic reaction may occur when subsequently exposed to very low levels.

Carcinogenicity : No known significant effects or critical hazards.

Mutagenicity : No known significant effects or critical hazards.

Teratogenicity : No known significant effects or critical hazards.

Developmental effects : No known significant effects or critical hazards.

Fertility effects : No known significant effects or critical hazards.

Numerical measures of toxicity

Acute toxicity estimates

Route	ATE value
Oral	12501.3 mg/kg

Section 12. Ecological information

Toxicity

Product/ingredient name	Result	Species	Exposure
BULAB 7145	Acute LC50 340 mg/l Acute LC50 362 mg/l Chronic NOEC 100 mg/l Chronic NOEC 100 mg/l	Daphnia Fish Daphnia Fish	48 hours 48 hours - -

Section 13. Disposal considerations

Disposal methods : The generation of waste should be avoided or minimized wherever possible. Disposal of this product, solutions and any by-products should at all times comply with the requirements of environmental protection and waste disposal legislation and any regional local authority requirements. Dispose of surplus and non-recyclable products via a licensed waste disposal contractor. Waste should not be disposed of untreated to the sewer unless fully compliant with the requirements of all authorities with jurisdiction. Waste packaging should be recycled. Incineration or landfill should only be considered when recycling is not feasible. This material and its container must be disposed of in a safe way. Care should be taken when handling emptied containers that have not been cleaned or rinsed out. Empty containers or liners may retain some product residues. Avoid dispersal of spilled material and runoff and contact with soil, waterways, drains and sewers.

RCRA classification : When disposed of, this product may be regulated as a RCRA Hazardous Waste with the characteristics of corrosivity.

Section 14. Transport information

	DOT Classification	IMDG	IATA
UN number	3265	3265	3265
UN proper shipping name	CORROSIVE LIQUID, ACIDIC, ORGANIC, N.O.S. (Polymaleic acid, Organic phosphonate)	CORROSIVE LIQUID, ACIDIC, ORGANIC, N.O.S. (Polymaleic acid, Organic phosphonate)	CORROSIVE LIQUID, ACIDIC, ORGANIC, N.O.S. (Polymaleic acid, Organic phosphonate)
Transport hazard class(es)	8 	8 	8 
Packing group	III	III	III
Environmental hazards	No.	No.	No.
Additional information	**Remarks** ERG Guide 153	**Emergency schedules (EmS)** F-A, S-B **IMDG Code Segregation group** 1 - Acids **Remarks** ERG Guide 153, HazMat Code 4931255	**Remarks** ERG Guide 153, ERG Code 8L

Special precautions for user : **Transport within user's premises:** always transport in closed containers that are upright and secure. Ensure that persons transporting the product know what to do in the event of an accident or spillage.

Transport in bulk according to Annex II of MARPOL and the IBC Code : Not available.

Section 15. Regulatory information

Potential impurities present in trace quantities are included in the regulatory listings of this section.

U.S. Federal regulations : **United States inventory (TSCA 8b)**: All components are listed or exempted.

Clean Water Act (CWA) 311: Phosphoric acid, solution; maleic acid

SARA 302/304

Composition/information on ingredients

No products were found.

SARA 304 RQ : Not applicable.

SARA 311/312

Classification : Immediate (acute) health hazard

Composition/information on ingredients

Name	%	Fire hazard	Sudden release of pressure	Reactive	Immediate (acute) health hazard	Delayed (chronic) health hazard
Organic phosphonate Maleic acid	Proprietary <1	No. No.	No. No.	No. No.	Yes. Yes.	No. No.

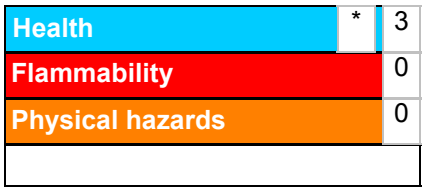
CERCLA : CERCLA: Hazardous substances.: maleic acid: 5000 lbs. (2270 kg); Phosphoric acid, solution: 5000 lbs. (2270 kg);

FDA : This product is not allowed for food contact uses.

FIFRA : This product is not a registered pesticide.

Section 16. Other information

Hazardous Material Information System (U.S.A.)



Caution: HMIS® ratings are based on a 0-4 rating scale, with 0 representing minimal hazards or risks, and 4 representing significant hazards or risks Although HMIS® ratings are not required on SDSs under 29 CFR 1910. 1200, the preparer may choose to provide them. HMIS® ratings are to be used with a fully implemented HMIS® program. HMIS® is a registered mark of the National Paint & Coatings Association (NPCA). HMIS® materials may be purchased exclusively from J. J. Keller (800) 327-6868.

The customer is responsible for determining the PPE code for this material.

National Fire Protection Association (U.S.A.)



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Section 16. Other information

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History

Date of printing	:	8/31/2016
Date of issue/Date of revision	:	8/31/2016
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Version	:	0.08
Prepared by	:	Buckman Regulatory Affairs
Key to abbreviations	:	ATE = Acute Toxicity Estimate BCF = Bioconcentration Factor GHS = Globally Harmonized System of Classification and Labelling of Chemicals IATA = International Air Transport Association IBC = Intermediate Bulk Container IMDG = International Maritime Dangerous Goods LogPow = logarithm of the octanol/water partition coefficient MARPOL = International Convention for the Prevention of Pollution From Ships, 1973 as modified by the Protocol of 1978. ("Marpol" = marine pollution) UN = United Nations

Indicates information that has changed from previously issued version.

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ATTACHMENT O

TECH REPORT ITEM 6 STORMWATER MANAGEMENT

Attachment O

Calaveras Power Plant Stormwater Management Facility/Site Information

1. Technical Report Item 6 – Stormwater Commingled with Other Waste Streams

Provide an inventory, or list, of materials currently handled at the facility that may be exposed to precipitation.

Material storage areas include the following:

- The coal pile.
- Limestone used for the ball mill area.
- Gypsum from the scrubber, dewatered and conveyed to the 5-year landfill.
- Fly ash and bottom ash storage ponds.
- Laydown areas with metal parts and equipment (including temporary occasional construction project laydown areas).
    - A Stormwater Pollution Prevention Plan (SWPPP), site best management practices (BMPs) (including good housekeeping), and regular inspections are employed for construction activities.
- Soil and gravel for maintenance and small construction.
- Authorized landfill areas.
    - Runoff is collected in a retention pond.
- Chemical and fuel oil tank storage areas, fuel island, and loading and unloading areas.
    - These areas are typically provided with secondary containment, and spills are immediately cleaned up to prevent ground contamination.
- Oil-filled electrical equipment.
    - Most of the electrical equipment in the switchyards is now filled with SF6 gas.

Provide narrative descriptions of the industrial processes and activities involving the materials in the above-listed inventory that occur outdoors or in some manner that may result in exposure of the materials to the precipitation or runoff.

Industrial processes and activities include the following:

- Coal transport from the coal pile on conveyors to the generating facility.
- Lime transport from the lime storage area by conveyor to the ball mill area.
- Fly and bottom ash is trucked from the point of generation to the 5-year landfill.
- Refueling is performed adjacent to the fuel island.
    - Spill kits are present so personnel can respond immediately to spills.
- Small quantities of oils, paints, herbicides, pesticides, and other chemicals may be used throughout the plant for maintenance activities.
    - Directions on pesticide and herbicide labels are followed.
    - BMPs are used (e.g., containers sealed and returned to storage locations when not in use).

2. Worksheet 7 – Stormwater Associated With Industrial Activity (Outfalls 006, 014-018)

Provide an inventory, or list, of materials currently handled at the facility that may be exposed to precipitation.

- Laydown areas with metal parts and equipment (including temporary occasional construction project laydown areas).
- Soil and gravel for maintenance and small construction.
- Coal in railcars within drainage areas

Provide narrative descriptions of the industrial processes and activities involving the materials in the above-listed inventory that occur outdoors or in some manner that may result in exposure of the materials to the precipitation or runoff.

- Small quantities of oils, paints, herbicides, pesticides, and other chemicals may be used throughout the plant for maintenance activities.
- Coal handling does not occur within the stormwater only drainage areas.

CALAVERAS LAKE

FIGURE 0-2

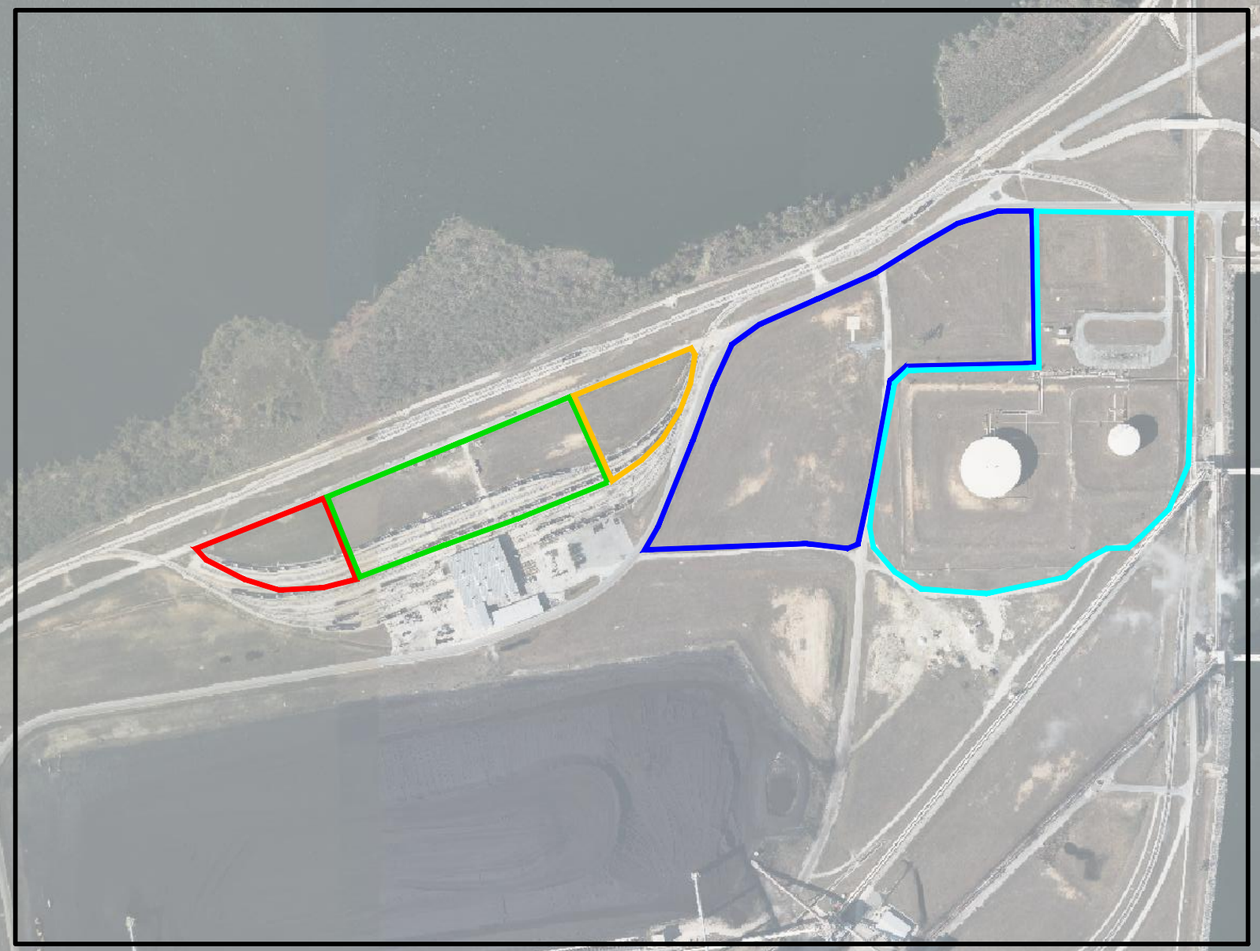
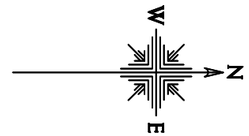




FIGURE 0-3

INTAKE CANAL

CALAVERAS LAKE



LEGEND

OUTFALL WATERSHED

THE FOLLOWING ARE NOT APPLICABLE:

- CONNECTIONS OR DISCHARGE POINTS TO MUNICIPAL SEPARATE STORM SEWER SYSTEMS
- STRUCTURAL CONTROL DEVICES THAT ARE DESIGNED TO REDUCE POLLUTION IN DISCHARGES OF STORMWATER ASSOCIATED WITH INDUSTRIAL ACTIVITIES
- PROCESS WASTEWATER TREATMENT UNITS (INCLUDING PONDS)
- BAG HOUSE AND OTHER AIR TREATMENT UNITS
- LANDFILLS; SCRAP YARDS
- VEHICLE AND EQUIPMENT MAINTENANCE AREAS
- PHYSICAL FEATURES OF THE SITE THAT MAY INFLUENCE DISCHARGES OF STORMWATER
- LOCATIONS OF REPORTABLE SPILLS OR LEAKS
- IN EACH DRAINAGE AREA, THERE MAY BE LAYDOWN AREAS AND SMALL CONSTRUCTION ACTIVITIES AND MATERIAL HANDLING AND STORAGE CAN OCCUR.

0 250 500

SCALE IN FEET

WESTON SOLUTIONS

FIGURE 0-1
STORMWATER OUTFALL LOCATION MAP

CALAVERAS POWER STATION
CPS ENERGY
12940 US HIGHWAY 181 SOUTH
SAN ANTONIO, TEXAS

DATE	PROJECT NO.	APPROX. SCALE
MAR 2025	10690.009.046.0002	NOT TO SCALE

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LEGEND

OUTFALL WATERSHED

THE FOLLOWING ARE NOT APPLICABLE:

- CONNECTIONS OR DISCHARGE POINTS TO MUNICIPAL SEPARATE STORM SEWER SYSTEMS
- STRUCTURAL CONTROL DEVICES THAT ARE DESIGNED TO REDUCE POLLUTION IN DISCHARGES OF STORMWATER ASSOCIATED WITH INDUSTRIAL ACTIVITIES
- PROCESS WASTEWATER TREATMENT UNITS (INCLUDING PONDS)
- BAG HOUSE AND OTHER AIR TREATMENT UNITS
- LANDFILLS; SCRAP YARDS
- VEHICLE AND EQUIPMENT MAINTENANCE AREAS
- PHYSICAL FEATURES OF THE SITE THAT MAY INFLUENCE DISCHARGES OF STORMWATER
- LOCATIONS OF REPORTABLE SPILLS OR LEAKS
- IN EACH DRAINAGE AREA, THERE MAY BE LAYDOWN AREAS AND SMALL CONSTRUCTION ACTIVITIES AND MATERIAL HANDLING AND STORAGE CAN OCCUR.

0 150 300

SCALE IN FEET

WESTON SOLUTIONS, INC.

FIGURE 0-2
STORMWATER DRAINAGE AREAS SITE MAP
CALAVERAS POWER STATION
CPS ENERGY
12940 US HIGHWAY 181 SOUTH
SAN ANTONIO, TEXAS

DATE	PROJECT NO.	APPROX. SCALE
MAR 2025	10690.009.046.0002	NOT TO SCALE

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LEGEND

OUTFALL WATERSHED

THE FOLLOWING ARE NOT APPLICABLE:

- CONNECTIONS OR DISCHARGE POINTS TO MUNICIPAL SEPARATE STORM SEWER SYSTEMS
- STRUCTURAL CONTROL DEVICES THAT ARE DESIGNED TO REDUCE POLLUTION IN DISCHARGES OF STORMWATER ASSOCIATED WITH INDUSTRIAL ACTIVITIES
- PROCESS WASTEWATER TREATMENT UNITS (INCLUDING PONDS)
- BAG HOUSE AND OTHER AIR TREATMENT UNITS
- LANDFILLS; SCRAP YARDS
- VEHICLE AND EQUIPMENT MAINTENANCE AREAS
- PHYSICAL FEATURES OF THE SITE THAT MAY INFLUENCE DISCHARGES OF STORMWATER
- LOCATIONS OF REPORTABLE SPILLS OR LEAKS
- IN EACH DRAINAGE AREA, THERE MAY BE LAYDOWN AREAS AND SMALL CONSTRUCTION ACTIVITIES AND MATERIAL HANDLING AND STORAGE CAN OCCUR.

0 50 100

SCALE IN FEET

WESTON SOLUTIONS

FIGURE 0-3
STORMWATER OUTFALL 018 DRAINAGE AREA SITE MAP

CALAVERAS POWER STATION
CPS ENERGY
12940 US HIGHWAY 181 SOUTH
SAN ANTONIO, TEXAS

DATE	PROJECT NO.	APPROX. SCALE
MAR 2025	10690.009.046.0002	NOT TO SCALE

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ATTACHMENT P

TECH REPORT ITEM 13 PERMIT AMENDMENT REQUESTS

Attachment P
Summary of Permit Modification Requests

Request Number	Permit Reference	Request
1	Outfall 103	**Remove Outfall 103**. The discharge pipes have been flanged and there is no discharge.
2	Outfall 109	**Remove Outfall 109**. All flow to this internal outfall has been redirected to other permitted outfalls.
3	Outfall 108	**Remove Total Suspended Solids (TSS) from Outfall 108**. The requirement to include TSS was from low-volume waste sources and metal cleaning wastes. Outfall 108 now only discharges boiler blowdown. This is a "material and substantial alternation" that justifies the application of a less stringent effluent limitation under §402(o)(2) of the Clean Water Act.
4	Outfall 112	**Add internal Outfalls 112(d) and 112(e) for boiler blowdown**. Other Requirement 21 requires that grab samples for oil and grease from internal Outfalls 108 and 112 must be taken when boiler blowdown is discharged; however, no internal outfall was established for boiler blowdown at Outfall 112. (Outfall 108 discharges only boiler blowdown, and no internal outfall is necessary.) **Request that Other Requirement 21 be revised as follows:** "Grab samples for oil and grease analyses **from Outfall 108 and internal Outfalls 112(d) and 112(e)** must be taken at the following frequencies…"
5	Outfalls 111, 112(a), 112(b), 112(c)	**Reduce pH monitoring frequency from once per day to once per week**. pH at these outfalls is required to be monitored once per day by grab sample when discharge occurs. These internal outfalls had been removed in the last permit renewal; at the time of the outfall removal, the pH monitoring frequency was once per week. When the internal outfalls were re-established in the permit from the subsequent permit amendment, the sampling frequency was mistakenly established at once per day. §402(o)(2) of the Clean Water Act allows for relaxed permit limits if the Administrator determines that a technical mistake was made.
6	Outfall 712(a), 712(b)	**Reduce pH monitoring frequency from once per day to once per six months**. pH at these outfalls is required to be monitored once per day by grab sample when discharge occurs. These internal outfalls had been removed in the last permit renewal; at the time of the outfall removal, the pH monitoring frequency was once per six months. When the internal outfalls were re-established in the permit from the subsequent permit amendment, the sampling frequency was mistakenly established at once per day. §402(o)(2) of the Clean Water Act allows for relaxed permit limits if the Administrator determines that a technical mistake was made.

Request Number	Permit Reference	Request
7	Other Requirement 6	**Other Requirement 6 related to Outfall 006 progress reports.** Outfall 006 rarely discharges stormwater and last discharged in August of 2017. The applicant understands the requirement to sample for the parameters requested when a discharge occurs but asks that the requirement to confirm there has been no discharge on a quarterly basis be removed.
8	Outfall 110(a)	**Change the outfall and effluent monitoring location for Outfall 110(a)** from "At end of pipe, where treated domestic wastewater from the Sommers/Deely is discharged in the Sommers/Deely Discharge Canal" to "at the v-notch weir, where treated domestic wastewater is discharged to Discharge Canal #1."
9	Outfall 110(b)	**Revise Outfall 110(b) effluent monitoring location as follows:** *"At sampling port at lift station prior to discharge into intake canal."*
10	Outfall 110(c)	**Revise Outfall 110(c) outfall and effluent monitoring location as follows:** "*….discharged into a ~~concrete~~ drainage ditch before entering the coal pile runoff pond (Pond 2)*
11	Outfall 002	**Revise the Outfall 002 outfall and effluent monitoring location**. "*At the weir on the concrete drainage ditch~~, where wastewater is discharged from the end pipe and~~ prior to entering ~~Lake~~ Calaveras Lake*"
12	Outfall 712(a)	**Clarify the Outfall 712(a) outfall and effluent monitoring location**. Change "Spruce discharge canal" to "Discharge Canal #2" for consistency with application materials.
13	Outfall 712(b)	**Revise the Outfall 712(b) outfall and effluent monitoring location.** Revise to **"***At the weir of pump discharge outlet from Pond No.6, prior to discharge entering the intake canal.***"**
14	Outfall 712	**Clarification of authorized discharges.** Revise authorized discharge "Fire Booster Pump" to "fire water/lake water."
15	Outfall 713	**Clarify the Outfall 713 effluent monitoring location**. Change "Spruce discharge canal" to "Discharge Canal #2" for consistency with application materials. Replace "landfill leachate" with "landfill stormwater."
16	Outfall 101	**Typographical correction**. Delete the extra "intake": "…prior to discharge behind the ~~intake~~ Sommers/Deely intake screen…"
17	Other Requirement 13 J and M	**Revise calculation for chlorine loading** to specifically account for actual time for each unit.
18	Outfall 001	**Revise Outfall 001 Effluent Limitations and Monitoring Requirements** as follows "…and previously monitored effluents (PMEs) from Sommers Units 1 & 2 ~~and Deely Units 1 & 2~~…"

Request Number	Permit Reference	Request
19	Outfall 104	**Revise Outfall Location Description –** Revise outfall location description from "*At the outlet of the coal pile runoff pond clarifier, prior to discharge entering the intake canal*" to "*At the discharge pipe, prior to discharge entering the intake canal*".
20	Other Requirement 18 Disposal via Evaporation	**Revise Other Requirement 18**. Domestic wastewater is not proposed to be discharged into any proposed evaporation pond. Please remove all references and requirements associated with domestic wastewater.
21	Other Requirement 13J.v	**Request the addition of Other Requirement 13J.v.** *In the event Zebra Mussels are found in Calaveras Lake, CPS Energy will notify TCEQ. After notification, multi-unit continuous or semi-continuous chlorination (15 minutes on, 45 minutes off) chlorination may be conducted as long as the total residual concentration is less than 0.5 ppm during the period of chlorination. Any other treatment option will be submitted to TCEQ for approval in accordance with Permit Condition 1.a.* See the following page for rationale behind this request.

Attachment P – Calaveras Power Station Description of Permit Changes - Mussels Mitigation Item

Zebra mussels are present within Medina Lake, which through the Medina River is connected to the San Antonio River. The water within Calaveras Lake is partly filled with recycled water that has undergone both primary and secondary treatment and has been released into the San Antonio River upstream of the river makeup water intake. Zebra mussels may eventually reach Calaveras Lake via the San Antonio River. In addition, Calaveras Lake is a space for community recreation, including boating and fishing. As such, zebra mussels have the potential to be introduced to Calaveras Lake by watercraft launched at one of the Lake's boat ramps at Calaveras Lake Park. According to the Texas Parks and Wildlife, zebra mussels have infested multiple lakes in Texas to include Lakes Amistad, Austin, Belton, Bridgeport, Brownwood, Buchanan, Canyon, Dean Gilbert, Diversion, Eagle Mountain, Georgetown, Granger, Grapevine, Hords Creek, Inks, Lady Bird, Lewisville, Livingston, Lyndon B. Johnson, Marble Falls, Medina, O.H. Ivie, Pflugerville, Placid, Randell, Ray Roberts, Richland Chambers, Stillhouse Hollow, Texoma, Travis, Town Center Pond, Walter E. Long, and CPS Requests the consideration of permit conditions allowing the use of extended chlorination or alternate mussel mitigation strategies if necessary for mussels mitigation at the Plant.

An introduction of zebra mussels could occur from the use of watercraft in an infested lake that were not properly cleaned, dried, and drained prior to use in Calaveras Lake.

A mussel vulnerability study by RNT Consulting Inc. (the study) was commissioned by CPS Energy in 2023. The study found that Calaveras Lake has the potential to support a population of zebra mussels which would have the potential to impact Plant operations and cause wear on Plant mechanical components. The study also found that the current chlorination practices utilized to control biofilm would be insufficient to fully mitigate potential impacts from zebra mussels to the Plant's equipment and operations.

CPS Energy is considering the implementation of proactive measures in anticipation of a potential future zebra mussel infestation of Calaveras Lake. The implemented measures would be taken with the intent to mitigate potential operational problems at the Plant that could interfere with the ability of the Plant to provide reliable electric service for CPS Energy customers. As part of these efforts, CPS Energy requests an amendment to this permit to allow for extended chlorination or an alternate mitigation technique as part of CPS Energy's efforts to mitigate potential zebra mussel impacts to the future operations of the Plant. This amendment is requested as part of CPS Energy's proactive approach to mussel mitigation so that the Plant is better prepared to respond in the event zebra mussels are detected within Calaveras Lake during the permit term. This would also help CPS Energy avoid the need for a reactive permit amendment request following a potential future infestation of Calaveras Lake.

The study commissioned by CPS Energy in 2023 provided a potential treatment strategy of continuous or semi-continuous (15 minutes on; 45 minutes off) chlorination with a concentration of 0.3 to 0.5 ppm of TRC. As CPS Energy currently utilizes chlorine for biofilm control, this method has the potential for quick implementation at the Plant in the event mussel mitigation becomes necessary to support Plant operations and reliability over the permit term. This method has found use by other generating utilities and was an original method utilized when mussels arrived within the Great Lakes.

As part of CPS Energy's proactive approach to zebra mussel mitigation, it is flexible and is open to considering permit conditions from TCEQ allowing alternate or additional techniques for mitigation. Based on the study, these techniques could potentially include treatments with chemical products such as Zequanox or EarthTec QZ, retrofitting components such as screens or grates with designs containing a higher copper content that are resistant to mussel settlement, mechanical filtration, or application of antifouling coatings. In addition, CPS Energy also understands technologies such as copper ion generator systems are in use by operators in Texas, such as the City of Austin, but has not yet evaluated potential application of this technology to the Calaveras Power Station.

ATTACHMENT Q

WORKSHEET 2 TABLES

ATTACHMENT Q

ANALYTICAL TESTING LABORATORY INFORMATION

The following labs performed the analysis for the pollutants listed below for Outfalls 001, 002, and 007 on all four sampling dates of 8/7/24, 8/14/24, 8/22/24, and 8/29/24.

Laboratory Name	San Antonio Testing Laboratory, LLC	Eurofins Pittsburgh	Albion Environmental
Address	1610 S Laredo Street, San Antonio, TX 78207	301 Alpha Drive, RIDC Park, Pittsburgh, PA 15328	4505 Boyett Street, Bryan, TX 77801-4614
Phone Number	210-229-9920	412-963-2446	979-268-4614
Pollutants Analyzed	All Table 1 Pollutants Table 2: • Aluminum • Antimony • Barium • Beryllium • Cadmium • Chromium, total • Chromium, hexavalent • Chromium, trivalent • Copper • Lead • Nickel • Silver • Thallium • Zinc All Table 3 Pollutants Table 4: • E. Coli Table 6: • Bromide • Nitrate-Nitrite (as N)	Table 2: • Cyanide Table 6: • Color	Table 2: • Arsenic • Mercury • Selenium

	• Sulfide (as S) • Sulfite (as SO3) • Surfactants • Boron • Cobalt • Iron • Magnesium • Manganese • Molybdenum • Tin • Titanium All Table 8 Pollutants All Table 9 Pollutants		

INDUSTRIAL WASTEWATER PERMIT APPLICATION WORKSHEET 2.0: POLLUTANT ANALYSIS

Worksheet 2.0 **is required** for all applications submitted for a TPDES permit. Worksheet 2.0 is not required for applications for a permit to dispose of all wastewater by land disposal or for discharges solely of stormwater associated with industrial activities.

Item 1. General Testing Requirements (Instructions, Page 55)

a. Provide the date range of all sampling events conducted to obtain the analytical data submitted with this application (e.g., 05/01/2018-05/30/2018): 08/07/2024 – 08/29/2024

b. ☒ Check the box to confirm all samples were collected no more than 12 months prior to the date of application submittal.

c. Read the general testing requirements in the instructions for important information about sampling, test methods, and MALs. If a contact laboratory was used, attach a list which includes the name, contact information, and pollutants analyzed for each laboratory/firm. **Attachment: Q**

Item 2. Specific Testing Requirements (Instructions, Page 56)

Attach correspondence from TCEQ approving submittal of less than the required number of samples, if applicable. **Attachment:** N/A

TABLE 1 and TABLE 2 (Instructions, Page 58)

Completion of Tables 1 and 2 **is required** for **all external outfalls** for all TPDES permit applications.

Table 1 for Outfall No.: 001 Samples are (check one): ☐ Composite ☒ Grab

Pollutant	Sample 1 (mg/L)	Sample 2 (mg/L)	Sample 3 (mg/L)	Sample 4 (mg/L)
BOD (5-day)	6.54	5.04	5.67	7.81
CBOD (5-day)	3.38	2.83	4.32	3.01
Chemical oxygen demand	54.9	64.5	71.5	59.2
Total organic carbon	14.4	11.7	12.3	12.1
Dissolved oxygen	8.21	8.74	6.10	9.31

Pollutant	Sample 1 (mg/L)	Sample 2 (mg/L)	Sample 3 (mg/L)	Sample 4 (mg/L)
Ammonia nitrogen	1.68	1.12	1.68	1.12
Total suspended solids	9.00	13.5	10.5	14.2
Nitrate nitrogen	< 0.10	< 0.10	< 0.10	0.404
Total organic nitrogen	2.24	3.36	2.24	3.36
Total phosphorus	0.50	0.49	0.56	0.52
Oil and grease	< 4.75	< 4.75	< 4.75	< 4.75
Total residual chlorine	0.03	0.03	0.02	0.04
Total dissolved solids	1130	1080	1510	1360
Sulfate	234	243	244	245
Chloride	524	541	536	549
Fluoride	1.03	1.03	1.05	1.04
Total alkalinity (mg/L as CaCO3)	272	276	268	264
Temperature (°F)	61.5	68.0	68.0	69.4
pH (standard units)	9.23	9.28	9.12	9.17

Table 2 for Outfall No.: 001 Samples are (check one): ☐ Composite ☒ Grab

Pollutant	Sample 1 (µg/L)	Sample 2 (µg/L)	Sample 3 (µg/L)	Sample 4 (µg/L)	MAL (µg/L)
Aluminum, total	12	14	13	17	2.5
Antimony, total	< 5	< 5	< 5	< 5	5
Arsenic, total	< 0.5	< 0.5	< 0.5	< 0.5	0.5
Barium, total	43	41	39	38	3
Beryllium, total	< 0.5	< 0.5	< 0.5	< 0.5	0.5
Cadmium, total	< 1	< 1	< 1	< 1	1
Chromium, total	< 3	< 3	< 3	< 3	3
Chromium, hexavalent	< 3	< 3	< 3	< 3	3
Chromium, trivalent	< 3	< 3	< 3	< 3	N/A
Copper, total	< 2	< 2	< 2	< 2	2

Pollutant	Sample 1 (µg/L)	Sample 2 (µg/L)	Sample 3 (µg/L)	Sample 4 (µg/L)	MAL (µg/L)
Cyanide, available	< 2.0	2.0	< 2.0	< 2.0	2/10
Lead, total	< 0.5	< 0.5	< 0.5	< 0.5	0.5
Mercury, total	0.0010	0.0011	0.0008	0.0011	0.005/0.0005
Nickel, total	7	7	6	6	2
Selenium, total	< 5	< 5	< 5	< 5	5
Silver, total	< 0.5	< 0.5	< 0.5	< 0.5	0.5
Thallium, total	< 0.5	< 0.5	< 0.5	< 0.5	0.5
Zinc, total	17	12	25	15	5.0

TABLE 3 (Instructions, Page 58)

Completion of Table 3 **is required** for all **external outfalls** which discharge process wastewater.

Partial completion of Table 3 **is required** for all **external outfalls** which discharge non-process wastewater and stormwater associated with industrial activities commingled with other wastestreams (see instructions for additional guidance).

Table 3 for Outfall No.: 001 Samples are (check one): ☐ Composite ☒ Grab

Pollutant	Sample 1 (µg/L)*	Sample 2 (µg/L)*	Sample 3 (µg/L)*	Sample 4 (µg/L)*	MAL (µg/L)*
Acrylonitrile	< 50	< 50	< 50	< 50	50
Anthracene	< 10	< 10	< 10	< 10	10
Benzene	< 10	< 10	< 10	< 10	10
Benzidine	< 50	< 50	< 50	< 50	50
Benzo(a)anthracene	< 5	< 5	< 5	< 5	5
Benzo(a)pyrene	< 5	< 5	< 5	< 5	5
Bis(2-chloroethyl)ether	< 10	< 10	< 10	< 10	10
Bis(2-ethylhexyl)phthalate	< 10	< 10	< 10	< 10	10
Bromodichloromethane [Dichlorobromomethane]	< 10	< 10	< 10	< 10	10
Bromoform	< 10	< 10	< 10	< 10	10
Carbon tetrachloride	< 2	< 2	< 2	< 2	2

Pollutant	Sample 1 (µg/L)*	Sample 2 (µg/L)*	Sample 3 (µg/L)*	Sample 4 (µg/L)*	MAL (µg/L)*
Chlorobenzene	< 10	< 10	< 10	< 10	10
Chlorodibromomethane [Dibromochloromethane]	< 10	< 10	< 10	< 10	10
Chloroform	< 10	< 10	< 10	< 10	10
Chrysene	< 5	< 5	< 5	< 5	5
m-Cresol [3-Methylphenol]	< 10	< 10	< 10	< 10	10
o-Cresol [2-Methylphenol]	< 10	< 10	< 10	< 10	10
p-Cresol [4-Methylphenol]	< 10	< 10	< 10	< 10	10
1,2-Dibromoethane	< 10	< 10	< 10	< 10	10
m-Dichlorobenzene [1,3-Dichlorobenzene]	< 10	< 10	< 10	< 10	10
o-Dichlorobenzene [1,2-Dichlorobenzene]	< 10	< 10	< 10	< 10	10
p-Dichlorobenzene [1,4-Dichlorobenzene]	< 10	< 10	< 10	< 10	10
3,3'-Dichlorobenzidine	< 5	< 5	< 5	< 5	5
1,2-Dichloroethane	< 10	< 10	< 10	< 10	10
1,1-Dichloroethene [1,1-Dichloroethylene]	< 10	< 10	< 10	< 10	10
Dichloromethane [Methylene chloride]	< 20	< 20	< 20	< 20	20
1,2-Dichloropropane	< 10	< 10	< 10	< 10	10
1,3-Dichloropropene [1,3-Dichloropropylene]	< 10	< 10	< 10	< 10	10
2,4-Dimethylphenol	< 10	< 10	< 10	< 10	10
Di-n-Butyl phthalate	< 10	< 10	< 10	< 10	10
Ethylbenzene	< 10	< 10	< 10	< 10	10
Fluoride	1030	1030	1050	1040	500
Hexachlorobenzene	< 5	< 5	< 5	< 5	5
Hexachlorobutadiene	< 10	< 10	< 10	< 10	10
Hexachlorocyclopentadiene	< 10	< 10	< 10	< 10	10

Pollutant	Sample 1 (µg/L)*	Sample 2 (µg/L)*	Sample 3 (µg/L)*	Sample 4 (µg/L)*	MAL (µg/L)*
Hexachloroethane	< 20	< 20	< 20	< 20	20
Methyl ethyl ketone	< 50	< 50	< 50	< 50	50
Nitrobenzene	< 10	< 10	< 10	< 10	10
N-Nitrosodiethylamine	< 20	< 20	< 20	< 20	20
N-Nitroso-di-n-butylamine	< 20	< 20	< 20	< 20	20
Nonylphenol	< 333	< 333	< 333	< 333	333
Pentachlorobenzene	< 20	< 20	< 20	< 20	20
Pentachlorophenol	< 5	< 5	< 5	< 5	5
Phenanthrene	< 10	< 10	< 10	< 10	10
Polychlorinated biphenyls (PCBs) (**)	< 0.2	< 0.2	< 0.2	< 0.2	0.2
Pyridine	< 20	< 20	< 20	< 20	20
1,2,4,5-Tetrachlorobenzene	< 20	< 20	< 20	< 20	20
1,1,2,2-Tetrachloroethane	< 10	< 10	< 10	< 10	10
Tetrachloroethene [Tetrachloroethylene]	< 10	< 10	< 10	< 10	10
Toluene	< 10	< 10	< 10	< 10	10
1,1,1-Trichloroethane	< 10	< 10	< 10	< 10	10
1,1,2-Trichloroethane	< 10	< 10	< 10	< 10	10
Trichloroethene [Trichloroethylene]	< 10	< 10	< 10	< 10	10
2,4,5-Trichlorophenol	< 50	< 50	< 50	< 50	50
TTHM (Total trihalomethanes)	< 10	< 10	< 10	< 10	10
Vinyl chloride	< 10	< 10	< 10	< 10	10

(*) Indicate units if different from µg/L.

(**) Total of detects for PCB-1242, PCB-1254, PCB-1221, PCB-1232, PCB-1248, PCB-1260, and PCB-1016. If all non-detects, enter the highest non-detect preceded by a "<".

TABLE 4 (Instructions, Pages 58-59)

Partial completion of Table 4 **is required** for each **external outfall** based on the conditions below.

a. **Tributyltin**

Is this facility an industrial/commercial facility which currently or proposes to directly dispose of wastewater from the types of operations listed below or a domestic facility which currently or proposes to receive wastewater from the types of industrial/commercial operations listed below?

☐ Yes ☒ No

If **yes**, check the box next to each of the following criteria which apply and provide the appropriate testing results in Table 4 below (check all that apply).

☐ Manufacturers and formulators of tributyltin or related compounds.

☐ Painting of ships, boats and marine structures.

☐ Ship and boat building and repairing.

☐ Ship and boat cleaning, salvage, wrecking and scaling.

☐ Operation and maintenance of marine cargo handling facilities and marinas.

☐ Facilities engaged in wood preserving.

☐ Any other industrial/commercial facility for which tributyltin is known to be present, or for which there is any reason to believe that tributyltin may be present in the effluent.

b. **Enterococci (discharge to saltwater)**

This facility discharges/proposes to discharge directly into saltwater receiving waters **and** Enterococci bacteria are expected to be present in the discharge based on facility processes.

☐ Yes ☒ No

Domestic wastewater is/will be discharged.

☒ Yes ☐ No

If **yes to either** question, provide the appropriate testing results in Table 4 below.

c. E. coli (discharge to freshwater)

This facility discharges/proposes to discharge directly into freshwater receiving waters **and** *E. coli* bacteria are expected to be present in the discharge based on facility processes.

☒ Yes ☐ No

Domestic wastewater is/will be discharged.

☒ Yes ☐ No

If **yes to either** question, provide the appropriate testing results in Table 4 below.

Table 4 for Outfall No.: 001 Samples are (check one): ☐ Composite ☒ Grab

Pollutant	Sample 1	Sample 2	Sample 3	Sample 4	MAL
Tributyltin (µg/L)					0.010
Enterococci (cfu or MPN/100 mL)					N/A
E. coli (cfu or MPN/100 mL)	35.5	29.9	90.6	11.4	N/A

TABLE 5 (Instructions, Page 59)

Completion of Table 5 **is required** for all **external outfalls** which discharge process wastewater from a facility which manufactures or formulates pesticides or herbicides or other wastewaters which may contain pesticides or herbicides.

If this facility does not/will not manufacture or formulate pesticides or herbicides and does not/will not discharge other wastewaters that may contain pesticides or herbicides, check N/A.

☒ N/A

Table 5 for Outfall No.: Click to enter text. Samples are (check one): ☐ Composite ☐ Grab

Pollutant	Sample 1 (µg/L)*	Sample 2 (µg/L)*	Sample 3 (µg/L)*	Sample 4 (µg/L)*	MAL (µg/L)*
Aldrin					0.01
Carbaryl					5
Chlordane					0.2
Chlorpyrifos					0.05
4,4'-DDD					0.1
4,4'-DDE					0.1
4,4'-DDT					0.02
2,4-D					0.7
Danitol [Fenpropathrin]					—
Demeton					0.20
Diazinon					0.5/0.1
Dicofol [Kelthane]					1

Pollutant	**Sample 1 (µg/L)***	**Sample 2 (µg/L)***	**Sample 3 (µg/L)***	**Sample 4 (µg/L)***	**MAL (µg/L)***
Dieldrin					0.02
Diuron					0.090
Endosulfan I (*alpha*)					0.01
Endosulfan II (*beta*)					0.02
Endosulfan sulfate					0.1
Endrin					0.02
Guthion [Azinphos methyl]					0.1
Heptachlor					0.01
Heptachlor epoxide					0.01
Hexachlorocyclohexane (*alpha*)					0.05
Hexachlorocyclohexane (*beta*)					0.05
Hexachlorocyclohexane (*gamma*) [Lindane]					0.05
Hexachlorophene					10
Malathion					0.1
Methoxychlor					2.0
Mirex					0.02
Parathion (ethyl)					0.1
Toxaphene					0.3
2,4,5-TP [Silvex]					0.3

* Indicate units if different from µg/L.

TABLE 6 (Instructions, Page 59)

Completion of Table 6 **is required** for all **external outfalls**.

Table 6 for Outfall No.: 001 Samples are (check one): ☐ Composite ☒ Grab

Pollutants	**Believed Present**	**Believed Absent**	**Sample 1 (mg/L)**	**Sample 2 (mg/L)**	**Sample 3 (mg/L)**	**Sample 4 (mg/L)**	**MAL (µg/L)***
Bromide	☒	☐	11.9	11.8	12.0	11.6	400
Color (PCU)	☒	☐	10	10	10	10	—
Nitrate-Nitrite (as N)	☒	☐	< 0.20	< 0.20	< 0.20	0.404	—
Sulfide (as S)	☐	☒	< 0.10	< 0.10	< 0.10	< 0.10	—
Sulfite (as SO3)	☐	☒	< 1.00	< 1.00	< 1.00	< 1.00	—
Surfactants	☐	☒	< 0.20	< 0.20	< 0.20	< 0.20	—
Boron, total	☒	☐	1.04	0.988	0.847	0.829	20
Cobalt, total	☒	☐	0.0004	0.0004	0.0004	0.0004	0.3
Iron, total	☒	☐	0.421	0.215	0.180	0.176	7
Magnesium, total	☒	☐	46.1	47.9	43.4	42.8	20
Manganese, total	☒	☐	0.009	0.008	0.008	0.006	0.5
Molybdenum, total	☒	☐	0.006	0.006	0.005	0.005	1
Tin, total	☒	☐	0.006	0.008	0.006	0.006	5
Titanium, total	☐	☒	< 0.03	< 0.03	< 0.03	< 0.03	30

TABLE 7 (Instructions, Page 60)

Check the box next to any of the industrial categories applicable to this facility. If no categories are applicable, check N/A. If GC/MS testing is required, check the box provided to confirm the testing results for the appropriate parameters are provided with the application.

☐ N/A

Table 7 for Applicable Industrial Categories

Industrial Category	40 CFR Part	Volatiles Table 8	Acids Table 9	Bases/ Neutrals Table 10	Pesticides Table 11
☐ Adhesives and Sealants		☐ Yes	☐ Yes	☐ Yes	No
☐ Aluminum Forming	467	☐ Yes	☐ Yes	☐ Yes	No
☐ Auto and Other Laundries		☐ Yes	☐ Yes	☐ Yes	☐ Yes
☐ Battery Manufacturing	461	☐ Yes	No	☐ Yes	No
☐ Coal Mining	434	No	No	No	No
☐ Coil Coating	465	☐ Yes	☐ Yes	☐ Yes	No
☐ Copper Forming	468	☐ Yes	☐ Yes	☐ Yes	No
☐ Electric and Electronic Components	469	☐ Yes	☐ Yes	☐ Yes	☐ Yes
☐ Electroplating	413	☐ Yes	☐ Yes	☐ Yes	No
☐ Explosives Manufacturing	457	No	☐ Yes	☐ Yes	No
☐ Foundries		☐ Yes	☐ Yes	☐ Yes	No
☐ Gum and Wood Chemicals - Subparts A,B,C,E	454	☐ Yes	☐ Yes	No	No
☐ Gum and Wood Chemicals - Subparts D,F	454	☐ Yes	☐ Yes	☐ Yes	No
☐ Inorganic Chemicals Manufacturing	415	☐ Yes	☐ Yes	☐ Yes	No
☐ Iron and Steel Manufacturing	420	☐ Yes	☐ Yes	☐ Yes	No
☐ Leather Tanning and Finishing	425	☐ Yes	☐ Yes	☐ Yes	No
☐ Mechanical Products Manufacturing		☐ Yes	☐ Yes	☐ Yes	No
☐ Nonferrous Metals Manufacturing	421,471	☐ Yes	☐ Yes	☐ Yes	☐ Yes
☐ Oil and Gas Extraction - Subparts A, D, E, F, G, H	435	☐ Yes	☐ Yes	☐ Yes	No
☐ Ore Mining - Subpart B	440	No	☐ Yes	No	No
☐ Organic Chemicals Manufacturing	414	☐ Yes	☐ Yes	☐ Yes	☐ Yes
☐ Paint and Ink Formulation	446,447	☐ Yes	☐ Yes	☐ Yes	No
☐ Pesticides	455	☐ Yes	☐ Yes	☐ Yes	☐ Yes
☐ Petroleum Refining	419	☐ Yes	No	No	No
☐ Pharmaceutical Preparations	439	☐ Yes	☐ Yes	☐ Yes	No
☐ Photographic Equipment and Supplies	459	☐ Yes	☐ Yes	☐ Yes	No
☐ Plastic and Synthetic Materials Manufacturing	414	☐ Yes	☐ Yes	☐ Yes	☐ Yes
☐ Plastic Processing	463	☐ Yes	No	No	No
☐ Porcelain Enameling	466	No	No	No	No
☐ Printing and Publishing		☐ Yes	☐ Yes	☐ Yes	☐ Yes
☐ Pulp and Paperboard Mills - Subpart C	430	☐ *	☐ Yes	☐ *	☐ Yes
☐ Pulp and Paperboard Mills - Subparts F, K	430	☐ *	☐ Yes	☐ *	☐ *
☐ Pulp and Paperboard Mills - Subparts A, B, D, G, H	430	☐ Yes	☐ Yes	☐ *	☐ *
☐ Pulp and Paperboard Mills - Subparts I, J, L	430	☐ Yes	☐ Yes	☐ *	☐ Yes
☐ Pulp and Paperboard Mills - Subpart E	430	☐ Yes	☐ Yes	☐ Yes	☐ *
☐ Rubber Processing	428	☐ Yes	☐ Yes	☐ Yes	No

Industrial Category	40 CFR Part	Volatiles Table 8	Acids Table 9	Bases/ Neutrals Table 10	Pesticides Table 11
☐ Soap and Detergent Manufacturing	417	☐ Yes	☐ Yes	☐ Yes	No
☒ Steam Electric Power Plants	423	☒ Yes	☒ Yes	No	No
☐ Textile Mills (Not Subpart C)	410	☐ Yes	☐ Yes	☐ Yes	No
☐ Timber Products Processing	429	☐ Yes	☐ Yes	☐ Yes	☐ Yes

* Test if believed present.

TABLES 8, 9, 10, and 11 (Instructions, Page 60)

Completion of Tables 8, 9, 10, and 11 **is required** as specified in Table 7 for all **external outfalls** that contain process wastewater.

Completion of Tables 8, 9, 10, and 11 **may be required** for types of industry not specified in Table 7 for specific parameters that are believed to be present in the wastewater.

Table 8 for Outfall No.: 001 Samples are (check one): ☐ Composite ☒ Grab

Pollutant	Sample 1 (µg/L)*	Sample 2 (µg/L)*	Sample 3 (µg/L)*	Sample 4 (µg/L)*	MAL (µg/L)
Acrolein	< 50	< 50	< 50	< 50	50
Acrylonitrile	< 50	< 50	< 50	< 50	50
Benzene	< 10	< 10	< 10	< 10	10
Bromoform	< 10	< 10	< 10	< 10	10
Carbon tetrachloride	< 2	< 2	< 2	< 2	2
Chlorobenzene	< 10	< 10	< 10	< 10	10
Chlorodibromomethane	< 10	< 10	< 10	< 10	10
Chloroethane	< 50	< 50	< 50	< 50	50
2-Chloroethylvinyl ether	< 10	< 10	< 10	< 10	10
Chloroform	< 10	< 10	< 10	< 10	10
Dichlorobromomethane [Bromodichloromethane]	< 10	< 10	< 10	< 10	10
1,1-Dichloroethane	< 10	< 10	< 10	< 10	10
1,2-Dichloroethane	< 10	< 10	< 10	< 10	10
1,1-Dichloroethylene [1,1-Dichloroethene]	< 10	< 10	< 10	< 10	10
1,2-Dichloropropane	< 10	< 10	< 10	< 10	10

Pollutant	Sample 1 (µg/L)*	Sample 2 (µg/L)*	Sample 3 (µg/L)*	Sample 4 (µg/L)*	MAL (µg/L)
1,3-Dichloropropylene [1,3-Dichloropropene]	< 10	< 10	< 10	< 10	10
Ethylbenzene	< 10	< 10	< 10	< 10	10
Methyl bromide [Bromomethane]	< 50	< 50	< 50	< 50	50
Methyl chloride [Chloromethane]	< 50	< 50	< 50	< 50	50
Methylene chloride [Dichloromethane]	< 20	< 20	< 20	< 20	20
1,1,2,2-Tetrachloroethane	< 10	< 10	< 10	< 10	10
Tetrachloroethylene [Tetrachloroethene]	< 10	< 10	< 10	< 10	10
Toluene	<10	<10	<10	<10	10
1,2-Trans-dichloroethylene [1,2-Trans-dichloroethene]	< 10	< 10	< 10	< 10	10
1,1,1-Trichloroethane	< 10	< 10	< 10	< 10	10
1,1,2-Trichloroethane	< 10	< 10	< 10	< 10	10
Trichloroethylene [Trichloroethene]	< 10	< 10	< 10	< 10	10
Vinyl chloride	< 10	< 10	< 10	< 10	10

* Indicate units if different from µg/L.

Table 9 for Outfall No.: <u>001</u> Samples are (check one): ☐ Composite ☒ Grab

Pollutant	Sample 1 (µg/L)*	Sample 2 (µg/L)*	Sample 3 (µg/L)*	Sample 4 (µg/L)*	MAL (µg/L)
2-Chlorophenol	< 10	< 10	< 10	< 10	10
2,4-Dichlorophenol	< 10	< 10	< 10	< 10	10
2,4-Dimethylphenol	< 10	< 10	< 10	< 10	10
4,6-Dinitro-o-cresol	< 50	< 50	< 50	< 50	50
2,4-Dinitrophenol	< 50	< 50	< 50	< 50	50
2-Nitrophenol	< 20	< 20	< 20	< 20	20

Pollutant	Sample 1 (µg/L)*	Sample 2 (µg/L)*	Sample 3 (µg/L)*	Sample 4 (µg/L)*	MAL (µg/L)
4-Nitrophenol	< 50	< 50	< 50	< 50	50
p-Chloro-m-cresol	< 10	< 10	< 10	< 10	10
Pentachlorophenol	< 5	< 5	< 5	< 5	5
Phenol	< 10	< 10	< 10	< 10	10
2,4,6-Trichlorophenol	< 10	< 10	< 10	< 10	10

* Indicate units if different from µg/L.

Table 10 for Outfall No.: Click to enter text. Samples are (check one): ☐ Composite ☐ Grab

Pollutant	Sample 1 (µg/L)*	Sample 2 (µg/L)*	Sample 3 (µg/L)*	Sample 4 (µg/L)*	MAL (µg/L)
Acenaphthene					10
Acenaphthylene					10
Anthracene					10
Benzidine					50
Benzo(a)anthracene					5
Benzo(a)pyrene					5
3,4-Benzofluoranthene [Benzo(b)fluoranthene]					10
Benzo(ghi)perylene					20
Benzo(k)fluoranthene					5
Bis(2-chloroethoxy)methane					10
Bis(2-chloroethyl)ether					10
Bis(2-chloroisopropyl)ether					10
Bis(2-ethylhexyl)phthalate					10
4-Bromophenyl phenyl ether					10
Butylbenzyl phthalate					10
2-Chloronaphthalene					10
4-Chlorophenyl phenyl ether					10

Pollutant	Sample 1 (µg/L)*	Sample 2 (µg/L)*	Sample 3 (µg/L)*	Sample 4 (µg/L)*	MAL (µg/L)
Chrysene					5
Dibenzo(a,h)anthracene					5
1,2-Dichlorobenzene [o-Dichlorobenzene]					10
1,3-Dichlorobenzene [m-Dichlorobenzene]					10
1,4-Dichlorobenzene [p-Dichlorobenzene]					10
3,3'-Dichlorobenzidine					5
Diethyl phthalate					10
Dimethyl phthalate					10
Di-n-butyl phthalate					10
2,4-Dinitrotoluene					10
2,6-Dinitrotoluene					10
Di-n-octyl phthalate					10
1,2-Diphenylhydrazine (as Azobenzene)					20
Fluoranthene					10
Fluorene					10
Hexachlorobenzene					5
Hexachlorobutadiene					10
Hexachlorocyclopentadiene					10
Hexachloroethane					20
Indeno(1,2,3-cd)pyrene					5
Isophorone					10
Naphthalene					10
Nitrobenzene					10
N-Nitrosodimethylamine					50
N-Nitrosodi-n-propylamine					20
N-Nitrosodiphenylamine					20

Pollutant	Sample 1 (µg/L)*	Sample 2 (µg/L)*	Sample 3 (µg/L)*	Sample 4 (µg/L)*	MAL (µg/L)
Phenanthrene					10
Pyrene					10
1,2,4-Trichlorobenzene					10

* Indicate units if different from µg/L.

Table 11 for Outfall No.: Click to enter text. Samples are (check one): ☐ Composite ☐ Grab

Pollutant	Sample 1 (µg/L)*	Sample 2 (µg/L)*	Sample 3 (µg/L)*	Sample 4 (µg/L)*	MAL (µg/L)
Aldrin					0.01
alpha-BHC [alpha-Hexachlorocyclohexane]					0.05
beta-BHC [beta-Hexachlorocyclohexane]					0.05
gamma-BHC [gamma-Hexachlorocyclohexane]					0.05
delta-BHC [delta-Hexachlorocyclohexane]					0.05
Chlordane					0.2
4,4'-DDT					0.02
4,4'-DDE					0.1
4,4'-DDD					0.1
Dieldrin					0.02
Endosulfan I (alpha)					0.01
Endosulfan II (beta)					0.02
Endosulfan sulfate					0.1
Endrin					0.02
Endrin aldehyde					0.1

Pollutant	Sample 1 (µg/L)*	Sample 2 (µg/L)*	Sample 3 (µg/L)*	Sample 4 (µg/L)*	MAL (µg/L)
Heptachlor					0.01
Heptachlor epoxide					0.01
PCB 1242					0.2
PCB 1254					0.2
PCB 1221					0.2
PCB 1232					0.2
PCB 1248					0.2
PCB 1260					0.2
PCB 1016					0.2
Toxaphene					0.3

* Indicate units if different from µg/L.

Attachment: Click to enter text.

TABLE 12 (DIOXINS/FURAN COMPOUNDS)

Complete of Table 12 **is required** for **external outfalls**, as directed below. (Instructions, Pages 59-60)

Indicate which compound(s) are manufactured or used at the facility and provide a brief description of the conditions of its/their presence at the facility (check all that apply).

☐ 2,4,5-trichlorophenoxy acetic acid (2,4,5-T) CASRN 93-76-5

☐ 2-(2,4,5-trichlorophenoxy) propanoic acid (Silvex, 2,4,5-TP) CASRN 93-72-1

☐ 2-(2,4,5-trichlorophenoxy) ethyl 2,2-dichloropropionate (Erbon) CASRN 136-25-4

☐ 0,0-dimethyl 0-(2,4,5-trichlorophenyl) phosphorothioate (Ronnel) CASRN 299-84-3

☐ 2,4,5-trichlorophenol (TCP) CASRN 95-95-4

☐ hexachlorophene (HCP) CASRN 70-30-4

☒ None of the above

Description: Click to enter text.

Does the applicant or anyone at the facility know or have any reason to believe that 2,3,7,8-tetrachlorodibenzo-p-dioxin (TCDD) or any congeners of TCDD may be present in the effluent proposed for discharge?

☐ Yes ☒ No

Description: Click to enter text.

If **yes** to either Items a **or** b, complete Table 12 as instructed.

Table 12 for Outfall No.: Click to enter text. Samples are (check one): ☐ Composite ☐ Grab

Compound	**Toxicity Equivalent Factors**	**Wastewater Concentration (ppq)**	**Wastewater Toxicity Equivalents (ppq)**	**Sludge Concentration (ppt)**	**Sludge Toxicity Equivalents (ppt)**	**MAL (ppq)**
2,3,7,8-TCDD	1					10
1,2,3,7,8-PeCDD	1.0					50
2,3,7,8-HxCDDs	0.1					50
1,2,3,4,6,7,8-HpCDD	0.01					50
2,3,7,8-TCDF	0.1					10
1,2,3,7,8-PeCDF	0.03					50
2,3,4,7,8-PeCDF	0.3					50
2,3,7,8-HxCDFs	0.1					50
2,3,4,7,8-HpCDFs	0.01					50
OCDD	0.0003					100
OCDF	0.0003					100
PCB 77	0.0001					500
PCB 81	0.0003					500
PCB 126	0.1					500
PCB 169	0.03					500
Total						

TABLE 13 (HAZARDOUS SUBSTANCES)

Complete Table 13 **is required** for all **external outfalls** as directed below. (Instructions, Pages 60-61)

Are there any pollutants listed in the instructions (pages 55-62) believed present in the discharge?

☐ Yes ☒ No

Are there pollutants listed in Item 1.c. of Technical Report 1.0 which are believed present in the discharge and have not been analytically quantified elsewhere in this application?

☐ Yes ☒ No

If **yes** to either Items a **or** b, complete Table 13 as instructed.

Table 13 for Outfall No.: Click to enter text. Samples are (check one): ☐ Composite ☐ Grab

Pollutant	CASRN	Sample 1 (µg/L)	Sample 2 (µg/L)	Sample 3 (µg/L)	Sample 4 (µg/L)	Analytical Method

INDUSTRIAL WASTEWATER PERMIT APPLICATION WORKSHEET 2.0: POLLUTANT ANALYSIS

Worksheet 2.0 **is required** for all applications submitted for a TPDES permit. Worksheet 2.0 is not required for applications for a permit to dispose of all wastewater by land disposal or for discharges solely of stormwater associated with industrial activities.

Item 1. General Testing Requirements (Instructions, Page 55)

a. Provide the date range of all sampling events conducted to obtain the analytical data submitted with this application (e.g., 05/01/2018-05/30/2018): 08/07/2024 – 08/29/2024

b. ☒ Check the box to confirm all samples were collected no more than 12 months prior to the date of application submittal.

c. Read the general testing requirements in the instructions for important information about sampling, test methods, and MALs. If a contact laboratory was used, attach a list which includes the name, contact information, and pollutants analyzed for each laboratory/firm. **Attachment: Q**

Item 2. Specific Testing Requirements (Instructions, Page 56)

Attach correspondence from TCEQ approving submittal of less than the required number of samples, if applicable. **Attachment:** N/A

TABLE 1 and TABLE 2 (Instructions, Page 58)

Completion of Tables 1 and 2 **is required** for **all external outfalls** for all TPDES permit applications.

Table 1 for Outfall No.: 002 Samples are (check one): ☐ Composite ☒ Grab

Pollutant	Sample 1 (mg/L)	Sample 2 (mg/L)	Sample 3 (mg/L)	Sample 4 (mg/L)
BOD (5-day)	5.86	3.95	< 2.00	3.67
CBOD (5-day)	3.36	2.28	< 2.00	4.10
Chemical oxygen demand	93.0	60.2	8.10	36.3
Total organic carbon	14.0	11.8	2.59	8.20
Dissolved oxygen	9.15	7.86	5.66	9.18

Pollutant	Sample 1 (mg/L)	Sample 2 (mg/L)	Sample 3 (mg/L)	Sample 4 (mg/L)
Ammonia nitrogen	1.12	1.12	< 1.00	1.12
Total suspended solids	7.20	6.50	< 2.50	15.3
Nitrate nitrogen	0.279	0.272	3.657	0.557
Total organic nitrogen	3.36	2.80	2.24	3.36
Total phosphorus	0.28	0.48	0.22	0.41
Oil and grease	< 4.75	< 4.75	< 4.75	< 4.75
Total residual chlorine	0.01	0.02	0.03	0.05
Total dissolved solids	129	1100	1440	903
Sulfate	227	229	171	168
Chloride	493	500	142	353
Fluoride	1.02	0.989	1.31	0.802
Total alkalinity (mg/L as CaCO3)	316	284	712	256
Temperature (°F)	61.5	68.0	68.0	69.4
pH (standard units)	9.00	9.15	8.11	8.79

Table 2 for Outfall No.: 002 Samples are (check one): ☐ Composite ☒ Grab

Pollutant	Sample 1 (µg/L)	Sample 2 (µg/L)	Sample 3 (µg/L)	Sample 4 (µg/L)	MAL (µg/L)
Aluminum, total	22	30	24	56	2.5
Antimony, total	< 5	< 5	< 5	< 5	5
Arsenic, total	< 0.5	< 0.5	< 0.5	< 0.5	0.5
Barium, total	63	61	389	78	3
Beryllium, total	< 0.5	< 0.5	< 0.5	< 0.5	0.5
Cadmium, total	< 1	< 1	< 1	< 1	1
Chromium, total	< 3	< 3	< 3	< 3	3
Chromium, hexavalent	< 3	< 3	< 3	< 3	3
Chromium, trivalent	< 3	< 3	< 3	< 3	N/A
Copper, total	< 2	< 2	< 2	5	2

Pollutant	Sample 1 (µg/L)	Sample 2 (µg/L)	Sample 3 (µg/L)	Sample 4 (µg/L)	MAL (µg/L)
Cyanide, available	< 2	2.6	< 2	< 2	2/10
Lead, total	< 0.5	< 0.5	< 0.5	1	0.5
Mercury, total	0.0010	0.0008	0.0006	0.0021	0.005/0.0005
Nickel, total	6	7	4	5	2
Selenium, total	< 5	< 5	< 5	< 5	5
Silver, total	< 0.5	< 0.5	< 0.5	< 0.5	0.5
Thallium, total	0.7	0.8	0.6	3	0.5
Zinc, total	19	20	27	31	5.0

TABLE 3 (Instructions, Page 58)

Completion of Table 3 **is required** for all **external outfalls** which discharge process wastewater.

Partial completion of Table 3 **is required** for all **external outfalls** which discharge non-process wastewater and stormwater associated with industrial activities commingled with other wastestreams (see instructions for additional guidance).

Table 3 for Outfall No.: 002 Samples are (check one): ☐ Composite ☒ Grab

Pollutant	Sample 1 (µg/L)*	Sample 2 (µg/L)*	Sample 3 (µg/L)*	Sample 4 (µg/L)*	MAL (µg/L)*
Acrylonitrile	< 50	< 50	< 50	< 50	50
Anthracene	< 10	< 10	< 10	< 10	10
Benzene	< 10	< 10	< 10	< 10	10
Benzidine	< 50	< 50	< 50	< 50	50
Benzo(a)anthracene	< 5	< 5	< 5	< 5	5
Benzo(a)pyrene	< 5	< 5	< 5	< 5	5
Bis(2-chloroethyl)ether	< 10	< 10	< 10	< 10	10
Bis(2-ethylhexyl)phthalate	< 10	< 10	< 10	< 10	10
Bromodichloromethane [Dichlorobromomethane]	< 10	< 10	< 10	< 10	10
Bromoform	< 10	< 10	< 10	< 10	10
Carbon tetrachloride	< 2	< 2	< 2	< 2	2

Pollutant	Sample 1 (µg/L)*	Sample 2 (µg/L)*	Sample 3 (µg/L)*	Sample 4 (µg/L)*	MAL (µg/L)*
Chlorobenzene	< 10	< 10	< 10	< 10	10
Chlorodibromomethane [Dibromochloromethane]	< 10	< 10	< 10	< 10	10
Chloroform	< 10	< 10	< 10	< 10	10
Chrysene	< 5	< 5	< 5	< 5	5
m-Cresol [3-Methylphenol]	< 10	< 10	< 10	< 10	10
o-Cresol [2-Methylphenol]	< 10	< 10	< 10	< 10	10
p-Cresol [4-Methylphenol]	< 10	< 10	< 10	< 10	10
1,2-Dibromoethane	< 10	< 10	< 10	< 10	10
m-Dichlorobenzene [1,3-Dichlorobenzene]	< 10	< 10	< 10	< 10	10
o-Dichlorobenzene [1,2-Dichlorobenzene]	< 10	< 10	< 10	< 10	10
p-Dichlorobenzene [1,4-Dichlorobenzene]	< 10	< 10	< 10	< 10	10
3,3'-Dichlorobenzidine	< 5	< 5	< 5	< 5	5
1,2-Dichloroethane	< 10	< 10	< 10	< 10	10
1,1-Dichloroethene [1,1-Dichloroethylene]	< 10	< 10	< 10	< 10	10
Dichloromethane [Methylene chloride]	< 20	< 20	< 20	< 20	20
1,2-Dichloropropane	< 10	< 10	< 10	< 10	10
1,3-Dichloropropene [1,3-Dichloropropylene]	< 10	< 10	< 10	< 10	10
2,4-Dimethylphenol	< 10	< 10	< 10	< 10	10
Di-n-Butyl phthalate	< 10	< 10	< 10	< 10	10
Ethylbenzene	< 10	< 10	< 10	< 10	10
Fluoride	1020	989	1310	802	500
Hexachlorobenzene	< 5	< 5	< 5	< 5	5
Hexachlorobutadiene	< 10	< 10	< 10	< 10	10
Hexachlorocyclopentadiene	< 10	< 10	< 10	< 10	10

Pollutant	Sample 1 (µg/L)*	Sample 2 (µg/L)*	Sample 3 (µg/L)*	Sample 4 (µg/L)*	MAL (µg/L)*
Hexachloroethane	< 20	< 20	< 20	< 20	20
Methyl ethyl ketone	< 50	< 50	< 50	< 50	50
Nitrobenzene	< 10	< 10	< 10	< 10	10
N-Nitrosodiethylamine	< 20	< 20	< 20	< 20	20
N-Nitroso-di-n-butylamine	< 20	< 20	< 20	< 20	20
Nonylphenol	< 333	< 333	< 333	< 333	333
Pentachlorobenzene	< 20	< 20	< 20	< 20	20
Pentachlorophenol	< 5	< 5	< 5	< 5	5
Phenanthrene	< 10	< 10	< 10	< 10	10
Polychlorinated biphenyls (PCBs) (**)	< 0.2	< 0.2	< 0.2	< 0.2	0.2
Pyridine	< 20	< 20	< 20	< 20	20
1,2,4,5-Tetrachlorobenzene	< 20	< 20	< 20	< 20	20
1,1,2,2-Tetrachloroethane	< 10	< 10	< 10	< 10	10
Tetrachloroethene [Tetrachloroethylene]	< 10	< 10	< 10	< 10	10
Toluene	< 10	< 10	< 10	< 10	10
1,1,1-Trichloroethane	< 10	< 10	< 10	< 10	10
1,1,2-Trichloroethane	< 10	< 10	< 10	< 10	10
Trichloroethene [Trichloroethylene]	< 10	< 10	< 10	< 10	10
2,4,5-Trichlorophenol	< 50	< 50	< 50	< 50	50
TTHM (Total trihalomethanes)	< 10	< 10	< 10	< 10	10
Vinyl chloride	< 10	< 10	< 10	< 10	10

(*) Indicate units if different from µg/L.

(**) Total of detects for PCB-1242, PCB-1254, PCB-1221, PCB-1232, PCB-1248, PCB-1260, and PCB-1016. If all non-detects, enter the highest non-detect preceded by a "<".

TABLE 4 (Instructions, Pages 58-59)

Partial completion of Table 4 **is required** for each **external outfall** based on the conditions below.

a. **Tributyltin**

Is this facility an industrial/commercial facility which currently or proposes to directly dispose of wastewater from the types of operations listed below or a domestic facility which currently or proposes to receive wastewater from the types of industrial/commercial operations listed below?

☐ Yes ☒ No

If **yes**, check the box next to each of the following criteria which apply and provide the appropriate testing results in Table 4 below (check all that apply).

☐ Manufacturers and formulators of tributyltin or related compounds.

☐ Painting of ships, boats and marine structures.

☐ Ship and boat building and repairing.

☐ Ship and boat cleaning, salvage, wrecking and scaling.

☐ Operation and maintenance of marine cargo handling facilities and marinas.

☐ Facilities engaged in wood preserving.

☐ Any other industrial/commercial facility for which tributyltin is known to be present, or for which there is any reason to believe that tributyltin may be present in the effluent.

b. **Enterococci (discharge to saltwater)**

This facility discharges/proposes to discharge directly into saltwater receiving waters **and** Enterococci bacteria are expected to be present in the discharge based on facility processes.

☐ Yes ☒ No

Domestic wastewater is/will be discharged.

☐ Yes ☒ No

If **yes to either** question, provide the appropriate testing results in Table 4 below.

c. E. coli (discharge to freshwater)

This facility discharges/proposes to discharge directly into freshwater receiving waters **and** *E. coli* bacteria are expected to be present in the discharge based on facility processes.

☐ Yes ☒ No

Domestic wastewater is/will be discharged.

☐ Yes ☒ No

If **yes to either** question, provide the appropriate testing results in Table 4 below.

Table 4 for Outfall No.: Click to enter text. Samples are (check one): ☐ Composite ☒ Grab

Pollutant	Sample 1	Sample 2	Sample 3	Sample 4	MAL
Tributyltin (µg/L)					0.010
Enterococci (cfu or MPN/100 mL)					N/A
E. coli (cfu or MPN/100 mL)					N/A

TABLE 5 (Instructions, Page 59)

Completion of Table 5 **is required** for all **external outfalls** which discharge process wastewater from a facility which manufactures or formulates pesticides or herbicides or other wastewaters which may contain pesticides or herbicides.

If this facility does not/will not manufacture or formulate pesticides or herbicides and does not/will not discharge other wastewaters that may contain pesticides or herbicides, check N/A.

☒ N/A

Table 5 for Outfall No.: Click to enter text. Samples are (check one): ☐ Composite ☐ Grab

Pollutant	Sample 1 (µg/L)*	Sample 2 (µg/L)*	Sample 3 (µg/L)*	Sample 4 (µg/L)*	MAL (µg/L)*
Aldrin					0.01
Carbaryl					5
Chlordane					0.2
Chlorpyrifos					0.05
4,4'-DDD					0.1
4,4'-DDE					0.1
4,4'-DDT					0.02
2,4-D					0.7
Danitol [Fenpropathrin]					—
Demeton					0.20
Diazinon					0.5/0.1
Dicofol [Kelthane]					1

Pollutant	**Sample 1 (µg/L)***	**Sample 2 (µg/L)***	**Sample 3 (µg/L)***	**Sample 4 (µg/L)***	**MAL (µg/L)***
Dieldrin					0.02
Diuron					0.090
Endosulfan I (*alpha*)					0.01
Endosulfan II (*beta*)					0.02
Endosulfan sulfate					0.1
Endrin					0.02
Guthion [Azinphos methyl]					0.1
Heptachlor					0.01
Heptachlor epoxide					0.01
Hexachlorocyclohexane (*alpha*)					0.05
Hexachlorocyclohexane (*beta*)					0.05
Hexachlorocyclohexane (*gamma*) [Lindane]					0.05
Hexachlorophene					10
Malathion					0.1
Methoxychlor					2.0
Mirex					0.02
Parathion (ethyl)					0.1
Toxaphene					0.3
2,4,5-TP [Silvex]					0.3

* Indicate units if different from µg/L.

TABLE 6 (Instructions, Page 59)

Completion of Table 6 **is required** for all **external outfalls**.

Table 6 for Outfall No.: 002 Samples are (check one): ☐ Composite ☒ Grab

Pollutants	**Believed Present**	**Believed Absent**	**Sample 1 (mg/L)**	**Sample 2 (mg/L)**	**Sample 3 (mg/L)**	**Sample 4 (mg/L)**	**MAL (µg/L)***
Bromide	☒	☐	10.9	10.7	0.448	7.25	400
Color (PCU)	☒	☐	10	10	5	5	—
Nitrate-Nitrite (as N)	☒	☐	0.28	0.27	3.66	0.56	—
Sulfide (as S)	☐	☒	< 0.10	< 0.10	< 0.10	< 0.10	—
Sulfite (as SO3)	☐	☒	< 1.00	< 1.00	< 1.00	< 1.00	—
Surfactants	☐	☒	< 0.20	< 0.20	< 0.20	< 0.20	—
Boron, total	☒	☐	0.908	0.873	0.138	0.531	20
Cobalt, total	☒	☐	0.0005	0.0005	0.0009	0.013	0.3
Iron, total	☒	☐	0.320	0.258	0.918	0.954	7
Magnesium, total	☒	☐	42.5	43.9	34.8	30.3	20
Manganese, total	☒	☐	0.008	0.007	0.006	0.076	0.5
Molybdenum, total	☒	☐	0.007	0.007	0.026	0.005	1
Tin, total	☒	☐	0.005	0.008	0.006	0.006	5
Titanium, total	☐	☒	< 0.03	< 0.03	< 0.03	< 0.03	30

TABLE 7 (Instructions, Page 60)

Check the box next to any of the industrial categories applicable to this facility. If no categories are applicable, check N/A. If GC/MS testing is required, check the box provided to confirm the testing results for the appropriate parameters are provided with the application.

☐ N/A

Table 7 for Applicable Industrial Categories

Industrial Category	40 CFR Part	Volatiles Table 8	Acids Table 9	Bases/ Neutrals Table 10	Pesticides Table 11
☐ Adhesives and Sealants		☐ Yes	☐ Yes	☐ Yes	No
☐ Aluminum Forming	467	☐ Yes	☐ Yes	☐ Yes	No
☐ Auto and Other Laundries		☐ Yes	☐ Yes	☐ Yes	☐ Yes
☐ Battery Manufacturing	461	☐ Yes	No	☐ Yes	No
☐ Coal Mining	434	No	No	No	No
☐ Coil Coating	465	☐ Yes	☐ Yes	☐ Yes	No
☐ Copper Forming	468	☐ Yes	☐ Yes	☐ Yes	No
☐ Electric and Electronic Components	469	☐ Yes	☐ Yes	☐ Yes	☐ Yes
☐ Electroplating	413	☐ Yes	☐ Yes	☐ Yes	No
☐ Explosives Manufacturing	457	No	☐ Yes	☐ Yes	No
☐ Foundries		☐ Yes	☐ Yes	☐ Yes	No
☐ Gum and Wood Chemicals - Subparts A,B,C,E	454	☐ Yes	☐ Yes	No	No
☐ Gum and Wood Chemicals - Subparts D,F	454	☐ Yes	☐ Yes	☐ Yes	No
☐ Inorganic Chemicals Manufacturing	415	☐ Yes	☐ Yes	☐ Yes	No
☐ Iron and Steel Manufacturing	420	☐ Yes	☐ Yes	☐ Yes	No
☐ Leather Tanning and Finishing	425	☐ Yes	☐ Yes	☐ Yes	No
☐ Mechanical Products Manufacturing		☐ Yes	☐ Yes	☐ Yes	No
☐ Nonferrous Metals Manufacturing	421,471	☐ Yes	☐ Yes	☐ Yes	☐ Yes
☐ Oil and Gas Extraction - Subparts A, D, E, F, G, H	435	☐ Yes	☐ Yes	☐ Yes	No
☐ Ore Mining - Subpart B	440	No	☐ Yes	No	No
☐ Organic Chemicals Manufacturing	414	☐ Yes	☐ Yes	☐ Yes	☐ Yes
☐ Paint and Ink Formulation	446,447	☐ Yes	☐ Yes	☐ Yes	No
☐ Pesticides	455	☐ Yes	☐ Yes	☐ Yes	☐ Yes
☐ Petroleum Refining	419	☐ Yes	No	No	No
☐ Pharmaceutical Preparations	439	☐ Yes	☐ Yes	☐ Yes	No
☐ Photographic Equipment and Supplies	459	☐ Yes	☐ Yes	☐ Yes	No
☐ Plastic and Synthetic Materials Manufacturing	414	☐ Yes	☐ Yes	☐ Yes	☐ Yes
☐ Plastic Processing	463	☐ Yes	No	No	No
☐ Porcelain Enameling	466	No	No	No	No
☐ Printing and Publishing		☐ Yes	☐ Yes	☐ Yes	☐ Yes
☐ Pulp and Paperboard Mills - Subpart C	430	☐ *	☐ Yes	☐ *	☐ Yes
☐ Pulp and Paperboard Mills - Subparts F, K	430	☐ *	☐ Yes	☐ *	☐ *
☐ Pulp and Paperboard Mills - Subparts A, B, D, G, H	430	☐ Yes	☐ Yes	☐ *	☐ *
☐ Pulp and Paperboard Mills - Subparts I, J, L	430	☐ Yes	☐ Yes	☐ *	☐ Yes
☐ Pulp and Paperboard Mills - Subpart E	430	☐ Yes	☐ Yes	☐ Yes	☐ *
☐ Rubber Processing	428	☐ Yes	☐ Yes	☐ Yes	No

Industrial Category	40 CFR Part	Volatiles Table 8	Acids Table 9	Bases/ Neutrals Table 10	Pesticides Table 11
☐ Soap and Detergent Manufacturing	417	☐ Yes	☐ Yes	☐ Yes	No
☒ Steam Electric Power Plants	423	☒ Yes	☒ Yes	No	No
☐ Textile Mills (Not Subpart C)	410	☐ Yes	☐ Yes	☐ Yes	No
☐ Timber Products Processing	429	☐ Yes	☐ Yes	☐ Yes	☐ Yes

* Test if believed present.

TABLES 8, 9, 10, and 11 (Instructions, Page 60)

Completion of Tables 8, 9, 10, and 11 **is required** as specified in Table 7 for all **external outfalls** that contain process wastewater.

Completion of Tables 8, 9, 10, and 11 **may be required** for types of industry not specified in Table 7 for specific parameters that are believed to be present in the wastewater.

Table 8 for Outfall No.: 002 Samples are (check one): ☐ Composite ☒ Grab

Pollutant	Sample 1 (µg/L)*	Sample 2 (µg/L)*	Sample 3 (µg/L)*	Sample 4 (µg/L)*	MAL (µg/L)
Acrolein	< 50	< 50	< 50	< 50	50
Acrylonitrile	< 50	< 50	< 50	< 50	50
Benzene	< 10	< 10	< 10	< 10	10
Bromoform	< 10	< 10	< 10	< 10	10
Carbon tetrachloride	< 2	< 2	< 2	< 2	2
Chlorobenzene	< 10	< 10	< 10	< 10	10
Chlorodibromomethane	< 10	< 10	< 10	< 10	10
Chloroethane	< 50	< 50	< 50	< 50	50
2-Chloroethylvinyl ether	< 10	< 10	< 10	< 10	10
Chloroform	< 10	< 10	< 10	< 10	10
Dichlorobromomethane [Bromodichloromethane]	< 10	< 10	< 10	< 10	10
1,1-Dichloroethane	< 10	< 10	< 10	< 10	10
1,2-Dichloroethane	< 10	< 10	< 10	< 10	10
1,1-Dichloroethylene [1,1-Dichloroethene]	< 10	< 10	< 10	< 10	10
1,2-Dichloropropane	< 10	< 10	< 10	< 10	10

Pollutant	Sample 1 (µg/L)*	Sample 2 (µg/L)*	Sample 3 (µg/L)*	Sample 4 (µg/L)*	MAL (µg/L)
1,3-Dichloropropylene [1,3-Dichloropropene]	< 10	< 10	< 10	< 10	10
Ethylbenzene	< 10	< 10	< 10	< 10	10
Methyl bromide [Bromomethane]	< 50	< 50	< 50	< 50	50
Methyl chloride [Chloromethane]	< 50	< 50	< 50	< 50	50
Methylene chloride [Dichloromethane]	< 20	< 20	< 20	< 20	20
1,1,2,2-Tetrachloroethane	< 10	< 10	< 10	< 10	10
Tetrachloroethylene [Tetrachloroethene]	< 10	< 10	< 10	< 10	10
Toluene	< 10	< 10	< 10	< 10	10
1,2-Trans-dichloroethylene [1,2-Trans-dichloroethene]	< 10	< 10	< 10	< 10	10
1,1,1-Trichloroethane	< 10	< 10	< 10	< 10	10
1,1,2-Trichloroethane	< 10	< 10	< 10	< 10	10
Trichloroethylene [Trichloroethene]	< 10	< 10	< 10	< 10	10
Vinyl chloride	< 10	< 10	< 10	< 10	10

* Indicate units if different from µg/L.

Table 9 for Outfall No.: 002 Samples are (check one): ☐ Composite ☐ Grab

Pollutant	Sample 1 (µg/L)*	Sample 2 (µg/L)*	Sample 3 (µg/L)*	Sample 4 (µg/L)*	MAL (µg/L)
2-Chlorophenol	< 10	< 10	< 10	< 10	10
2,4-Dichlorophenol	< 10	< 10	< 10	< 10	10
2,4-Dimethylphenol	< 10	< 10	< 10	< 10	10
4,6-Dinitro-o-cresol	< 50	< 50	< 50	< 50	50
2,4-Dinitrophenol	< 10	< 10	< 10	< 10	50
2-Nitrophenol	< 20	< 20	< 20	< 20	20

Pollutant	Sample 1 (µg/L)*	Sample 2 (µg/L)*	Sample 3 (µg/L)*	Sample 4 (µg/L)*	MAL (µg/L)
4-Nitrophenol	< 50	< 50	< 50	< 50	50
p-Chloro-m-cresol	< 10	< 10	< 10	< 10	10
Pentachlorophenol	< 5	< 5	< 5	< 5	5
Phenol	< 10	< 10	< 10	< 10	10
2,4,6-Trichlorophenol	< 10	< 10	< 10	< 10	10

* Indicate units if different from µg/L.

Table 10 for Outfall No.: Click to enter text. Samples are (check one): ☐ Composite ☐ Grab

Pollutant	Sample 1 (µg/L)*	Sample 2 (µg/L)*	Sample 3 (µg/L)*	Sample 4 (µg/L)*	MAL (µg/L)
Acenaphthene					10
Acenaphthylene					10
Anthracene					10
Benzidine					50
Benzo(a)anthracene					5
Benzo(a)pyrene					5
3,4-Benzofluoranthene [Benzo(b)fluoranthene]					10
Benzo(ghi)perylene					20
Benzo(k)fluoranthene					5
Bis(2-chloroethoxy)methane					10
Bis(2-chloroethyl)ether					10
Bis(2-chloroisopropyl)ether					10
Bis(2-ethylhexyl)phthalate					10
4-Bromophenyl phenyl ether					10
Butylbenzyl phthalate					10
2-Chloronaphthalene					10
4-Chlorophenyl phenyl ether					10

Pollutant	Sample 1 (µg/L)*	Sample 2 (µg/L)*	Sample 3 (µg/L)*	Sample 4 (µg/L)*	MAL (µg/L)
Chrysene					5
Dibenzo(a,h)anthracene					5
1,2-Dichlorobenzene [o-Dichlorobenzene]					10
1,3-Dichlorobenzene [m-Dichlorobenzene]					10
1,4-Dichlorobenzene [p-Dichlorobenzene]					10
3,3'-Dichlorobenzidine					5
Diethyl phthalate					10
Dimethyl phthalate					10
Di-n-butyl phthalate					10
2,4-Dinitrotoluene					10
2,6-Dinitrotoluene					10
Di-n-octyl phthalate					10
1,2-Diphenylhydrazine (as Azobenzene)					20
Fluoranthene					10
Fluorene					10
Hexachlorobenzene					5
Hexachlorobutadiene					10
Hexachlorocyclopentadiene					10
Hexachloroethane					20
Indeno(1,2,3-cd)pyrene					5
Isophorone					10
Naphthalene					10
Nitrobenzene					10
N-Nitrosodimethylamine					50
N-Nitrosodi-n-propylamine					20
N-Nitrosodiphenylamine					20

Pollutant	Sample 1 (µg/L)*	Sample 2 (µg/L)*	Sample 3 (µg/L)*	Sample 4 (µg/L)*	MAL (µg/L)
Phenanthrene					10
Pyrene					10
1,2,4-Trichlorobenzene					10

* Indicate units if different from µg/L.

Table 11 for Outfall No.: Click to enter text. Samples are (check one): ☐ Composite ☐ Grab

Pollutant	Sample 1 (µg/L)*	Sample 2 (µg/L)*	Sample 3 (µg/L)*	Sample 4 (µg/L)*	MAL (µg/L)
Aldrin					0.01
alpha-BHC [alpha-Hexachlorocyclohexane]					0.05
beta-BHC [beta-Hexachlorocyclohexane]					0.05
gamma-BHC [gamma-Hexachlorocyclohexane]					0.05
delta-BHC [delta-Hexachlorocyclohexane]					0.05
Chlordane					0.2
4,4'-DDT					0.02
4,4'-DDE					0.1
4,4'-DDD					0.1
Dieldrin					0.02
Endosulfan I (alpha)					0.01
Endosulfan II (beta)					0.02
Endosulfan sulfate					0.1
Endrin					0.02
Endrin aldehyde					0.1

Pollutant	Sample 1 (µg/L)*	Sample 2 (µg/L)*	Sample 3 (µg/L)*	Sample 4 (µg/L)*	MAL (µg/L)
Heptachlor					0.01
Heptachlor epoxide					0.01
PCB 1242					0.2
PCB 1254					0.2
PCB 1221					0.2
PCB 1232					0.2
PCB 1248					0.2
PCB 1260					0.2
PCB 1016					0.2
Toxaphene					0.3

* Indicate units if different from µg/L.

Attachment: Click to enter text.

TABLE 12 (DIOXINS/FURAN COMPOUNDS)

Complete of Table 12 **is required** for **external outfalls**, as directed below. (Instructions, Pages 59-60)

Indicate which compound(s) are manufactured or used at the facility and provide a brief description of the conditions of its/their presence at the facility (check all that apply).

☐ 2,4,5-trichlorophenoxy acetic acid (2,4,5-T) CASRN 93-76-5

☐ 2-(2,4,5-trichlorophenoxy) propanoic acid (Silvex, 2,4,5-TP) CASRN 93-72-1

☐ 2-(2,4,5-trichlorophenoxy) ethyl 2,2-dichloropropionate (Erbon) CASRN 136-25-4

☐ 0,0-dimethyl 0-(2,4,5-trichlorophenyl) phosphorothioate (Ronnel) CASRN 299-84-3

☐ 2,4,5-trichlorophenol (TCP) CASRN 95-95-4

☐ hexachlorophene (HCP) CASRN 70-30-4

☒ None of the above

Description: Click to enter text.

Does the applicant or anyone at the facility know or have any reason to believe that 2,3,7,8-tetrachlorodibenzo-p-dioxin (TCDD) or any congeners of TCDD may be present in the effluent proposed for discharge?

☐ Yes ☒ No

Description: Click to enter text.

If **yes** to either Items a **or** b, complete Table 12 as instructed.

Table 12 for Outfall No.: Click to enter text. Samples are (check one): ☐ Composite ☐ Grab

Compound	**Toxicity Equivalent Factors**	**Wastewater Concentration (ppq)**	**Wastewater Toxicity Equivalents (ppq)**	**Sludge Concentration (ppt)**	**Sludge Toxicity Equivalents (ppt)**	**MAL (ppq)**
2,3,7,8-TCDD	1					10
1,2,3,7,8-PeCDD	1.0					50
2,3,7,8-HxCDDs	0.1					50
1,2,3,4,6,7,8-HpCDD	0.01					50
2,3,7,8-TCDF	0.1					10
1,2,3,7,8-PeCDF	0.03					50
2,3,4,7,8-PeCDF	0.3					50
2,3,7,8-HxCDFs	0.1					50
2,3,4,7,8-HpCDFs	0.01					50
OCDD	0.0003					100
OCDF	0.0003					100
PCB 77	0.0001					500
PCB 81	0.0003					500
PCB 126	0.1					500
PCB 169	0.03					500
Total						

TABLE 13 (HAZARDOUS SUBSTANCES)

Complete Table 13 **is required** for all **external outfalls** as directed below. (Instructions, Pages 60-61)

Are there any pollutants listed in the instructions (pages 55-62) believed present in the discharge?

☐ Yes ☒ No

Are there pollutants listed in Item 1.c. of Technical Report 1.0 which are believed present in the discharge and have not been analytically quantified elsewhere in this application?

☐ Yes ☒ No

If **yes** to either Items a **or** b, complete Table 13 as instructed.

Table 13 for Outfall No.: Click to enter text. Samples are (check one): ☐ Composite ☐ Grab

Pollutant	CASRN	Sample 1 (µg/L)	Sample 2 (µg/L)	Sample 3 (µg/L)	Sample 4 (µg/L)	Analytical Method

INDUSTRIAL WASTEWATER PERMIT APPLICATION WORKSHEET 2.0: POLLUTANT ANALYSIS

Worksheet 2.0 **is required** for all applications submitted for a TPDES permit. Worksheet 2.0 is not required for applications for a permit to dispose of all wastewater by land disposal or for discharges solely of stormwater associated with industrial activities.

Item 1. General Testing Requirements (Instructions, Page 55)

a. Provide the date range of all sampling events conducted to obtain the analytical data submitted with this application (e.g., 05/01/2018-05/30/2018): 08/07/2024 – 08/29/2024

b. ☒ Check the box to confirm all samples were collected no more than 12 months prior to the date of application submittal.

c. Read the general testing requirements in the instructions for important information about sampling, test methods, and MALs. If a contact laboratory was used, attach a list which includes the name, contact information, and pollutants analyzed for each laboratory/firm. **Attachment: Q**

Item 2. Specific Testing Requirements (Instructions, Page 56)

Attach correspondence from TCEQ approving submittal of less than the required number of samples, if applicable. **Attachment:** N/A

TABLE 1 and TABLE 2 (Instructions, Page 58)

Completion of Tables 1 and 2 **is required** for **all external outfalls** for all TPDES permit applications.

Table 1 for Outfall No.: 007 Samples are (check one): ☐ Composite ☒ Grab

Pollutant	Sample 1 (mg/L)	Sample 2 (mg/L)	Sample 3 (mg/L)	Sample 4 (mg/L)
BOD (5-day)	6.05	4.16	5.46	4.77
CBOD (5-day)	3.48	2.52	3.43	2.76
Chemical oxygen demand	53.5	62.7	60.9	65.2
Total organic carbon	15.1	11.0	12.0	12.1
Dissolved oxygen	8.11	8.34	5.08	8.41

Pollutant	Sample 1 (mg/L)	Sample 2 (mg/L)	Sample 3 (mg/L)	Sample 4 (mg/L)
Ammonia nitrogen	1.68	1.68	1.68	1.12
Total suspended solids	7.00	11.5	9.33	15.1
Nitrate nitrogen	< 0.10	< 0.10	< 0.10	< 0.10
Total organic nitrogen	3.36	2.80	3.92	3.36
Total phosphorus	0.56	0.53	0.56	0.53
Oil and grease	< 4.80	< 4.75	< 4.75	< 4.75
Total residual chlorine	0.02	0.02	0.06	0.03
Total dissolved solids	1250	1160	1530	1500
Sulfate	234	244	243	249
Chloride	526	541	530	552
Fluoride	1.02	1.04	1.07	1.04
Total alkalinity (mg/L as CaCO3)	276	272	264	268
Temperature (°F)	61.5	68.0	68.0	69.4
pH (standard units)	9.16	9.42	9.07	9.13

Table 2 for Outfall No.: 007 Samples are (check one): ☐ Composite ☒ Grab

Pollutant	Sample 1 (µg/L)	Sample 2 (µg/L)	Sample 3 (µg/L)	Sample 4 (µg/L)	MAL (µg/L)
Aluminum, total	26	13	12	21	2.5
Antimony, total	< 5	< 5	< 5	< 5	5
Arsenic, total	< 0.5	< 0.5	< 0.5	< 0.5	0.5
Barium, total	41	40	39	40	3
Beryllium, total	< 0.5	< 0.5	< 0.5	< 0.5	0.5
Cadmium, total	< 1	< 1	< 1	< 1	1
Chromium, total	< 3	< 3	< 3	< 3	3
Chromium, hexavalent	< 3	< 3	< 3	< 3	3
Chromium, trivalent	< 3	< 3	< 3	< 3	N/A
Copper, total	< 2	< 2	< 2	< 2	2

Pollutant	Sample 1 (µg/L)	Sample 2 (µg/L)	Sample 3 (µg/L)	Sample 4 (µg/L)	MAL (µg/L)
Cyanide, available	< 2	< 2	< 2	< 2	2/10
Lead, total	< 0.5	< 0.5	< 0.5	< 0.5	0.5
Mercury, total	0.0011	0.0009	0.0011	0.0010	0.005/0.0005
Nickel, total	7	6	7	6	2
Selenium, total	< 5	< 5	< 5	< 5	5
Silver, total	< 0.5	< 0.5	< 0.5	< 0.5	0.5
Thallium, total	< 0.5	< 0.5	0.8	< 0.5	0.5
Zinc, total	16	16	15	15	5.0

TABLE 3 (Instructions, Page 58)

Completion of Table 3 **is required** for all **external outfalls** which discharge process wastewater.

Partial completion of Table 3 **is required** for all **external outfalls** which discharge non-process wastewater and stormwater associated with industrial activities commingled with other wastestreams (see instructions for additional guidance).

Table 3 for Outfall No.: 007 Samples are (check one): ☐ Composite ☒ Grab

Pollutant	Sample 1 (µg/L)*	Sample 2 (µg/L)*	Sample 3 (µg/L)*	Sample 4 (µg/L)*	MAL (µg/L)*
Acrylonitrile	< 50	< 50	< 50	< 50	50
Anthracene	< 10	< 10	< 10	< 10	10
Benzene	< 10	< 10	< 10	< 10	10
Benzidine	< 10	< 10	< 10	< 10	50
Benzo(a)anthracene	< 5	< 5	< 5	< 5	5
Benzo(a)pyrene	< 5	< 5	< 5	< 5	5
Bis(2-chloroethyl)ether	< 10	< 10	< 10	< 10	10
Bis(2-ethylhexyl)phthalate	< 10	< 10	< 10	< 10	10
Bromodichloromethane [Dichlorobromomethane]	< 10	< 10	< 10	< 10	10
Bromoform	< 10	< 10	< 10	< 10	10
Carbon tetrachloride	< 2	< 2	< 2	< 2	2

Pollutant	Sample 1 (µg/L)*	Sample 2 (µg/L)*	Sample 3 (µg/L)*	Sample 4 (µg/L)*	MAL (µg/L)*
Chlorobenzene	< 10	< 10	< 10	< 10	10
Chlorodibromomethane [Dibromochloromethane]	< 10	< 10	< 10	< 10	10
Chloroform	< 10	< 10	< 10	< 10	10
Chrysene	< 5	< 5	< 5	< 5	5
m-Cresol [3-Methylphenol]	< 10	< 10	< 10	< 10	10
o-Cresol [2-Methylphenol]	< 10	< 10	< 10	< 10	10
p-Cresol [4-Methylphenol]	< 10	< 10	< 10	< 10	10
1,2-Dibromoethane	< 10	< 10	< 10	< 10	10
m-Dichlorobenzene [1,3-Dichlorobenzene]	< 10	< 10	< 10	< 10	10
o-Dichlorobenzene [1,2-Dichlorobenzene]	< 10	< 10	< 10	< 10	10
p-Dichlorobenzene [1,4-Dichlorobenzene]	< 10	< 10	< 10	< 10	10
3,3'-Dichlorobenzidine	< 5	< 5	< 5	< 5	5
1,2-Dichloroethane	< 10	< 10	< 10	< 10	10
1,1-Dichloroethene [1,1-Dichloroethylene]	< 10	< 10	< 10	< 10	10
Dichloromethane [Methylene chloride]	< 20	< 20	< 20	< 20	20
1,2-Dichloropropane	< 10	< 10	< 10	< 10	10
1,3-Dichloropropene [1,3-Dichloropropylene]	< 10	< 10	< 10	< 10	10
2,4-Dimethylphenol	< 10	< 10	< 10	< 10	10
Di-n-Butyl phthalate	< 10	< 10	< 10	< 10	10
Ethylbenzene	< 10	< 10	< 10	< 10	10
Fluoride	1020	1040	1070	1040	500
Hexachlorobenzene	< 5	< 5	< 5	< 5	5
Hexachlorobutadiene	< 10	< 10	< 10	< 10	10
Hexachlorocyclopentadiene	< 10	< 10	< 10	< 10	10

Pollutant	Sample 1 (µg/L)*	Sample 2 (µg/L)*	Sample 3 (µg/L)*	Sample 4 (µg/L)*	MAL (µg/L)*
Hexachloroethane	< 20	< 20	< 20	< 20	20
Methyl ethyl ketone	< 50	< 50	< 50	< 50	50
Nitrobenzene	< 10	< 10	< 10	< 10	10
N-Nitrosodiethylamine	< 20	< 20	< 20	< 20	20
N-Nitroso-di-n-butylamine	< 20	< 20	< 20	< 20	20
Nonylphenol	< 333	< 333	< 333	< 333	333
Pentachlorobenzene	< 20	< 20	< 20	< 20	20
Pentachlorophenol	< 5	< 5	< 5	< 5	5
Phenanthrene	< 10	< 10	< 10	< 10	10
Polychlorinated biphenyls (PCBs) (**)	< 0.2	< 0.2	< 0.2	< 0.2	0.2
Pyridine	< 20	< 20	< 20	< 20	20
1,2,4,5-Tetrachlorobenzene	< 20	< 20	< 20	< 20	20
1,1,2,2-Tetrachloroethane	< 10	< 10	< 10	< 10	10
Tetrachloroethene [Tetrachloroethylene]	< 10	< 10	< 10	< 10	10
Toluene	< 10	< 10	< 10	< 10	10
1,1,1-Trichloroethane	< 10	< 10	< 10	< 10	10
1,1,2-Trichloroethane	< 10	< 10	< 10	< 10	10
Trichloroethene [Trichloroethylene]	< 10	< 10	< 10	< 10	10
2,4,5-Trichlorophenol	< 50	< 50	< 50	< 50	50
TTHM (Total trihalomethanes)	< 10	< 10	< 10	< 10	10
Vinyl chloride	< 10	< 10	< 10	< 10	10

(*) Indicate units if different from µg/L.

(**) Total of detects for PCB-1242, PCB-1254, PCB-1221, PCB-1232, PCB-1248, PCB-1260, and PCB-1016. If all non-detects, enter the highest non-detect preceded by a "<".

TABLE 4 (Instructions, Pages 58-59)

Partial completion of Table 4 **is required** for each **external outfall** based on the conditions below.

a. **Tributyltin**

Is this facility an industrial/commercial facility which currently or proposes to directly dispose of wastewater from the types of operations listed below or a domestic facility which currently or proposes to receive wastewater from the types of industrial/commercial operations listed below?

☐ Yes ☒ No

If **yes**, check the box next to each of the following criteria which apply and provide the appropriate testing results in Table 4 below (check all that apply).

☐ Manufacturers and formulators of tributyltin or related compounds.

☐ Painting of ships, boats and marine structures.

☐ Ship and boat building and repairing.

☐ Ship and boat cleaning, salvage, wrecking and scaling.

☐ Operation and maintenance of marine cargo handling facilities and marinas.

☐ Facilities engaged in wood preserving.

☐ Any other industrial/commercial facility for which tributyltin is known to be present, or for which there is any reason to believe that tributyltin may be present in the effluent.

b. **Enterococci (discharge to saltwater)**

This facility discharges/proposes to discharge directly into saltwater receiving waters **and** Enterococci bacteria are expected to be present in the discharge based on facility processes.

☐ Yes ☒ No

Domestic wastewater is/will be discharged.

☒ Yes ☐ No

If **yes to either** question, provide the appropriate testing results in Table 4 below.

c. E. coli (discharge to freshwater)

This facility discharges/proposes to discharge directly into freshwater receiving waters **and** *E. coli* bacteria are expected to be present in the discharge based on facility processes.

☒ Yes ☐ No

Domestic wastewater is/will be discharged.

☒ Yes ☐ No

If **yes to either** question, provide the appropriate testing results in Table 4 below.

Table 4 for Outfall No.: Click to enter text. Samples are (check one): ☐ Composite ☒ Grab

Pollutant	Sample 1	Sample 2	Sample 3	Sample 4	MAL
Tributyltin (µg/L)					0.010
Enterococci (cfu or MPN/100 mL)					N/A
E. coli (cfu or MPN/100 mL)	< 1.00	2.00	< 1.00	20.6	N/A

TABLE 5 (Instructions, Page 59)

Completion of Table 5 **is required** for all **external outfalls** which discharge process wastewater from a facility which manufactures or formulates pesticides or herbicides or other wastewaters which may contain pesticides or herbicides.

If this facility does not/will not manufacture or formulate pesticides or herbicides and does not/will not discharge other wastewaters that may contain pesticides or herbicides, check N/A.

☒ N/A

Table 5 for Outfall No.: Click to enter text. Samples are (check one): ☐ Composite ☐ Grab

Pollutant	Sample 1 (µg/L)*	Sample 2 (µg/L)*	Sample 3 (µg/L)*	Sample 4 (µg/L)*	MAL (µg/L)*
Aldrin					0.01
Carbaryl					5
Chlordane					0.2
Chlorpyrifos					0.05
4,4'-DDD					0.1
4,4'-DDE					0.1
4,4'-DDT					0.02
2,4-D					0.7
Danitol [Fenpropathrin]					—
Demeton					0.20
Diazinon					0.5/0.1
Dicofol [Kelthane]					1

Pollutant	**Sample 1 (µg/L)***	**Sample 2 (µg/L)***	**Sample 3 (µg/L)***	**Sample 4 (µg/L)***	**MAL (µg/L)***
Dieldrin					0.02
Diuron					0.090
Endosulfan I (*alpha*)					0.01
Endosulfan II (*beta*)					0.02
Endosulfan sulfate					0.1
Endrin					0.02
Guthion [Azinphos methyl]					0.1
Heptachlor					0.01
Heptachlor epoxide					0.01
Hexachlorocyclohexane (*alpha*)					0.05
Hexachlorocyclohexane (*beta*)					0.05
Hexachlorocyclohexane (*gamma*) [Lindane]					0.05
Hexachlorophene					10
Malathion					0.1
Methoxychlor					2.0
Mirex					0.02
Parathion (ethyl)					0.1
Toxaphene					0.3
2,4,5-TP [Silvex]					0.3

* Indicate units if different from µg/L.

TABLE 6 (Instructions, Page 59)

Completion of Table 6 **is required** for all **external outfalls**.

Table 6 for Outfall No.: 007 Samples are (check one): ☐ Composite ☒ Grab

Pollutants	**Believed Present**	**Believed Absent**	**Sample 1 (mg/L)**	**Sample 2 (mg/L)**	**Sample 3 (mg/L)**	**Sample 4 (mg/L)**	**MAL (µg/L)***
Bromide	☒	☐	11.8	11.8	11.9	11.5	400
Color (PCU)	☒	☐	10	10	5	10	—
Nitrate-Nitrite (as N)	☒	☐	< 0.20	< 0.20	< 0.20	0.48	—
Sulfide (as S)	☐	☒	< 0.10	< 0.10	< 0.10	< 0.10	—
Sulfite (as SO3)	☐	☒	< 1.00	< 1.00	< 1.00	< 1.00	—
Surfactants	☐	☒	< 0.20	< 0.20	< 0.20	< 0.20	—
Boron, total	☒	☐	0.996	0.913	0.842	0.863	20
Cobalt, total	☒	☐	0.0004	0.0004	0.0004	0.0004	0.3
Iron, total	☒	☐	0.272	0.193	0.170	0.186	7
Magnesium, total	☒	☐	45.5	45.1	43.1	45.4	20
Manganese, total	☒	☐	0.009	0.008	0.010	0.008	0.5
Molybdenum, total	☒	☐	0.006	0.005	0.005	0.005	1
Tin, total	☒	☐	0.006	0.007	0.006	0.006	5
Titanium, total	☐	☒	< 0.03	< 0.03	< 0.03	< 0.03	30

TABLE 7 (Instructions, Page 60)

Check the box next to any of the industrial categories applicable to this facility. If no categories are applicable, check N/A. If GC/MS testing is required, check the box provided to confirm the testing results for the appropriate parameters are provided with the application.

☐ N/A

Table 7 for Applicable Industrial Categories

Industrial Category	40 CFR Part	Volatiles Table 8	Acids Table 9	Bases/ Neutrals Table 10	Pesticides Table 11
☐ Adhesives and Sealants		☐ Yes	☐ Yes	☐ Yes	No
☐ Aluminum Forming	467	☐ Yes	☐ Yes	☐ Yes	No
☐ Auto and Other Laundries		☐ Yes	☐ Yes	☐ Yes	☐ Yes
☐ Battery Manufacturing	461	☐ Yes	No	☐ Yes	No
☐ Coal Mining	434	No	No	No	No
☐ Coil Coating	465	☐ Yes	☐ Yes	☐ Yes	No
☐ Copper Forming	468	☐ Yes	☐ Yes	☐ Yes	No
☐ Electric and Electronic Components	469	☐ Yes	☐ Yes	☐ Yes	☐ Yes
☐ Electroplating	413	☐ Yes	☐ Yes	☐ Yes	No
☐ Explosives Manufacturing	457	No	☐ Yes	☐ Yes	No
☐ Foundries		☐ Yes	☐ Yes	☐ Yes	No
☐ Gum and Wood Chemicals - Subparts A,B,C,E	454	☐ Yes	☐ Yes	No	No
☐ Gum and Wood Chemicals - Subparts D,F	454	☐ Yes	☐ Yes	☐ Yes	No
☐ Inorganic Chemicals Manufacturing	415	☐ Yes	☐ Yes	☐ Yes	No
☐ Iron and Steel Manufacturing	420	☐ Yes	☐ Yes	☐ Yes	No
☐ Leather Tanning and Finishing	425	☐ Yes	☐ Yes	☐ Yes	No
☐ Mechanical Products Manufacturing		☐ Yes	☐ Yes	☐ Yes	No
☐ Nonferrous Metals Manufacturing	421,471	☐ Yes	☐ Yes	☐ Yes	☐ Yes
☐ Oil and Gas Extraction - Subparts A, D, E, F, G, H	435	☐ Yes	☐ Yes	☐ Yes	No
☐ Ore Mining - Subpart B	440	No	☐ Yes	No	No
☐ Organic Chemicals Manufacturing	414	☐ Yes	☐ Yes	☐ Yes	☐ Yes
☐ Paint and Ink Formulation	446,447	☐ Yes	☐ Yes	☐ Yes	No
☐ Pesticides	455	☐ Yes	☐ Yes	☐ Yes	☐ Yes
☐ Petroleum Refining	419	☐ Yes	No	No	No
☐ Pharmaceutical Preparations	439	☐ Yes	☐ Yes	☐ Yes	No
☐ Photographic Equipment and Supplies	459	☐ Yes	☐ Yes	☐ Yes	No
☐ Plastic and Synthetic Materials Manufacturing	414	☐ Yes	☐ Yes	☐ Yes	☐ Yes
☐ Plastic Processing	463	☐ Yes	No	No	No
☐ Porcelain Enameling	466	No	No	No	No
☐ Printing and Publishing		☐ Yes	☐ Yes	☐ Yes	☐ Yes
☐ Pulp and Paperboard Mills - Subpart C	430	☐ *	☐ Yes	☐ *	☐ Yes
☐ Pulp and Paperboard Mills - Subparts F, K	430	☐ *	☐ Yes	☐ *	☐ *
☐ Pulp and Paperboard Mills - Subparts A, B, D, G, H	430	☐ Yes	☐ Yes	☐ *	☐ *
☐ Pulp and Paperboard Mills - Subparts I, J, L	430	☐ Yes	☐ Yes	☐ *	☐ Yes
☐ Pulp and Paperboard Mills - Subpart E	430	☐ Yes	☐ Yes	☐ Yes	☐ *
☐ Rubber Processing	428	☐ Yes	☐ Yes	☐ Yes	No

Industrial Category	40 CFR Part	Volatiles Table 8	Acids Table 9	Bases/ Neutrals Table 10	Pesticides Table 11
☐ Soap and Detergent Manufacturing	417	☐ Yes	☐ Yes	☐ Yes	No
☒ Steam Electric Power Plants	423	☒ Yes	☒ Yes	No	No
☐ Textile Mills (Not Subpart C)	410	☐ Yes	☐ Yes	☐ Yes	No
☐ Timber Products Processing	429	☐ Yes	☐ Yes	☐ Yes	☐ Yes

* Test if believed present.

TABLES 8, 9, 10, and 11 (Instructions, Page 60)

Completion of Tables 8, 9, 10, and 11 **is required** as specified in Table 7 for all **external outfalls** that contain process wastewater.

Completion of Tables 8, 9, 10, and 11 **may be required** for types of industry not specified in Table 7 for specific parameters that are believed to be present in the wastewater.

Table 8 for Outfall No.: 007 Samples are (check one): ☐ Composite ☒ Grab

Pollutant	Sample 1 (µg/L)*	Sample 2 (µg/L)*	Sample 3 (µg/L)*	Sample 4 (µg/L)*	MAL (µg/L)
Acrolein	< 50	< 50	< 50	< 50	50
Acrylonitrile	< 50	< 50	< 50	< 50	50
Benzene	< 10	< 10	< 10	< 10	10
Bromoform	< 10	< 10	< 10	< 10	10
Carbon tetrachloride	< 2	< 2	< 2	< 2	2
Chlorobenzene	< 10	< 10	< 10	< 10	10
Chlorodibromomethane	< 10	< 10	< 10	< 10	10
Chloroethane	< 50	< 50	< 50	< 50	50
2-Chloroethylvinyl ether	< 10	< 10	< 10	< 10	10
Chloroform	< 10	< 10	< 10	< 10	10
Dichlorobromomethane [Bromodichloromethane]	< 10	< 10	< 10	< 10	10
1,1-Dichloroethane	< 10	< 10	< 10	< 10	10
1,2-Dichloroethane	< 10	< 10	< 10	< 10	10
1,1-Dichloroethylene [1,1-Dichloroethene]	< 10	< 10	< 10	< 10	10
1,2-Dichloropropane	< 10	< 10	< 10	< 10	10

Pollutant	Sample 1 (µg/L)*	Sample 2 (µg/L)*	Sample 3 (µg/L)*	Sample 4 (µg/L)*	MAL (µg/L)
1,3-Dichloropropylene [1,3-Dichloropropene]	< 10	< 10	< 10	< 10	10
Ethylbenzene	< 10	< 10	< 10	< 10	10
Methyl bromide [Bromomethane]	< 50	< 50	< 50	< 50	50
Methyl chloride [Chloromethane]	< 50	< 50	< 50	< 50	50
Methylene chloride [Dichloromethane]	< 20	< 20	< 20	< 20	20
1,1,2,2-Tetrachloroethane	< 10	< 10	< 10	< 10	10
Tetrachloroethylene [Tetrachloroethene]	< 10	< 10	< 10	< 10	10
Toluene	< 10	< 10	< 10	< 10	10
1,2-Trans-dichloroethylene [1,2-Trans-dichloroethene]	< 10	< 10	< 10	< 10	10
1,1,1-Trichloroethane	< 10	< 10	< 10	< 10	10
1,1,2-Trichloroethane	< 10	< 10	< 10	< 10	10
Trichloroethylene [Trichloroethene]	< 10	< 10	< 10	< 10	10
Vinyl chloride	< 10	< 10	< 10	< 10	10

* Indicate units if different from µg/L.

Table 9 for Outfall No.: 007 Samples are (check one): ☐ Composite ☒ Grab

Pollutant	Sample 1 (µg/L)*	Sample 2 (µg/L)*	Sample 3 (µg/L)*	Sample 4 (µg/L)*	MAL (µg/L)
2-Chlorophenol	< 10	< 10	< 10	< 10	10
2,4-Dichlorophenol	< 10	< 10	< 10	< 10	10
2,4-Dimethylphenol	< 10	< 10	< 10	< 10	10
4,6-Dinitro-o-cresol	< 50	< 50	< 50	< 50	50
2,4-Dinitrophenol	< 50	< 50	< 50	< 50	50
2-Nitrophenol	< 20	< 20	< 20	< 20	20

Pollutant	Sample 1 (µg/L)*	Sample 2 (µg/L)*	Sample 3 (µg/L)*	Sample 4 (µg/L)*	MAL (µg/L)
4-Nitrophenol	< 50	< 50	< 50	< 50	50
p-Chloro-m-cresol	< 10	< 10	< 10	< 10	10
Pentachlorophenol	< 5	< 5	< 5	< 5	5
Phenol	< 10	< 10	< 10	< 10	10
2,4,6-Trichlorophenol	< 10	< 10	< 10	< 10	10

* Indicate units if different from µg/L.

Table 10 for Outfall No.: Click to enter text. Samples are (check one): ☐ Composite ☐ Grab

Pollutant	Sample 1 (µg/L)*	Sample 2 (µg/L)*	Sample 3 (µg/L)*	Sample 4 (µg/L)*	MAL (µg/L)
Acenaphthene					10
Acenaphthylene					10
Anthracene					10
Benzidine					50
Benzo(a)anthracene					5
Benzo(a)pyrene					5
3,4-Benzofluoranthene [Benzo(b)fluoranthene]					10
Benzo(ghi)perylene					20
Benzo(k)fluoranthene					5
Bis(2-chloroethoxy)methane					10
Bis(2-chloroethyl)ether					10
Bis(2-chloroisopropyl)ether					10
Bis(2-ethylhexyl)phthalate					10
4-Bromophenyl phenyl ether					10
Butylbenzyl phthalate					10
2-Chloronaphthalene					10
4-Chlorophenyl phenyl ether					10

Pollutant	Sample 1 (µg/L)*	Sample 2 (µg/L)*	Sample 3 (µg/L)*	Sample 4 (µg/L)*	MAL (µg/L)
Chrysene					5
Dibenzo(a,h)anthracene					5
1,2-Dichlorobenzene [o-Dichlorobenzene]					10
1,3-Dichlorobenzene [m-Dichlorobenzene]					10
1,4-Dichlorobenzene [p-Dichlorobenzene]					10
3,3'-Dichlorobenzidine					5
Diethyl phthalate					10
Dimethyl phthalate					10
Di-n-butyl phthalate					10
2,4-Dinitrotoluene					10
2,6-Dinitrotoluene					10
Di-n-octyl phthalate					10
1,2-Diphenylhydrazine (as Azobenzene)					20
Fluoranthene					10
Fluorene					10
Hexachlorobenzene					5
Hexachlorobutadiene					10
Hexachlorocyclopentadiene					10
Hexachloroethane					20
Indeno(1,2,3-cd)pyrene					5
Isophorone					10
Naphthalene					10
Nitrobenzene					10
N-Nitrosodimethylamine					50
N-Nitrosodi-n-propylamine					20
N-Nitrosodiphenylamine					20

Pollutant	Sample 1 (µg/L)*	Sample 2 (µg/L)*	Sample 3 (µg/L)*	Sample 4 (µg/L)*	MAL (µg/L)
Phenanthrene					10
Pyrene					10
1,2,4-Trichlorobenzene					10

* Indicate units if different from µg/L.

Table 11 for Outfall No.: Click to enter text. Samples are (check one): ☐ Composite ☐ Grab

Pollutant	Sample 1 (µg/L)*	Sample 2 (µg/L)*	Sample 3 (µg/L)*	Sample 4 (µg/L)*	MAL (µg/L)
Aldrin					0.01
alpha-BHC [alpha-Hexachlorocyclohexane]					0.05
beta-BHC [beta-Hexachlorocyclohexane]					0.05
gamma-BHC [gamma-Hexachlorocyclohexane]					0.05
delta-BHC [delta-Hexachlorocyclohexane]					0.05
Chlordane					0.2
4,4'-DDT					0.02
4,4'-DDE					0.1
4,4'-DDD					0.1
Dieldrin					0.02
Endosulfan I (alpha)					0.01
Endosulfan II (beta)					0.02
Endosulfan sulfate					0.1
Endrin					0.02
Endrin aldehyde					0.1

Pollutant	Sample 1 (µg/L)*	Sample 2 (µg/L)*	Sample 3 (µg/L)*	Sample 4 (µg/L)*	MAL (µg/L)
Heptachlor					0.01
Heptachlor epoxide					0.01
PCB 1242					0.2
PCB 1254					0.2
PCB 1221					0.2
PCB 1232					0.2
PCB 1248					0.2
PCB 1260					0.2
PCB 1016					0.2
Toxaphene					0.3

* Indicate units if different from µg/L.

Attachment: Click to enter text.

TABLE 12 (DIOXINS/FURAN COMPOUNDS)

Complete of Table 12 **is required** for **external outfalls**, as directed below. (Instructions, Pages 59-60)

Indicate which compound(s) are manufactured or used at the facility and provide a brief description of the conditions of its/their presence at the facility (check all that apply).

☐ 2,4,5-trichlorophenoxy acetic acid (2,4,5-T) CASRN 93-76-5

☐ 2-(2,4,5-trichlorophenoxy) propanoic acid (Silvex, 2,4,5-TP) CASRN 93-72-1

☐ 2-(2,4,5-trichlorophenoxy) ethyl 2,2-dichloropropionate (Erbon) CASRN 136-25-4

☐ 0,0-dimethyl 0-(2,4,5-trichlorophenyl) phosphorothioate (Ronnel) CASRN 299-84-3

☐ 2,4,5-trichlorophenol (TCP) CASRN 95-95-4

☐ hexachlorophene (HCP) CASRN 70-30-4

☒ None of the above

Description: Click to enter text.

Does the applicant or anyone at the facility know or have any reason to believe that 2,3,7,8-tetrachlorodibenzo-p-dioxin (TCDD) or any congeners of TCDD may be present in the effluent proposed for discharge?

☐ Yes ☒ No

Description: Click to enter text.

If **yes** to either Items a **or** b, complete Table 12 as instructed.

Table 12 for Outfall No.: Click to enter text. Samples are (check one): ☐ Composite ☐ Grab

Compound	**Toxicity Equivalent Factors**	**Wastewater Concentration (ppq)**	**Wastewater Toxicity Equivalents (ppq)**	**Sludge Concentration (ppt)**	**Sludge Toxicity Equivalents (ppt)**	**MAL (ppq)**
2,3,7,8-TCDD	1					10
1,2,3,7,8-PeCDD	1.0					50
2,3,7,8-HxCDDs	0.1					50
1,2,3,4,6,7,8-HpCDD	0.01					50
2,3,7,8-TCDF	0.1					10
1,2,3,7,8-PeCDF	0.03					50
2,3,4,7,8-PeCDF	0.3					50
2,3,7,8-HxCDFs	0.1					50
2,3,4,7,8-HpCDFs	0.01					50
OCDD	0.0003					100
OCDF	0.0003					100
PCB 77	0.0001					500
PCB 81	0.0003					500
PCB 126	0.1					500
PCB 169	0.03					500
Total						

TABLE 13 (HAZARDOUS SUBSTANCES)

Complete Table 13 **is required** for all **external outfalls** as directed below. (Instructions, Pages 60-61)

Are there any pollutants listed in the instructions (pages 55-62) believed present in the discharge?

☐ Yes ☒ No

Are there pollutants listed in Item 1.c. of Technical Report 1.0 which are believed present in the discharge and have not been analytically quantified elsewhere in this application?

☐ Yes ☒ No

If **yes** to either Items a **or** b, complete Table 13 as instructed.

Table 13 for Outfall No.: Click to enter text. Samples are (check one): ☐ Composite ☐ Grab

Pollutant	CASRN	Sample 1 (µg/L)	Sample 2 (µg/L)	Sample 3 (µg/L)	Sample 4 (µg/L)	Analytical Method

Leah Whallon

From: Koch, Nancy <Nancy.Koch@WestonSolutions.com>
Sent: Tuesday, May 20, 2025 9:57 AM
To: Leah Whallon
Cc: Speed, Emily L.
Subject: RE: [EXT]:Application to Amend Permit No. WQ0001514000; City Public Service Of San Antonio; Calaveras Power Station
Attachments: _WQ0001514000_ANOD_Response.pdf; Calaveras Mailing Labels.docx; WQ0001514000 _Spanish NORI.docx

Follow Up Flag: Follow up
Flag Status: Flagged

Leah:
Here is our response to your notice of deficiency along with the requested files.
Let us know if you need anything additional.
Regards,
Nancy

WESTON SOLUTIONS
Nancy L. Koch, P.E
Senior Project Manager
(512) 651-7104 Nancy.Koch@WestonSolutions.com
5301 Southwest Parkway, Suite 450
Austin, TX 78735
Trust.Performance.People

From: Koch, Nancy
Sent: Friday, May 16, 2025 3:38 PM
To: Leah Whallon <Leah.Whallon@Tceq.Texas.Gov>
Cc: Speed, Emily L. <elspeed@cpsenergy.com>
Subject: RE: [EXT]:Application to Amend Permit No. WQ0001514000; City Public Service Of San Antonio; Calaveras Power Station

Thank you Leah. We will review and respond by the deadline.
Regards,
Nancy

From: Leah Whallon <Leah.Whallon@Tceq.Texas.Gov>
Sent: Friday, May 16, 2025 3:07 PM
To: Koch, Nancy <Nancy.Koch@WestonSolutions.com>
Cc: Speed, Emily L. <elspeed@cpsenergy.com>
Subject: [EXT]:Application to Amend Permit No. WQ0001514000; City Public Service Of San Antonio; Calaveras Power Station

***** External Message *** -- PROBE message before clicking links or opening attachments.**

Good Afternoon,

Please see the attached Notice of Deficiency letter dated May 16, 2025 requesting additional information needed to declare the application administratively complete. Please send the complete response by May 30, 2025.

Please let me know if you have any questions.

Thank you,

Leah Whallon
Texas Commission on Environmental Quality
Water Quality Division
512-239-0084
leah.whallon@tceq.texas.gov

How is our customer service? Fill out our online customer satisfaction survey at www.tceq.texas.gov/customersurvey

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Weston Solutions, Inc.
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512-651-7100
WestonSolutions.com

20 May 2025

Ms. Leah Whallen
Application Review and Processing Team MC-148
Water Quality Division
Texas Commission on Environmental Quality
12100 Park 35 Circle
Austin, Texas 78753

Via Email: leah.whallon@tceq.texas.gov

RE: Transmittal of Administrative Notice of Deficiency Response
WQ0001514000 Major Amendment with Renewal
RN 100217975 Calaveras Power Station
CN 603174244 City Public Service of San Antonio

Dear Ms. Whallen:

On behalf of CPS Energy, Weston Solutions, Inc. (WESTON®) is pleased to submit this response to your administrative notice of deficiency letter dated 16 May 2025 for the above-referenced Texas Pollutant Discharge Elimination System (TPDES) permit renewal application. We are responding to your comments on an item-by-item basis.

Item 1. Administrative Report 1.1, Section 1. We have provided the affected landowner list formatted for mailing labels (file "Calaveras Mailing Labels.docx").

Item 2. NORI Language Review. We have reviewed the NORI language provided and have no comment. The Word file with the Spanish translation is provided (file "WQ0001514000_Spanish NORI.docx"). Please note the template provided for the Spanish translation was not usable. We had to print it to pdf and save it back to word to make the necessary edits.

Please contact me at 512-651-7104 or at nancy.koch@westonsolutions.com should you have any questions regarding this response.

Very truly yours,
Weston Solutions, Inc.

N. L. Koch

Nancy L. Koch, P.E.
Project Manager

cc: Emily Speed, CPS Energy

Attachment: Files WQ0001514000_Spanish NORI.docx and Calaveras Mailing Labels.docx

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CARDENAS LOUIS P EST OF CARDENAS
ISABEL L/E
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GOLDEN STATE PROPERTIES LLC
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GUERRERO YESENIA & GUERRERO LILIANA
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UNION CITY, CA 94587-5411

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LEE GERALD A & MARY JO
9475 STUART RD
SAN ANTONIO, TX 78263-9685

LOPEZ JESUS & MAYRA E & LOPEZ IDALA
8803 S FOSTER RD
SAN ANTONIO, TX 78222-5916

LOPEZ JESUS B & CAROLINA
6703 COOKSEY RD
ADKINS, TX 78101-2245

LOPEZ LUIS
5126 LARK
SAN ANTONIO, TX 78228-4530

LUBIANSKI MARGARET R
10340 S FOSTER RD
SAN ANTONIO, TX 78223-4415

MARTIN CHARLES
325 REGINA ST
SAN ANTONIO, TX 78223-1158

MARTINEZ ANABELLE & SAN JUAN
14388 KILOWATT RD
SAN ANTONIO, TX 78223

MARTINEZ JUAN M & VILLASANA DIANA J
14186 S US HIGHWAY 181
SAN ANTONIO, TX 78223-4534

MARTINEZ PAULINE F
12933 LAGUNA RD
SAN ANTONIO, TX 78223-9706

MARTINEZ RAMIRO JR
10615 STUART RD
SAN ANTONIO, TX 78263-9697

MARTINEZ SHARI & LESLEY THOMAS HOPKINS
14680 KILOWATT RD APT 3
SAN ANTONIO, TX 78223-9405

MARTINEZ STEVE
14512 KILOWATT RD
SAN ANTONIO, TX 78223

MASSEY EARL & MARIA
1164 COUNTY ROAD 122
FLORESVILLE, TX 78114-6045

MENDEZ ANJEL CERVANTES
7714 SCHULTZ RD
ELMENDORF, TX 78112-9788

MENDEZ SALVADOR
13251 LAGUNA RD
SAN ANTONIO, TX 78223-4295

MENDOZA PAUL
12126 JIMMER CV
SAN ANTONIO, TX 78221-3151

MENGER ALFRED C JR & ALMS PATRICIA ANN
10535 STUART RD
SAN ANTONIO, TX 78263-9696

MEYER KENNETH J & CARRIE G
10240 STUART RD
SAN ANTONIO, TX 78263-9693

MICKNICZ ANDREW A & ANITA
13379 LEEWARD LN
SAN ANTONIO, TX 78263-2383

MONGE ERIC ALBERTO
9810 SPINNAKER PATH
SAN ANTONIO, TX 78263-2380

MONTEMAYOR JESUS E
9417 STUART RD
SAN ANTONIO, TX 78263-9685

MOODY DAVID & TRACY
9030 S FOSTER RD
SAN ANTONIO, TX 78222-6002

MORADO IBALDO R
12915 CASSIANO RD
SAN ANTONIO, TX 78223-4574

MORALES ALFONSO & ELDA T
9180 HILDEBRANDT RD
SAN ANTONIO, TX 78222-6040

MORGAN LEANN M
9580 STUART RD
SAN ANTONIO, TX 78263-9614

MUELLER JOSHUA KANE & SYLVIA CELINA
13218 COMPASS ROSE
SAN ANTONIO, TX 78263-2382

MUNOZ ALFONSO
739 MCDOUGAL AVE
SAN ANTONIO, TX 78223-1543

MURPHY LINDA
10235 NEW SULPHUR SPRINGS RD
SAN ANTONIO, TX 78263-9759

NAVARRO MICHELE M & JAMES RENUARD
9809 VISTA CIR
SAN ANTONIO, TX 78263-4405

NEW WILLIAM JR & WANDA J
14950 LAGUNA RD
SAN ANTONIO, TX 78223-9726

NGUYEN NHAN
6525 W LAGUNA RD
SAN ANTONIO, TX 78223-9623

NICHOLS LINDA LOU
14096 S US HIGHWAY 181 LOT 1
SAN ANTONIO, TX 78223-9748

NICKENS JAMES D & DAWN
14450 KILOWATT RD
SAN ANTONIO, TX 78223-9727

NIXON GARY GLENN & LAURA ANN
10234 STUART RD
SAN ANTONIO, TX 78263-9693

NORTHLAKE SA LLC
1067 FM 306 STE 106
NEW BRAUNFELS, TX 78130

OLVERA MANUEL LORENZO & REBBECCA SUSANN
9938 BERMUDA PALM
SAN ANTONIO, TX 78245

PADALECKI HARRY JR
8440 KNOWLTON RD
SAN ANTONIO, TX 78263-9673

PADIER KRISANDRA M
10222 STUART RD
SAN ANTONIO, TX 78263-9693

PADUA GRID LLC
4845 PEARL EAST CIR STE 118
BOULDER, CO 80301

PALACIOS MARIA ELIZA
129 CASTILLO AVE
SAN ANTONIO, TX 78210-2809

PALMER MILTON L JR LIVING TRUST - PALMER MILTON L JR TRUSTEE
523 PALMER RD
PLEASANTON, TX 78064-6334

PALOMO DANIEL C
PO BOX 75
ELMENDORF, TX 78112-0075

PEREZ RUTH
8331 GLEN CT
SAN ANTONIO, TX 78239-3020

POLLOK TIMOTHY & MONICA
11392 S FOSTER RD LOT 2
SAN ANTONIO, TX 78223-4447

PORTER JAMES E
343 KILLARNEY DR
SAN ANTONIO, TX 78223-2853

PRINCE ESTATES LLC
14072 E LOOP 1604 S
SAN ANTONIO, TX 78223-9725

PSENCIK ROBERT A & KAREN J
9366 HILDEBRANDT RD
SAN ANTONIO, TX 78222-6030

RAMIREZ CHARLES & JANIE R
10135 NEW SULPHUR SPRINGS RD
SAN ANTONIO, TX 78263-9610

RAMIREZ LIVING TRUST & RAMIREZ DAVID A & LILLIAN L TRSTES
9658 S FOSTER RD
SAN ANTONIO, TX 78222-6014

RAMIREZ RICARDO & RAMIREZ LAURA
13257 LAGUNA RD
SAN ANTONIO, TX 78223-4295

RAUSCHUBER IRREVOCABLE TRUST
10826 KOBORT CANYON
SAN ANTONIO, TX 78023

RC SCHUBERT FAMILY TRUST
4115 E SOUTHCROSS BLVD
SAN ANTONIO, TX 78222-3729

REMPEL JEFF R & PATRICIA B
245 OAK HOLLOW DR
LA VERNIA, TX 78121-5855

REYES JESUS JR
13762 S US HIGHWAY 181
SAN ANTONIO, TX 78223-4288

RIVERA JOSE LOUIS ACEVEDO
254 OELKERS
SAN ANTONIO, TX 78204-2910

RODRIGUEZ CESAR JAVIER & GRACIELA N
10340 STUART RD
SAN ANTONIO, TX 78263-9694

RODRIGUEZ JENOVEBA R ETAL
12911 LAGUNA RD
SAN ANTONIO, TX 78223-9706

RODRIGUEZ MICHAEL A & MARTHA JO
13419 LEEWARD LN
SAN ANTONIO, TX 78263-2384

RODRIGUEZ VIRGIL M & REBECCA L
9814 SPINNAKER PATH
SAN ANTONIO, TX 78263-2380

RUTIAGA CESAR R & MARIA D
216 MARGO ST
SAN ANTONIO, TX 78223-5605

SAENZ JUAN ANTONIO JR
6815 HARRY RD
SAN ANTONIO, TX 78223-9412

SALINAS RAYMOND & SYLVIA G
12961 LAGUNA RD LOT 2
SAN ANTONIO, TX 78223-9752

SANCHEZ ERIK & LISA
4102 WINESAP DR
SAN ANTONIO, TX 78222-4842

SANCHEZ JUAN DIEGO
1658 GORMAN
SAN ANTONIO, TX 78202-2607

SCHODTS DAVID
14528 S US HIGHWAY 181
SAN ANTONIO, TX 78223-9702

SCHODTS DON & PATSY
14528 S US HIGHWAY 181
SAN ANTONIO, TX 78223-9702

SECRETARY OF HOUSING & URBAN DEVELOPMENT
2401 NW 23RD ST STE 1D
OKLAHOMA CITY, OK 73107-2420

SEGOVIA JESSE & CHELSY CRISP
775 UTOPIA LN
SAN ANTONIO, TX 78223-3315

SEGURA CARLOS JR
10360 STUART RD
SAN ANTONIO, TX 78263-9694

SEPULVEDA MARCO
19918 PARK RNCH
SAN ANTONIO, TX 78259-1934

SERRANO JOSE & MARIA
511 ANCHORS COACH
SAN ANTONIO, TX 78245

SHEDROCK DAVID A
10231 NEW SULPHUR SPRINGS RD
SAN ANTONIO, TX 78263-9612

SILER SAMUEL DEVONNE & BARBARA ANN
12902 S US HIGHWAY 181
SAN ANTONIO, TX 78223-4285

SMITH JENNIFER LEIGH & SMITH FAMILY TRUST
6420 FM 1628
ADKINS, TX 78101-2275

SOLIS ELOISA T
10042 S FOSTER RD
SAN ANTONIO, TX 78223-4409

SOLIS GILBERT & REBECCA
10036 S FOSTER RD
SAN ANTONIO, TX 78223-4409

SPIVEY ROBERT S
PO BOX 192
ELMENDORF, TX 78112-0192

STRUNK CARMEN
9590 S FOSTER RD
SAN ANTONIO, TX 78222-6012

SYMA JUSTIN ALBERT
15045 CASSIANO RD
ELMENDORF, TX 78112-4710

TAYLOR JANIS M & KETNICK DAVID J
14910 LAGUNA RD
SAN ANTONIO, TX 78223-9729

TERRILL FERDINAND A
10025 STUART RD
SAN ANTONIO, TX 78263-9670

TERRILL JOHN
9955 STUART RD
SAN ANTONIO, TX 78263-9510

THOMAS JOHN A
451 LINDA DR
SAN ANTONIO, TX 78216-7420

THOMPSON NATHAN G
11880 S US HIGHWAY 181
SAN ANTONIO, TX 78223-4278

TOBIAS KEVIN
12270 S US HIGHWAY 181
SAN ANTONIO, TX 78223-4270

TOBIAS KEVIN G & EUGENE B
10210 S FOSTER RD
SAN ANTONIO, TX 78223-4514

TOVAR KRISTINA
322 SUSSEX AVE
SAN ANTONIO, TX 78221

TOVAR STEVEN & ALICIA T
9800 SPINNAKER PATH
SAN ANTONIO, TX 78263-2380

TRACY W B
8401 STUART RD
SAN ANTONIO, TX 78263-9653

TREVINO DANIEL C
2318 W HERMOSA DR
SAN ANTONIO, TX 78201-3350

TREVINO SHEILA & PAUL E PHILLIPS
14858 S US HIGHWAY 181
SAN ANTONIO, TX 78223-4289

TROSTMANN CATHERINE C & KUNO S
10615 GARRICK LN
HOUSTON, TX 77013-5435

VALDES JULIO C & HERNANDEZ CIRILA PATRICIO
9495 S FOSTER RD
SAN ANTONIO, TX 78222

VALDEZ DAVID & MARIA M
13355 LEEWARD LN
SAN ANTONIO, TX 78263-2383

VARELA JEANIE L & VARELA DONALD
9505 S FOSTER RD
SAN ANTONIO, TX 78222

VARGAS-LAMBOY HIROS EMMANUEL & MARICELA I V
2543 PINTAIL LOOP
COPPERAS COVE, TX 76522

VASBINDER ARTHUR D
12055 STUART RD
SAN ANTONIO, TX 78263-9732

VEGA ALFONSO
1243 SANTA ANNA
SAN ANTONIO, TX 78201-4210

VEGA DIANA GONZALEZ
156 N FOSTER RD #2
SAN ANTONIO, TX 78219

VEILLEUX THOMAS J SR & GLENDA DIANE
12145 STUART RD
SAN ANTONIO, TX 78263-9511

VERASTEGUI REJINO M & PETRA
10066 HILDEBRANDT RD
SAN ANTONIO, TX 78222-6016

VILLAREAL JUDITH MARIE & GUSTAVO
10147 NEW SULPHUR SPRINGS RD
SAN ANTONIO, TX 78263

VILLEGAS MARIA
3650 CANDLEHEAD LN
SAN ANTONIO, TX 78244-2104

WALDREP R B
8485 COVER RD
SAN ANTONIO, TX 78263-9632

WALLACE JOHNNY B
222 COUNTY ROAD 446
NIXON, TX 78140-4006

WENGLER MARK E
9140 HILDEBRANDT RD
SAN ANTONIO, TX 78222-6034

WESCH FRANK H JR & DOBBS DAVID R SR
7015 TRANQUIL LN
CONVERSE, TX 78109-1017

Comisión de Calidad Ambiental del Estado de Texas

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

PERMISO NO. WQ0001514000

SOLICITUD. City Public Service of San Antonio, P.O. Box 1771, San Antonio, Texas, 78296, que posee una instalación de generación de energía eléctrica de vapor ha solicitado a la Comisión de Calidad Ambiental de Texas (TCEQ) para modificar el Permiso No. WQ0001514000 (EPA I.D. No. TX0063681) del Sistema de Eliminación de Descargas de Contaminantes de Texas (TPDES) para autorizar la eliminación de los emisarios internos 103 y 109; reducción de la frecuencia de monitoreo del pH en los emisarios internos 111, 112 y 712; la adición de los emisarios internos 112(d) y 112(e); la eliminación del monitoreo de sólidos totales en suspensión del emisario interno 108; aclaraciones sobre las descargas autorizadas, lugares de muestreo y Otros Requisitos, incluidos el Otro Requisito 6 (relacionado con los informes de progreso del emisario 006), el Otro Requisito 18 (relacionado con los residuos listados para los estanques de evaporación propuestos), y el Otro Requisito 13.J.iv (relacionado con los cálculos de carga masiva diaria para el cloro residual total) y 13.J.v (relacionado con los períodos de clorinación). La planta está ubicada 12940 S U.S. Highway 181, cerca de la ciudad de San Antonio en el Condado de Bexar, Texas 78223. La ruta de descarga es del sitio de la planta a emisarios 001, 002, 006, 007, 014, 015, 016, 017, y 018 al Lago Calaveras, del allí al Arroyo Calaveras, del allí al Río San Antonio Superior. La TCEQ recibió esta solicitud el 8 de mayo de 2025. La solicitud para el permiso estará disponible para leerla y copiarla en CPS Energy Sede, recepción del primer piso, 500 McCullough Avenue, San Antonio en el Condado de Bexar, Texas antes de la fecha de publicación de este aviso en el periódico. La solicitud (cualquier actualización y aviso inclusive) está disponible electrónicamente en la siguiente página web: https://www.tceq.texas.gov/permitting/wastewater/pending-permits/tpdes-applications. Este enlace a un mapa electrónico de la ubicación general del sitio o de la instalación es proporcionado como una cortesía y no es parte de la solicitud o del aviso. Para la ubicación exacta, consulte la solicitud.
https://gisweb.tceq.texas.gov/LocationMapper/?marker=-98.321944,29.308611&level=18

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.

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

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

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

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

Después del cierre de todos los períodos de comentarios y de petición que aplican, el Director Ejecutivo enviará la solicitud y cualquier petición para reconsideración o para una audiencia de caso impugnado a los Comisionados de la TCEQ para su consideración durante una reunión programada de la Comisión.

La Comisión sólo puede conceder una solicitud de una audiencia de caso impugnado sobre los temas que el solicitante haya presentado en sus comentarios oportunos que no fueron retirados posteriormente. **Si se concede una audiencia, el tema de la audiencia estará limitado a cuestiones de hecho en disputa o cuestiones mixtas de hecho y de derecho relacionadas a intereses pertinentes y materiales de calidad del agua que se hayan presentado durante el período de comentarios.**

LISTA DE CORREO. Si somete comentarios públicos, un pedido para una audiencia administrativa de lo contencioso o una reconsideración de la decisión del Director Ejecutivo, la Oficina del Secretario Principal enviará por correo los avisos públicos en relación con la solicitud. 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 del 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.

INFORMACIÓN DISPONIBLE EN LÍNEA. Para detalles sobre el estado de la solicitud, favor de visitar la Base de Datos Integrada de los Comisionados en www.tceq.texas.gov/goto/cid. Para buscar en la base de datos, utilizar el número de permiso para esta solicitud que aparece en la parte superior de este aviso.

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 City Public Service of San Antonio a la dirección indicada arriba o llamando a Sra. Emily Speed, Analista Ambiental, al 210-353-5010.

Fecha de emisión: *[Date notice issued]*

TPDES PERMIT NO.
WQ0001514000
[For TCEQ office use only -
EPA I.D. No. TX0063691]

This major amendment replaces
TPDES Permit No. WQ0001514000,
issued on September 7, 2023.

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 423

City Public Service of San Antonio

whose mailing address is

P.O. Box 1711
San Antonio, Texas 78296

is authorized to treat and discharge wastes from Calaveras Power Station, a steam electric power generating facility (SIC 4911)

located at 12940 U.S. Highway 181 South, near the City of San Antonio, in Bexar County, Texas 78223

via Outfalls 001, 002, 006, 007, 014, 015, 016, 017, and 018 to Calaveras Lake, thence to Calaveras Creek, thence to Upper San Antonio River in Segment No. 1911 of the San Antonio River Basin

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

This permit shall expire at midnight, five years from the date of 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 once-through cooling water [1, 2] and previously monitored effluents (PMEs) from Sommers Units 1 & 2, utility wastewater [2], stormwater [2], stormwater associated with construction activity [3] subject to the following effluent limitations:

   The daily average flow of effluent shall not exceed 1,440 million gallons per day (MGD). The daily maximum flow shall not exceed 1,800 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	1,440 MGD		1,800 MGD		N/A	Continuous	Record [4]
Temperature [2]	110 °F		115 °F		N/A	Continuous [5]	Record
Free Available Chlorine [2, 6]	400	0.2	1,001	0.5	0.5	1/week [6, 8]	Grab
Free Available Chlorine [2, 7]	N/A	0.2	N/A	0.25	0.5	1/week [7, 8]	Grab
Total Residual Chlorine [2, 6]	N/A	N/A	400	0.2	0.2	1/week [6, 8]	Grab
Total Residual Chlorine [2, 7]	N/A	N/A	N/A	0.1	0.2	1/week [7, 8]	Grab
Chemical Oxygen Demand	N/A	N/A	N/A	Report	N/A	1/week	Grab
Oil and Grease	N/A	15	N/A	20	20	1/week	Grab

2. The pH shall not be less than 6.0 standard units nor greater than 10.0 standard units and shall be monitored 1/week by grab sample.

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

4. Effluent monitoring samples shall be taken at the following location: At Outfall 001, at the sample platform of the hot pond discharge area, prior to discharge to Calaveras Lake.

[1] See Other Requirement No. 5.
[2] See Other Requirement No. 13.I.
[3] See Other Requirement Nos. 21.
[4] Flow may be calculated using pump curve data and pump records.
[5] Applicable when discharging once-through cooling water.
[6] Effluent limits effective until 30 days after notification has been made in accordance with Other Requirement 1.
[7] Effluent limits effective 30 days after notification has been made in accordance with Other Requirement 1.
[8] Samples must be representative of periods of chlorination.

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 low volume waste sources [1], water treatment waste [1], and water treatment bulk chemical secondary containments subject to the following effluent limitations:

   Volume: Intermittent and flow-variable.

Effluent Characteristics	Discharge Limitations			Minimum Self-Monitoring Requirements	
	Daily Average mg/L	Daily Maximum mg/L	Single Grab mg/L	Report Daily Average and Daily Maximum Measurement Frequency	Sample Type
Flow	Report, MGD	Report, MGD	N/A	1/day [2]	Estimate
Total Suspended Solids	30	100	100	1/week [2]	Grab [3]
Oil and Grease	15	20	20	1/week [2]	Grab [3]

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

3. Effluent monitoring samples shall be taken at the following location: Outfall 101, at the sample port of the neutralization basin discharge pipe, prior to discharge behind the Sommers intake screen and prior to mixing with once-through cooling water.

[1] See Other Requirement No. 13.
[2] When discharge occurs.
[3] See Other Requirement No.8.

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 low volume waste sources [1], water treatment waste, polisher wastewater, and water treatment bulk chemical secondary containments subject to the following effluent limitations:

   Volume: Intermittent and flow-variable.

Effluent Characteristics	Discharge Limitations			Minimum Self-Monitoring Requirements	
	Daily Average mg/L	Daily Maximum mg/L	Single Grab mg/L	Report Daily Average and Daily Maximum Measurement Frequency	Sample Type
Flow	Report, MGD	Report, MGD	N/A	1/day [2]	Estimate
Total Suspended Solids	30	100	100	1/week [2]	Grab [3]
Oil and Grease	15	20	20	1/week [2]	Grab [3]

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

3. Effluent monitoring samples shall be taken at the following location: Outfall 102, at the sample port of the neutralization basin discharge pipe, prior to discharge behind the Spruce intake screen and prior to mixing with once-through cooling water.

[1] See Other Requirement No. 13.
[2] When discharge occurs.
[3] See Other Requirement No. 8.

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 coal pile runoff [1], PME (treated domestic effluent from the rail car maintenance and coal handling facility sewage package treatment plants) [2] low volume waste sources [1], stormwater [1], utility wastewater [1], and uncontaminated stormwater from secondary containments subject to the following effluent limitations:

   Volume: Intermittent and flow-variable.

Effluent Characteristics	Discharge Limitations			Minimum Self-Monitoring Requirements	
	Daily Average mg/L	Daily Maximum mg/L	Single Grab mg/L	Report Daily Average and Daily Maximum Measurement Frequency	Sample Type
Flow	Report, MGD	Report, MGD	N/A	1/day [3]	Estimate
Total Suspended Solids	N/A	50	50	1/week [4]	Grab
Chemical Oxygen Demand	N/A	200	200	1/week [4]	Grab
Oil and Grease	15	20	20	1/week [4]	Grab

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

3. Effluent monitoring samples shall be taken at the following locations:

   Outfall 104(a) - At the discharge pipe, prior to discharge entering the intake canal.

   Outfall 104(b) - At the discharge pipe, prior to discharge entering the intake canal.

[1] See Other Requirement Nos. 13 and 21.
[2] See Other Requirement No. 19.
[3] When discharge occurs.

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 boiler blowdown subject to the following effluent limitations:

   Volume: Intermittent and flow-variable.

Effluent Characteristics	Discharge Limitations			Minimum Self-Monitoring Requirements	
	Daily Average mg/L	Daily Maximum mg/L	Single Grab mg/L	Report Daily Average and Daily Maximum Measurement Frequency	Sample Type
Flow	Report, MGD	Report, MGD	N/A	1/day [1]	Estimate
Total Suspended Solids	30	100	100	1/week [1]	Grab
Oil and Grease	15	20	20	1/6 months [1]	Grab

2. The pH shall not be less than 6.0 standard units nor greater than 10.0 standard units and shall be monitored 1/week [1] by grab sample.

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

4. Effluent monitoring samples shall be taken at the following locations: Outfall 108, at the end of pipe prior to entering the intake canal.

[1] When discharge occurs.

1. During the period beginning upon the date of permit issuance and lasting until the activation of the relocation of the existing domestic wastewater treatment[1] plant, the permittee is authorized to discharge treated domestic wastewater subject to the following effluent limitations:

   The daily average flow of effluent shall not exceed 0.04 million gallons per day (MGD). The daily maximum flow shall not exceed 0.08 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	0.04 [2] MGD		0.08 [3] MGD		N/A	1/week [3]	Instantaneous
Biochemical Oxygen Demand, 5-day	6.6	20	N/A	45	45	1/week [3]	Grab
Total Suspended Solids	6.6	20	N/A	45	45	1/week [3]	Grab [4]
E. coli	126 [5, 6]		399 [5]		399 [5]	1/week [3]	Grab [4]

2. All domestic wastewater must be given complete treatment (both primary and secondary) and chlorinated sufficiently to maintain a chlorine residual of at least 1.0 mg/L after at least 20 minutes of contact time (based on peak flow) and must be monitored 1/week [3] by grab sample.
3. The pH must not be less than 6.0 standard nor greater than 9.0 standard units and must be monitored 1/week [3]by grab [4] sample.
4. There shall be no discharge of floating solids or visible foam in other than trace amounts and no discharge of visible oil.
5. Effluent monitoring samples must be taken at the following location:
   Outfall 110(a) – At the v-notch weir, where treated domestic wastewater is discharged to Discharge Canal #1.
   Outfall 110(b) – At sampling port at lift station prior to discharge into the intake canal.
   Outfall 110(c) – At end of pipe, where treated domestic wastewater from the rail car maintenance facility is discharged into a drainage ditch before entering the coal pile runoff pond (Pond 2).
   Outfall 110(d) – At end of pipe, where treated domestic wastewater from the coal handling facility is discharged into the coal pile runoff pond (Pond 2).

[1] See Other Requirement No. 14.
[2] The daily average flow must be calculated as the sum of the daily average flow from Outfalls 110(a), 110(b), 110(c), and 110(d). The daily maximum flow must be calculated as the sum of the daily maximum flows from Outfalls 110(a), 110(b), 110(c), and 110(d).
[3] For Outfalls 110(c) and 110(d), the measurement frequency is 1/quarter.
[4] See Other Requirement No. 8.
[5] Colony-forming units (CFU) per 100 mL or most probable number (MPN) per 100 mL.
[6] Daily average must be calculated as geometric mean.

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 stormwater [1], washdown from plant yard drains, stormwater associated with construction activities [2], low volume waste sources [1], utility wastewater, and uncontaminated stormwater from secondary containments subject to the following effluent limitations:

   Volume: Intermittent and flow-variable.

Effluent Characteristics	Discharge Limitations			Minimum Self-Monitoring Requirements	
	Daily Average mg/L	Daily Maximum mg/L	Single Grab mg/L	Report Daily Average and Daily Maximum Measurement Frequency	Sample Type
Flow	Report, MGD	Report, MGD	N/A	1/day [3]	Estimate
Total Suspended Solids	30	100	100	1/week [3]	Grab
Chemical Oxygen Demand	N/A	200	200	1/6 months [3, 4]	Grab
Oil and Grease	N/A	15	15	1/6 months [3, 4]	Grab

2. The pH shall not be less than 6.0 standard units nor greater than 10.0 standard units and shall be monitored 1/week [3] by grab sample.

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

4. Effluent monitoring samples shall be taken at the following locations: At Outfall 111, at the weir of the stormwater runoff pond (Pond 5), prior to discharge entering the intake canal.

[1] See Other Requirement No. 13.
[2] See Other Requirement No. 21.
[3] When discharge occurs.
[4] See Other Requirement No. 10.

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 low volume waste sources [1] and car and equipment wash water, stormwater [1], utility wastewater [1], and uncontaminated stormwater from secondary containments subject [1] to the following effluent limitations:

   Volume: Intermittent and flow-variable.

Effluent Characteristics	Discharge Limitations			Minimum Self-Monitoring Requirements	
	Daily Average mg/L	Daily Maximum mg/L	Single Grab mg/L	Report Daily Average and Daily Maximum Measurement Frequency	Sample Type
Flow	Report, MGD	Report, MGD	N/A	1/day [2]	Estimate
Total Suspended Solids	30	100	100	1/week [2]	Grab [3]
Oil and Grease	15	20	20	1/week [2, 4]	Grab [3]

2. The pH shall not be less than 6.0 standard units nor greater than 10.0 standard units and shall be monitored 1/week [2] by grab sample [3].

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

4. Effluent monitoring samples shall be taken at the following locations:

   Outfall 112(a), Where effluent is discharged into floor and yard box and sample utilizing stationary submerged pump and tubing/piping prior to mixing with any other waters.

   Outfall 112(b), At weir prior to discharge entering the intake canal.

   Outfall 112(c), At weir prior to discharge entering the intake canal.

   Outfall 112(d), At OWS 1, boiler blowdown at the water chemistry station in the water chemistry room.

   Outfall 112(e), At OWS 2, boiler blowdown at the water chemistry station in the water chemistry room.

[1] See Other Requirement No. 13.
[2] When discharge occurs.
[3] See Other Requirement No. 8.
[4] See Other Requirement No. 20.

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 low volume waste sources [1], utility wastewater [1], water treatment wastes [1], stormwater [1, 2], and uncontaminated stormwater from secondary containments subject to the following effluent limitations:

   Volume: Intermittent and flow-variable.

Effluent Characteristics	Discharge Limitations			Minimum Self-Monitoring Requirements	
	Daily Average mg/L	Daily Maximum mg/L	Single Grab mg/L	Report Daily Average and Daily Maximum Measurement Frequency	Sample Type
Flow	Report, MGD	Report, MGD	N/A	1/day [3]	Estimate
Total Suspended Solids	30	100	100	1/week [3]	Grab
Chemical Oxygen Demand	N/A	200	200	1/week [3]	Grab
Oil and Grease	15	20	20	1/week [3]	Grab

2. The pH shall not be less than 6.0 standard units nor greater than 10.0 standard units and shall be monitored 1/week [3] by grab sample.

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

4. Effluent monitoring samples shall be taken at the following locations: At Outfall 002 – At the weir on the concrete drainage ditch, prior to entering Calaveras Lake.

[1] See Other Requirement No. 13.
[2] See Other Requirement Nos. 13 and 21.
[3] When discharge occurs.

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 stormwater [1], subject to the following effluent limitations:

   Volume: Intermittent and flow-variable.

Effluent Characteristics	Discharge Limitations			Minimum Self-Monitoring Requirements	
	Daily Average mg/L	Daily Maximum mg/L	Single Grab mg/L	Report Daily Average and Daily Maximum Measurement Frequency	Sample Type
Flow	Report, MGD	Report, MGD	N/A	1/day [2]	Estimate
Total Suspended Solids	30	100	100	1/week [2]	Grab
Chemical Oxygen Demand	N/A	200	200	1/week [2]	Grab
Oil and Grease	15	20	20	1/week [2]	Grab

2. The pH shall not be less than 6.0 standard units nor greater than 9.0 standard units and shall be monitored 1/week [2] by grab sample.

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

4. Effluent monitoring samples shall be taken at the following location: At Outfall 006 - At end of pipe where stormwater is discharged into Calaveras Lake.

[1] See Other Requirement Nos. 13 and 21.

[2] When discharge occurs during normal business hours for the Environmental Operations Department, excluding Saturday, Sunday, and holidays. Samples must be obtained within two hours of initiation of discharge.

EFFLUENT LIMITATIONS AND MONITORING REQUIREMENTS — Outfall Number 007

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 once-through cooling water [1, 2] from Spruce Units 1 & 2, and previously monitored effluents, utility wastewater [2], stormwater runoff from the plant area, and stormwater [2, 3] subject to the following effluent limitations:

   The daily average flow of effluent shall not exceed 1,440 million gallons per day (MGD). The daily maximum flow shall not exceed 1,800 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	1,440 MGD		1,800 MGD		N/A	Continuous [4]	Record
Temperature [2, 5]	110 °F		115 °F		N/A	Continuous [4]	Record
Free Available Chlorine [2, 6]	400	0.2	1,001	0.5	0.5	1/week [6, 7]	Grab
Free Available Chlorine [2, 8]	N/A	0.2	N/A	0.25	0.25	1/week [7, 8]	Grab
Total Residual Chlorine [2, 6]	N/A	N/A	400	0.2	0.2	1/week [6, 7]	Grab
Total Residual Chlorine [2, 8]	N/A	N/A	N/A	0.1	0.1	1/week [7, 8]	Grab
Chemical Oxygen Demand	N/A	N/A	N/A	Report	N/A	1/week	Grab
Oil and Grease	N/A	15	N/A	20	20	1/week	Grab

2. The pH shall not be less than 6.0 standard units nor greater than 10.0 standard units and shall be monitored 1/week by grab sample.

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

4. Effluent monitoring samples shall be taken at the following location: At Outfall 007 sample platform where wastewater is discharged into Calaveras Lake from the discharge canal.

[1] See Other Requirement No. 5.
[2] See Other Requirement No. 13.I.
[3] See Other Requirement No. 21.
[4] Flow may be calculated using pump curve data and pump records.
[5] Applicable when discharging once-through cooling water.
[6] Effluent Limitations effective until 30 days after notification made in accordance with Other Requirement 1.
[7] Samples must be representative of periods of chlorination.
[8] Effluent limits effective 30 days after notification has been made in accordance with Other Requirement 1.

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 stormwater runoff from plant areas, stormwater associated with construction activities and material storage areas[1], steam condensate tank overflow, fire water/lake water, stormwater, wash water, utility wastewater, and uncontaminated stormwater from secondary containments subject to the following effluent limitations:

   Volume: Intermittent and flow-variable.

Effluent Characteristics	Discharge Limitations			Minimum Self-Monitoring Requirements	
	Daily Average mg/L	Daily Maximum mg/L	Single Grab mg/L	Report Daily Average and Daily Maximum Measurement Frequency	Sample Type
Flow	Report, MGD	Report, MGD	N/A	1/day [2]	Estimate
Total Suspended Solids	30	50	50	1/6 months [2, 3]	Grab [4]
Chemical Oxygen Demand	N/A	200	200	1/6 months [2, 3]	Grab
Oil and Grease	15	20	20	1/6 months [2, 3]	Grab [4]

2. The pH shall not be less than 6.0 standard units nor greater than 10.0 standard units and shall be monitored 1/6 months [2, 3] by grab sample [4].

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

4. Effluent monitoring samples shall be taken at the following locations:

   At Outfall 712(a), at the weir of Pond No. 8, prior to discharge entering the Discharge Canal #2.

   At Outfall 712(b), at the weir of pump discharge outlet from Pond No. 6, prior to discharge entering the intake canal.

[1] See Other Requirement No. 21.
[2] When discharge occurs.
[3] See Other Requirement No. 8.
[4] See Other Requirement No. 10.

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 stormwater runoff collected in the Sludge and Fly Ash Disposal Landfill, the Class 1 Landfill and Retention Pond and stormwater from the Sludge and Fly Ash Disposal Landfill and the Class 1 Landfill subject to the following effluent limitations:

   Volume: Intermittent and flow-variable.

Effluent Characteristics	Discharge Limitations			Minimum Self-Monitoring Requirements	
	Daily Average mg/L	Daily Maximum mg/L	Single Grab mg/L	Report Daily Average and Daily Maximum Measurement Frequency	Sample Type
Flow	Report, MGD	Report, MGD	N/A	1/day [1]	Estimate
Total Suspended Solids	30	50	50	1/6 months [1, 2]	Grab
Oil and Grease	N/A	15	15	1/6 months [1, 2]	Grab
Selenium, Total	N/A	0.2	0.2	1/6 months [1, 2]	Grab

2. The pH shall not be less than 6.0 standard units nor greater than 9.0 standard units and shall be monitored 1/6 months [1, 2] by grab sample.

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

4. Effluent monitoring samples shall be taken at the following locations: At Outfall 713, Pond No. 9 (Fly Ash Runoff Pond), from the weir prior to discharge entering the Discharge Canal #2.

[1] When discharge occurs.
[2] See Other Requirement No. 10.

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 flue gas desulphurization (FGD) wastewater [1], low volume waste sources [1], auxiliary cooling water area drains, quench water, wash down water, stormwater [1], Sludge Recycle Holding pond dewatering, chemical metal cleaning waste [2], metal cleaning wastes [3], and utility wastewater subject to the following effluent limitations:

   Volume: Intermittent and flow-variable.

Effluent Characteristics	Discharge Limitations			Minimum Self-Monitoring Requirements	
	Daily Average mg/L	Daily Maximum mg/L	Single Grab mg/L	Report Daily Average and Daily Maximum Measurement Frequency	Sample Type
Flow	Report, MGD	Report, MGD	N/A	1/day [4]	Estimate
Total Suspended Solids	30	100	100	1/week [4]	Grab
Oil and Grease	15	20	20	1/week [4]	Grab
Total Arsenic [5]	N/A	0.005	0.005	1/week [4]	Grab
Total Mercury [5]	1.0×10^{-8}	2.3×10^{-8}	5.0×10^{-6}	1/week [4]	Grab
Total Selenium [5]	N/A	0.01	0.01	1/week [4]	Grab
Nitrate/Nitrite as N [5]	1.2	2.0	2.0	1/week [4]	Grab
Bromide [5]	N/A	0.2	0.2	1/week [4]	Grab
Total Dissolved Solids [5]	149	306	306	1/week [4]	Grab
Total Iron	1.0	1.0	1.0	1/week [2]	Grab
Total Copper	0.5	1.0	1.0	1/week [2]	Grab

2. The pH shall not be less than 6.0 standard units nor greater than 10.0 standard units and shall be monitored 1/week [4] by grab sample.

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

4. Effluent monitoring samples shall be taken at the following locations: Outfall 714, at the outlet of the pond clarifier (Pond 13), prior to discharge entering the discharge canal.

[1] See Other Requirement No. 13.
[2] When discharging chemical metal cleaning waste, as defined in Other Requirement 13.B.
[3] See Other Requirement No. 13.G.
[4] When discharge occurs.
[5] Effluent limitations and associated monitoring requirements are effective beginning on December 31, 2028, when discharging FGD wastewater, and last through the date of permit expiration, except if the NOPP to cease coal combustion no later than December 31, 2028 is filed by December 31, 2025, then instead of these limits there would be no discharge of pollutants in FGD wastewater after April 30, 2029.

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 stormwater [1] subject to the following effluent limitations:

   Volume: Intermittent and flow-variable.

Effluent Characteristics	Discharge Limitations			Minimum Self-Monitoring Requirements	
	Daily Average mg/L	Daily Maximum mg/L	Single Grab mg/L	Report Daily Average and Daily Maximum Measurement Frequency	Sample Type
Flow	N/A	Report, MGD	N/A	1/6 months [2, 3]	Estimate
Chemical Oxygen Demand	N/A	200	200	1/6 months [2, 3]	Grab
Oil and Grease	N/A	15	15	1/6 months [2, 3]	Grab

2. The pH shall not be less than 6.0 standard units nor greater than 9.0 standard units and shall be monitored 1/6 months [2, 3] by grab sample.

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

4. Effluent monitoring samples shall be taken at the following location: At Outfall 014 at the end of pipe, prior to discharge entering Calaveras Lake.

[1] See Other Requirement Nos. 13 and 21.
[2] When discharge occurs during normal business hours for the Environmental Operations Department, excluding Saturday, Sunday, and holidays. Samples must be obtained within two hours of initiation of discharge.
[3] See Other Requirements No. 10.

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 stormwater [1] subject to the following effluent limitations:

   Volume: Intermittent and flow-variable.

Effluent Characteristics	Discharge Limitations			Minimum Self-Monitoring Requirements	
	Daily Average mg/L	Daily Maximum mg/L	Single Grab mg/L	Report Daily Average and Daily Maximum Measurement Frequency	Sample Type
Flow	N/A	Report, MGD	N/A	1/6 months [2, 3]	Estimate
Chemical Oxygen Demand	N/A	200	200	1/6 months [2, 3]	Grab
Oil and Grease	N/A	20	20	1/6 months [2, 3]	Grab [4]

2. The pH shall not be less than 6.0 standard units nor greater than 9.0 standard units and shall be monitored 1/6 months [2, 3] by grab [4] sample.

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

4. Effluent monitoring samples shall be taken at the following location:

   Outfall 015 [5] - At the drainage culvert located west of the railroad tracks, prior to discharge entering Calaveras Lake.
   Outfall 016 [5] – At the drainage culvert located west of the railroad track, south of Outfall 015, prior to discharge entering Calaveras Lake.
   Outfall 017 [5] – At the drainage culvert located west of the railroad tracks, south of Outfall 016, prior to entering Calaveras Lake.

[1] See Other Requirement Nos. 13 and 21.
[2] When discharge occurs during normal business hours for the Environmental Operations Department, excluding Saturday, Sunday, and holidays. Samples must be obtained within two hours of initiation of discharge.
[3] See Other Requirement No. 10.
[4] See Other Requirement No. 8.
[5] See Other Requirement No. 16.

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 stormwater [1] subject to the following effluent limitations:

   Volume: Intermittent and flow-variable.

Effluent Characteristics	Discharge Limitations			Minimum Self-Monitoring Requirements	
	Daily Average mg/L	Daily Maximum mg/L	Single Grab mg/L	Report Daily Average and Daily Maximum Measurement Frequency	Sample Type
Flow	N/A	Report, MGD	N/A	1/6 months [2, 3]	Estimate
Chemical Oxygen Demand	N/A	200	200	1/6 months [2, 3]	Grab
Oil and Grease	N/A	20	20	1/6 months [2, 3]	Grab

2. The pH shall not be less than 6.0 standard units nor greater than 9.0 standard units and shall be monitored 1/6 months [2, 3] by grab sample.

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

4. Effluent monitoring samples shall be taken at the following location: At Outfall 018, at the end of pipe, prior to discharge entering Calaveras Lake.

[1] See Other Requirement Nos. 13 and 21.
[2] When discharge occurs during normal business hours for the Environmental Operations Department, excluding Saturday, Sunday, and holidays. Samples must be obtained within two hours of initiation of discharge.
[3] See Other Requirement No. 10.

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.

8. In accordance with the procedures described in 30 TAC §§35.301 - 35.303 (relating to Water Quality Emergency and Temporary Orders) if the permittee knows in advance of the need for a bypass, it shall submit prior notice by applying for such authorization.

9. Changes in Discharges of Toxic Substances

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

   a. That any activity has occurred or will occur 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.

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OTHER REQUIREMENTS

1. The permittee shall provide written notification to the TCEQ Industrial Permits Team (MC 148) and Region 13 Office of implementation of the Zebra Mussel mitigation program of continuous or semi-continuous alternating of 15 minutes on and 45 minutes off chlorination with a concentration of 0.3 to 0.5 parts per million of TRC. Free available chlorine (FAC) and Total residual chlorine (TRC) limits and methods described in the permit and in Other Requirement Nos. 4 and 6 cannot be violated with the mitigation process. 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.

2. COAL COMBUSTION RESIDUALS

   The permittee must comply with the requirements of 40 CFR Chapter 257 regarding closure and post-closure care of solid waste impoundments which contain coal combustion residuals.

   Additionally, the permittee must comply with the following requirements:

   A. Pond 3 (North Bottom Ash Pond) – All discharges from Pond 3 must cease prior to December 31, 2025.

   B. Pond 4 (South Bottom Ash Pond) – All discharges from Pond 4 must cease prior to December 31, 2025.

   C. Pond 7 (Sludge Recycling Holding Pond) – Flue-gas desulfurization wastewater generated on and after December 31, 2028 may not be routed to Pond 7; however, if the Notice of Planned Participation (NOPP) to cease coal combustion no later than December 31, 2028 is filed by the permittee by December 31, 2025, then FGD wastewater generated before December 31, 2028 may continue to be routed and discharged from Pond 7 until April 30, 2029.

3. COOLING WATER INTAKE STRUCTURE REQUIREMENTS

   The permittee shall provide written notification to the TCEQ Industrial Permits Team (MC-148) and the Region 13 Office of any change in 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.

4. There shall be no discharge of polychlorinated biphenyl compounds such as those commonly used for transformer fluid.

5. ONCE-THROUGH COOLING WATER EXEMPTION

   In accordance with 30 TAC § 307.8(d) and based upon statistical analysis and source investigation, a once-through cooling water exemption for TDS, chloride, and sulfate has been approved by the Water Quality Standards Implementation Team at Outfalls 001 and 007. As a result of this analysis, the permit will be issued without effluent limitations based on water quality criteria for TDS, chloride, and sulfate; however, the permittee must conduct long-term monitoring at a frequency of once per year for these exempted pollutants at Outfalls 001 and 007.

   The above records must be maintained on an annual basis and be available at the plant site for inspection by authorized representatives of the TCEQ for at least five years. Additionally, the

permittee must submit the results of such monitoring with the application for each subsequent permit action.

Based on a technical review of the submitted monitoring results, an amendment may be initiated by TCEQ staff to include additional effluent limitations, monitoring requirements, or both.

6. EFFLUENT TESTING REQUIREMENTS

Stormwaters discharged via Outfalls 006, 014, 015, 016, 017, and 018 must be sampled and analyzed as directed below for those parameters listed in Table SW-1 of Attachment A. Analytical testing for Table SW-1 at Outfalls 006 must be completed within 60 days of initial discharge. Results of the analytical testing must be submitted within 90 days of initial discharge to the Industrial Wastewater Permits Team (MC-148). Based on a technical review of the submitted analytical results, an amendment may be initiated by TCEQ staff to include additional effluent limitations, monitoring requirements, or both.

Table SW-1: Analysis is required for all pollutants in Table SW-1. Wastewater must be sampled and analyzed for those parameters listed in Table SW-1 for a minimum of one sampling event.

The permittee shall report the flow at Outfalls 006, 014, 015, 016, 017, and 018 in MGD in the attachment. The permittee shall indicate on the table whether the samples are composite (C) or grab (G) by checking the appropriate box.

7. Violations of daily maximum limitations for the following pollutants shall be reported orally or by facsimile to TCEQ Region 13 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 13 and Compliance Monitoring Team (MC 224):

Pollutant	**MAL[1] (mg/L)**
Arsenic (Total)	0.0005
Mercury (Total)	0.000005
Nitrate/Nitrite as N	0.100
Selenium (Total)	0.005
Bromide (Total)	0.400

Test methods used must be sensitive enough to demonstrate compliance with the permit effluent limitations. If an effluent limit for a pollutant is less than the MAL, then the test method for that pollutant must be sensitive enough to demonstrate compliance at the MAL. Permit compliance/noncompliance determinations will be based on the effluent limitations contained in this permit, with consideration given to the MAL for the pollutants specified above.

When an analysis of an effluent sample for a pollutant 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 shall be used for that measurement when making calculations 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 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:

[1] Minimum analytical level.

"The reported value(s) of zero for ____[list pollutant(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 pollutant 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 pollutant, the level of detection achieved shall be used for that measurement when making calculations for the self-reporting form. A zero may not be used.

8. If more than one source is being discharged, the permittee shall obtain grab samples from each source and use the appropriate analysis procedure below.

   A. Total Suspended Solids: Grab samples obtained from each source may be analyzed in either of the following ways:

      i. Individually – Each sample may be analyzed individually. The daily average must be the flow-weighted average of the results for all samples, and the daily maximum must be the maximum of the results for all samples; or

      ii. Combined – All samples may be physically combined into a single flow-weighted sample for analysis and reporting.

   B. Oil and Grease: Grab samples must be analyzed individually. The daily average must be the flow-weighted average of the results for all samples, and the daily maximum must be the maximum of the results for all samples.

   C. pH: Grab samples must be analyzed individually. The minimum and maximum of the results for all samples must be used for reporting purposes.

   D. E. coli: Grab samples must be analyzed individually. The daily average must be the flow-weighted geometric mean of the results for all samples, and the daily maximum must be the maximum of the results for all samples.

   In order to clarify and define the location of complex outfalls described in the permit, the permittee shall identify each point of discharge by a placard (or some type of label) that contains the outfall number corresponding to that point of discharge. The permittee may apply for consideration of alternate sampling and laboratory test methods in accordance with the provisions of 30 TAC § 319.12.

9. This provision supersedes and replaces Provision 1, Paragraph 1 of Monitoring and Reporting Requirements found on Page 4 of this permit.

   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 TCEQ Compliance Monitoring Team (MC-224), by the 25th 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.

10. Monitoring results must be provided at the intervals specified in this permit. For pollutants which are monitored twice per year, the first effluent report must be submitted six months after the date of permit issuance and subsequent reports every six months thereafter. For discharges that are not continuous and are intermittent in nature, and for discharges which do not occur regularly, (e.g., monthly) sampling must be scheduled and conducted to ensure that two results are submitted each year.

11. DOMESTIC WASTEWATER

    This requirement applies to the treatment and disposal of domestic wastewater at internal Outfall 110 only.

    On-site disposal of sewage sludge is not authorized. The permittee shall ensure that all sewage sludge which is not a hazardous waste (as defined in 30 TAC Chapter 335) is handled, transported, and disposed of in compliance with the applicable provisions of 30 TAC Chapter 312. The permittee shall ensure that all sewage sludge which is a hazardous waste (as defined in 30 TAC Chapter 335) is handled, transported, and disposed of in compliance with the applicable provisions of 30 TAC Chapter 335. The permittee shall keep records of all sludges removed from the wastewater treatment plant site. Such records will include the following information:

    A. volume (dry weight basis) of sludge disposed;

    B. date of disposal;

    C. identity and registration number of hauler;

    D. location and registration or permit number of disposal site; and

    E. method of final disposal.

    The above records must be maintained on a monthly basis and be available at the plant site for inspection by authorized representatives of the TCEQ for at least five years.

12. MIXING ZONE DEFINITIONS

    The mixing zone at Outfalls 001, 002, and 007 is defined as a volume within a radius of 100 feet from the point of discharge. Chronic toxic criteria apply at the edge of the mixing zone.

13. DEFINITIONS

    A. The term *transport water* means any wastewater that is used to convey fly ash, bottom ash, or economizer ash from the ash collection or storage equipment, or boiler, and has direct contact with the ash. Transport water does not include low volume, short duration discharges of wastewater from minor leaks (*e.g.,* leaks from valve packing, pipe flanges, or piping), minor maintenance events (*e.g.,* replacement of valves or pipe sections), FGD paste equipment cleaning water, or bottom ash purge water.

       The term *fly ash* means the ash that is carried out of the furnace by a gas stream and collected by a capture device such as a mechanical precipitator, electrostatic precipitator, or fabric filter. Economizer ash is included in this definition when it is collected with fly ash. Ash is not included in this definition when is collected in wet scrubber air pollution control systems whose primary purpose is particulate removal.

The term *bottom ash* means the ash, including boiler slag, which settles in the furnace or is dislodged from furnace walls. Economizer ash is included in this definition when it is collected with bottom ash.

Except for discharges to which 40 CFR §423.13(k)(2) applies or when the bottom ash transport water is used in the FGD scrubber, there shall be no discharge of pollutants in bottom ash transport water on and after December 31, 2025. Prior to this compliance date, whenever bottom ash transport water is used in any other plant process or is sent to a treatment system at the plant (except when it is used in the FGD scrubber), the resulting effluent must comply with the discharge limitations in this permit.

B. The term *chemical metal cleaning waste* means any wastewater resulting from the cleaning of any metal process equipment with chemical compounds, including, but not limited to, boiler tube cleaning.

C. The term *coal pile runoff* means the rainfall runoff from or through any coal storage pile.

Any untreated overflow from facilities designed, constructed and operated to treat the volume of "coal pile runoff" which is associated with a 10-year, 24-hour rainfall event is not subject to the total suspended solids limitations specified at Page 2d, of this permit.

The term *10 year, 24/hour rainfall event* means a rainfall event with a probable recurrence interval of once in ten years as defined by the National Weather Service in Technical Paper No. 40. *Rainfall Frequency Atlas of the United States,* May 1961 or equivalent regional rainfall probability information developed therefrom.

D. Flow-Weighted Average Temperature

The flow-weighted average temperature (FWAT) must be computed and recorded on a daily basis for Outfalls 001 and 007. The FWAT must be computed at equal time intervals not greater than two hours. The method of calculating FWAT is as follows:

$$\text{FWAT} = \frac{\Sigma\ (\text{INSTANTANEOUS FLOW} \times \text{INSTANTANEOUS TEMPERATURE})}{\Sigma\ (\text{INSTANTANEOUS FLOW})}$$

The *daily average temperature* must be computed as the arithmetic average of all FWATs calculated during the calendar month.

The *daily maximum temperature* must be set equal to the highest FWAT calculated during the calendar month.

E. The term *flue gas desulfurization (FGD) wastewater* means any wastewater generated specifically from the wet flue gas desulfurization scrubber system that comes into contact with the flue gas or the FGD solids, including but not limited to, the blowdown from the FGD scrubber system, overflow or underflow from the solids separation process, FGD solids wash water, and the filtrate from the solids dewatering process. Wastewater generated from cleaning the FGD scrubber, cleaning FGD solids separation equipment, cleaning FGD solids dewatering equipment, or that is collected in floor drains in the FGD process area is not considered FGD wastewater.

The discharge of FGD wastewater generated on and after December 31, 2028, shall be subject to the effluent limitations set forth in 40 CFR §423(g)(i)(3). Flue gas desulfurization wastewater must be sampled prior to commingling with any other wastestreams for compliance with the effluent limitations on pages 2, 2j, and 2m.

The revised rule released by EPA in November 2020, revised the technology-based effluent limitations, and compliance dates for the voluntary incentives program (VIP) for FGD. The permittee has requested that the compliance period for FGD be revised to December 31, 2028 by meeting the VIP by implementing a zero-liquid discharge (ZLD) evaporative technology for treatment of the FGD. The permittee has submitted a preliminary plan for the addition of four

proposed disposal ponds for FGD wastewater. The Executive Director has reviewed the permittee's request and complies with the requirements of 40 CFR §423.13(g)(3)(i). The permittee must submit an annual progress report, where it will identify completed milestones, and update remaining milestones to be completed in accordance with 40 CFR §423.19(h)(3) and 40 CFR §423.19(h)(4). The annual progress report must be submitted by the end of September of each year, until the project has been completed, but no later than December 31, 2028.

The permittee may, in accordance with 40 CFR § 423.13(o)(1)(ii)(A), file a Notice of Planned Participation (NOPP) by December 31, 2025 to instead cease coal combustion by December 31, 2028 and comply with FGD wastewater limits in 423.13(g)(2)(i). In this scenario, the permittee may discharge FGD wastewater generated prior to December 31, 2028 through April 30, 2029, after which time the effluent limits shall be zero discharge of pollutants in FGD wastewater.

F. The term *low volume waste sources* means, taken collectively as if from one source, wastewater from all sources except those for which specific limitations or standards are otherwise established in this part. Low volume waste sources include, but are not limited to, the following: Wastewaters from ion exchange water treatment systems, water treatment evaporator blowdown, laboratory and sampling streams, boiler blowdown, floor drains, cooling tower basin cleaning wastes, recirculating house service water systems, and wet scrubber air pollution control systems whose primary purpose is particulate removal. Sanitary wastes, air conditioning wastes, and wastewater from carbon capture or sequestration systems are not included in this definition

G. The term *metal cleaning waste* means any wastewater resulting from cleaning [with or without chemical cleaning compounds] any metal process equipment including, but not limited to, boiler tube cleaning, boiler fireside cleaning, and air preheater cleaning.

H. The term *once-through cooling water* means water passed through the main cooling condensers in one or two passes for the purpose of removing waste heat.

I. Stormwater

i. The term *stormwater associated with industrial activities* includes the discharge from any conveyance that is used for collecting and conveying stormwater and that is directly related to manufacturing, processing, or raw materials storage areas at an industrial plant [see 40 CFR §122.26(b)(14) for complete definition].

ii. The term *allowable non-stormwater wastestreams* includes and is limited to:

a. discharges from emergency firefighting activities and uncontaminated fire hydrant flushings (excluding discharges of hyperchlorinated water, unless the water is first dechlorinated and discharges are not expected to adversely affect aquatic life);

b. potable water sources (excluding discharges of hyperchlorinated water, unless the water is first dechlorinated and discharges are not expected to adversely affect aquatic life);

c. lawn watering and similar irrigation drainage, provided that all pesticides, herbicides, and fertilizer have been applied in accordance with the approved labeling;

d. water from the routine external washing of buildings, conducted without the use of detergents or other chemicals;

e. water from the routine washing of pavement conducted without the use of detergents or other chemicals and where spills or leaks of toxic or hazardous materials have not occurred (unless all spilled material has been removed);

f. uncontaminated air conditioner condensate, compressor condensate, and steam condensate, and condensate from the outside storage of refrigerated gases or liquids;

g. water from foundation or footing drains where flows are not contaminated with pollutants (e.g., process materials, solvents, and other pollutants);

h. uncontaminated water used for dust suppression;

i. springs and other uncontaminated ground water;

j. other discharges described in Part V of TPDES general permit TXR050000 that are subject to effluent guidelines and effluent limitations.

k. See the Construction General Permit (TXR150000) for additional allowable non-stormwater wastewaters.

iii. *Stormwater Associated with Construction Activities* - See Other Requirement No. 21 for the definition and applicable requirements.

J. Total Residual Chlorine

i. The term *total residual chlorine* (or total residual oxidants for intake water with bromides) means the value obtained using any of the "chlorine—total residual" methods in Table IB in 40 CFR Part 136.3(a), or other methods approved by the TCEQ.

ii. Daily mass loading of total residual chlorine (TRC) shall be calculated using the following equation.

∑ TRC (mg/L) x Flow (MGD) * 8.345 (Conversion Factor) *(chlorination period for each unit [hours]) = lb/day

where TRC (mg/L) = total concentration measured in the effluent during representative periods of chlorination; values less than 0.1 mg/L may be calculated as "zero".

Flow (MGD) = total actual flow of discharge via the outfall during the sampling day.

iii. In the event Zebra Mussels are found in Calaveras Lake, CPS Energy will notify TCEQ. After notification, multi-unit continuous or semi-continuous chlorination (15 minutes on, 45 minutes off) chlorination may be conducted as long as the total residual concentration is less than 0.5 ppm during the period of chlorination. Any other treatment option will be submitted to TCEQ for approval in accordance with Permit Conditions Item 1.a on Page 7. The permittee has demonstrated to the TCEQ that the units in a particular location cannot operate at or below the level of chlorination of 2 hours per day maximum. The daily maximum limitation for TRC has been changed to 0.1 mg/L to allow for these variations.

iv. After notification has been made in accordance with Other Requirement 1, the permittee will have demonstrated to the TCEQ that the units in a particular location cannot operate at or below the level of chlorination of 2 hours per day maximum. The daily maximum limitation for TRC will change to 0.1 mg/L to allow for these variations and daily mass limits will not apply.

K. The term *water treatment wastes* include but is not limited to, cold lime water treatment wastes, demineralizer backwash, filter backwash, ion exchange water treatment system wastes, membrane regeneration wastes, and reverse osmosis reject water.

L. The term *utility wastewater* includes but is not limited to, wash water, electrical vault water, city water, service water, cooling water pump discharges, and intake structure screen wash water.

M. The term "free available chlorine" means the value obtained using any of the "chlorine-free available" methods in Table IB in 40 CFR 136.3(a) where the method has the capability of

measuring free available chlorine, or other methods approved by the TCEQ.

i. Daily mass loading of total residual chlorine (FAC) shall be calculated using the following equation.

∑ FAC (mg/L) x Flow (MGD) * 8.345 (Conversion Factor) *(chlorination period for each unit [hours]) = lb/day

where FAC (mg/L) = total concentration measured in the effluent during representative periods of chlorination; values less than 0.1 mg/L may be calculated as "zero".
Flow (MGD) = total actual flow of discharge via the outfall during the sampling day.

ii. After notification has been made in accordance with Other Requirement 1, the permittee will have demonstrated to the TCEQ that the units in a particular location cannot operate at or below the level of chlorination of 2 hours per day maximum. The daily maximum limitation for FAC will change to 0.25 mg/L to allow for these variations and daily mass limits will not apply. The permittee has demonstrated to the TCEQ that the units in a particular location cannot operate at or below the level of chlorination of 2 hours per day maximum. The daily maximum limitation for FAC has been changed to 0.25 mg/L to allow for these variations.

14. Reporting requirements according to 30 TAC §§ 319.1-319.12 and any additional effluent reporting requirements contained in the permit are suspended for internal Outfall 110 from the permit upon notification received from the permittee that the discharge of internal Outfall 110 has ceased, from the facility described by this permit. The permittee shall provide written notice to the TCEQ Region 13 Office, Applications Review and Processing Team (MC 148) of the Water Quality Division, and Compliance Monitoring Team (MC 224) at least forty-five days prior to anticipated disposal of wastewater to the evaporation pond, on Notification of Completion Form 20007.

15. POND REQUIREMENTS

Name	Use Treatment (T) Disposal (D) Containment (C) Evaporation (E)	Description	Compliance with 40 CFR Part 257, Subpart D Required?
Pond #1	C	Diked Oil Storage Area	No
Pond #2	C, T	Coal Pile Runoff Pond	No
Pond #3	C	North Bottom Ash Pond	Yes, to be closed according to CCR requirements in 40 CFR Parts 257
Pond #4	C	South Bottom Ash Pond	Yes, to be closed according to CCR requirements in 40 CFR Parts 257
Pond #5	C	Stormwater (Southwest Runoff Pond 3)	No
Pond #6	C	Stormwater (CRP Runoff Pond 1)	No
Pond #7	C, T	Sludge Recycle Holding/Flue-gas Desulphurization (FGD) Pond	Yes, to be closed after 2028
Pond #8	C	Stormwater (CRP Runoff Pond 2)	No

Name	Use Treatment (T) Disposal (D) Containment (C) Evaporation (E)	Description	Compliance with 40 CFR Part 257, Subpart D Required?
Pond #9	C, T	Stormwater Runoff (Fly Ash) Pond	Yes
Pond #10	E	Evaporation Pond	Yes
Pond #11	C	Clarifier Sludge Recycling pond	No
Pond #12	C	Stormwater (Coal conveyor area temporary holding pond)	No
Pond #13	C, T	New Low-Volume Waste/FGD Waste Pond	Yes
Ponds #14 - 16	E	New FGD Waste Evaporation Ponds	Yes, new construction
Pond # 17	E	Evaporation Pond	Yes
Pond # 18	E	Evaporation Pond	Yes

A wastewater pond must comply with the following 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. A wastewater pond **subject to 40 CFR Part 257, Subpart D** (related to coal combustion residuals) must comply with those requirements in lieu of the requirements in subparagraphs B through G of POND REQUIREMENTS.

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 discharge 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. 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 items 3.i through 3.iii and subparagraphs 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 3.i through 3.iii of this subparagraph.

i. 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.

ii. 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.

iii. 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).

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 3.i – 3.iii 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.

i. The certification must be provided to the TCEQ Water Quality Assessment Team (MC-150), Industrial Permits Team (MC-148), Compliance Monitoring Section (MC-224), and TCEQ 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).

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

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

iii. 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.

iv. 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 unauthorized discharge, then the repair must be documented and certified by a Texas licensed professional engineer. Within 60 days after a repair is completed, liner certification must be provided to the TCEQ Water Quality Assessment Team (MC-150), Compliance Monitoring Section (MC-224), and TCEQ 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:

i. 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;

ii. 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

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

16. REPRESENTATIVE SAMPLING

Outfalls 015, 016, and 017 are authorized to discharge substantially identical effluents (i.e., stormwaters). The permittee may sample the effluent discharged via only one outfall (Outfall 015, 016, or 017) and report that quantitative data as applying to the substantially other identical outfalls (Outfall 015, 016, or 017).

17. The following provisions apply to ponds existing prior to October 10, 1997:

A. The fly ash disposal pit must be constructed and maintained in such a manner that a minimum of three (3) feet of clay-rich (liquid limit with a minimum value of 30, plasticity index with a minimum value of 15) soil material which exhibits a permeability of 1 × 10-7 cm/sec, or its equivalent (in no case less than eighteen (18) inches in thickness), directly underlies the base of the pit. Natural in-place solids that do not meet the above criteria must be removed or covered with a sufficient thickness of compacted clay-rich soil material so as to provide a soil-barrier equivalent to three (3) feet of soil having a permeability of 1 × 10-7 cm/sec.

B. The fly ash disposal pit must be constructed in such a manner that at least two (2) feet of recompacted clay-rich (liquid limit with a minimum value of 30, plasticity index with a minimum value of 15) soil material which exhibits a permeability of 1 × 10-7 cm/sec, or its equivalent, lines the dike which will form the sides of the disposal pit.

C. The permittee shall maintain a minimum of three (3) groundwater monitor wells completed to sample groundwater below the fly ash disposal pit.

D. The fly ash disposal pit groundwater monitor wells must be sampled in February and August of each year. The samples obtained must be analyzed for pH, total dissolved solids, chloride, sulfate, and chemical oxygen demand.

E. The permittee shall submit the results of the analyses described above to the TCEQ Wastewater Permitting Section (MC 148) and the Water Quality Assessment Team (MC 150) of the Water Quality Division and to the TCEQ Region 13 Office within 60 days of each required sampling.

F. The permittee shall maintain at least two feet of freeboard in the fly ash disposal pit.

18. DISPOSAL VIA EVAPORATION

Upon completion of the evaporation ponds for the disposal of domestic wastewater and non-CCR wastewater (boiler cleaning waste, ion exchange wastewater, steam turbine cleaning liquid waste, waste plasma cutter liquid waste, acid/base vessel cleaning liquid waste, spill cleanup liquid waste, laboratory analyte solution liquid waste, air preheater basket cleaning waste, heat exchanger condenser liquid cleaning waste, circulating water from service activities on plant equipment), wastewater grab samples shall be collected and analyzed quarterly for total suspended solids (TSS), oil and grease, and pH. The summation of the daily average flow routed to the evaporation pond must not exceed an annual average flow of 0.027 million gallons per day (MGD). Effluent limitations must not exceed a single grab of 45 mg/L BOD_5 (applicable for domestic wastewater only), 100 mg/L TSS, and a pH between 5.0 and 10.0 standard units. The wastewater samples shall be collected at a point located after all waste streams are commingled but prior to the wastewater entering the evaporation pond. If waste streams are not commingled, each waste stream must be sampled prior to entering the evaporation pond and analyzed separately. Results from the analyses must be retained on site for five years and available for inspection by authorized representatives of the Texas Commission on Environmental Quality (TCEQ). This data must be submitted to the Industrial Permits Team (MC 148), and Region 13 Office during the month of September of each calendar year.

19. This permit authorizes the discharge of coal pile runoff and car and equipment wash water on an intermittent and flow-variable basis via internal Outfall 104. In addition, internal Outfall 104 receives treated domestic wastewater from internal Outfall 110. Effluent monitoring samples must be taken at the following location: At internal Outfalls 110c and 110d, where treated effluent is discharged from the rail car maintenance plant and the coal yard dumper house, prior to discharge to the coal pile runoff pond.

20. Grab samples for oil and grease analysis from internal Outfalls 112(d) and 112(e) must be taken at the following frequencies:

    A. When only boiler blowdown is discharged – once per six months (1/6 months); or

    B. When any other authorized waste stream is discharged – once per week (1/week).

21. Stormwater discharges from construction activities and construction support activities, and allowable non-stormwater discharges described in section (a)(1)-(8) below are authorized for discharge under this TPDES individual permit via Outfalls 001, 111, 007, 712, 014, 015, 016, 017, and 018.

    (a) Allowable non-stormwater discharges authorized for discharge are limited to the following, unless specific waste streams are identified on Page 2, 2f, 2j, 2k, 2n, 2o, and 2p of this permit:

        (1) discharges from emergency fire-fighting activities (emergency fire-fighting activities do not include washing of trucks, run-off water from training activities, test water from fire suppression systems, or similar activities);

        (2) uncontaminated fire hydrant flushings (excluding discharges of hyperchlorinated water, unless the water is first dechlorinated and discharges are not expected to adversely affect aquatic life), which include flushings from systems that utilize potable water, surface water, or groundwater that does not contain additional pollutants (uncontaminated fire hydrant flushings do not include systems utilizing reclaimed wastewater as a source water);

        (3) water from the routine external washing of vehicles, the external portion of buildings or structures, and pavement, where solvents, detergents, and soaps are not used, where spills or leaks of toxic or hazardous materials have not occurred (unless spilled materials have been removed; and if local state, or federal regulations are applicable, the materials are removed according to those regulations), and where the purpose is to remove mud, dirt, or dust;

        (4) uncontaminated water used to control dust;

        (5) potable water sources, including waterline flushings, but excluding discharges of hyperchlorinated water, unless the water is first dechlorinated and discharges are not expected to adversely affect aquatic life;

        (6) uncontaminated air conditioning condensate;

        (7) uncontaminated ground water or spring water, including foundation or footing drains where flows are not contaminated with industrial materials such as solvents; and

        (8) lawn watering and similar irrigation drainage.

    (b) The permittee must implement and comply with the permit conditions and requirements outlined in the current TPDES stormwater Construction General Permit, TXR150000, effective on March 5, 2023, that are applicable for the type of operator and size of soil disturbing construction activities and construction support activities except as detailed in paragraphs (d) and (f) below. The permittee must identify and document the conditions and requirements established in TXR150000 that are applicable to its construction activities, including the development and implementation of a stormwater pollution prevention plan (SWP3) and best management practices (BMPs). The SWP3 must include justification documenting which conditions and requirements in TXR150000 are applicable to the permittee's construction activities and construction support activities.

(c) The SWP3 and any other applicable records required by TXR150000 must be kept current, maintained onsite, and made readily available to TCEQ, federal, state, or local government representatives upon request.

(d) Since stormwater discharges from construction activities and construction support activities and allowable non-stormwater discharges are authorized under this TPDES individual permit, there is no requirement for the permittee to obtain separate authorization(s) under TXR150000 by filing of a Notice of Intent (NOI) for construction activities and construction support activities performed within the permitted facility.

(e) If authorization(s) under TXR150000 for stormwater discharges from construction activities and construction support activities and allowable non-stormwater discharges at Outfalls 001, 111, 712, 014, 015, 016, 017, and 018 exist, then the permittee must terminate coverage under TXR150000 for Outfalls 001, 111, 712, 014, 015, 016, 017, and 018 upon issuance of this TPDES individual permit.

(f) *Final Stabilization.* Because stormwater discharges from construction and construction support activities are covered under this TPDES individual permit, the permittee does not need to submit a Notice of Termination (NOT) after final stabilization has been completed. Instead, the permittee must document in the SWP3 the dates when soil disturbing construction activities are completed, and the final stabilization conditions and requirements established in TXR150000 have been achieved on any portion of the permitted facility.

(g) Should the permittee decide to alternatively obtain coverage to discharge under TXR150000, the permittee must file an application for a minor amendment of this TPDES individual permit to remove the authorization to discharge stormwater from construction activities and construction support activities, and allowable non-stormwater discharges. Once this individual permit is modified and issued, it is the responsibility of the permittee to obtain coverage under the TXR150000 for any construction activities within the permitted facility.

The permittee is placed on notice that authorization to continue discharging stormwater from construction activities and construction support activities, and allowable non-stormwater discharges under this TPDES individual permit, this Other Requirement 21 will be updated at the time of the next permitting action for this TPDES individual permit to require the permittee to comply with any new or revised conditions and requirements established within the current reissued and updated TXR150000.

ATTACHMENT A

Table SW-1

Pollutant	Effluent Concentration (mg/L)					MAL (mg/L)
	Grab Sample[1]	Flow-Weighted	Grab Sample[3]	Flow-Weighted	Number of Storm	

[1] Sample must be taken during the first 30 minutes of discharge.

		Composite Sample		**Composite Sample**	**Events Sampled**	
pH (Standard Units)	(min)	(max)	(min)	(max)		—
Total Suspended Solids						—
Chemical Oxygen Demand						—
Total Organic Carbon						—
Oil and Grease						—
Total Arsenic						0.010
Total Barium						0.010
Total Cadmium						0.001
Total Chromium						0.010
Trivalent Chromium						—
Hexavalent Chromium						0.010
Total Copper						0.010
Total Lead						0.005
Total Mercury						0.0002
Total Nickel						0.010
Total Selenium						0.010
Total Silver						0.002
Total Zinc						0.005

CHRONIC BIOMONITORING REQUIREMENTS: FRESHWATER

The provisions of this section apply to Outfalls 001 and 007 for whole effluent toxicity (WET) testing.

1. Scope, Frequency, and Methodology

a. The permittee shall test the effluent for toxicity in accordance with the provisions below. Such testing will determine if an appropriately dilute effluent sample adversely affects the survival, reproduction, or growth of the test organisms.

b. The permittee shall conduct the following toxicity tests utilizing the test organisms, procedures, and quality assurance requirements specified in this part of this permit and in accordance with "Short-Term Methods for Estimating the Chronic Toxicity of Effluents and Receiving Waters to Freshwater Organisms," fourth edition (EPA-821-R-02-013) or its most recent update:

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

2) Chronic static renewal 7-day larval survival and growth test using the fathead minnow (*Pimephales promelas*) (Method 1000.0). A minimum of five replicates with eight organisms per replicate shall be used in the control and in each dilution. This test shall be conducted once per quarter.

The permittee must perform and report a valid test for each test species during the prescribed reporting period. An invalid test must be repeated during the same reporting period. An invalid test is defined as any test failing to satisfy the test acceptability criteria, procedures, and quality assurance requirements specified in the test methods and permit.

c. The permittee shall use five effluent dilution concentrations and a control in each toxicity test. These effluent dilution concentrations are 32%, 42%, 56%, 75%, and 100% effluent. The critical dilution, defined as 100% effluent, is the effluent concentration representative of the proportion of effluent in the receiving water during critical low flow or critical mixing conditions.

d. This permit may be amended to require a WET limit, a chemical-specific effluent limit, a best management practice, or other appropriate actions to address toxicity. The permittee may be required to conduct a toxicity reduction evaluation (TRE) after multiple toxic events.

e. Testing Frequency Reduction

1) If none of the first four consecutive quarterly tests demonstrates significant toxicity, the permittee may submit this information in writing and, upon approval, reduce the testing frequency to once per six months for the invertebrate test species and once per year for the vertebrate test species.

2) If one or more of the first four consecutive quarterly tests demonstrates significant toxicity, the permittee shall continue quarterly testing for that species until this permit is reissued. If a testing frequency reduction had been

previously granted and a subsequent test demonstrates significant toxicity, the permittee will resume a quarterly testing frequency for that species until this permit is reissued.

2. Required Toxicity Testing Conditions

a. Test Acceptance - The permittee shall repeat any toxicity test, including the control and all effluent dilutions, which fail to meet the following criteria:

1) a control mean survival of 80% or greater;

2) a control mean number of water flea neonates per surviving adult of 15 or greater;

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

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

5) a critical dilution CV% of 40 or less for the young of surviving females in the water flea test; and the growth and survival endpoints for the fathead minnow test. However, if statistically significant lethal or nonlethal effects are exhibited at the critical dilution, a CV% greater than 40 shall not invalidate the test;

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

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

b. Statistical Interpretation

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

2) For the water flea reproduction test and the fathead minnow larval survival and growth tests, the statistical analyses used to determine if there is a significant difference between the control and an effluent dilution shall be in accordance with the manual referenced in Part 1.b.

3) The permittee is responsible for reviewing test concentration-response relationships to ensure that calculated test-results are interpreted and reported correctly. The document entitled "Method Guidance and Recommendation for Whole Effluent Toxicity (WET) Testing (40 CFR Part 136)" (EPA 821-B-00-004) provides guidance on determining the validity of test results.

4) If significant lethality is demonstrated (that is, there is a statistically significant difference in survival at the critical dilution when compared to the survival in the control), the conditions of test acceptability are met, and the survival of the test organisms are equal to or greater than 80% in the critical dilution and all

dilutions below that, then the permittee shall report a survival No Observed Effect Concentration (NOEC) of not less than the critical dilution for the reporting requirements.

5) The NOEC is defined as the greatest effluent dilution at which no significant effect is demonstrated. The Lowest Observed Effect Concentration (LOEC) is defined as the lowest effluent dilution at which a significant effect is demonstrated. A significant effect is herein defined as a statistically significant difference between the survival, reproduction, or growth of the test organism in a specified effluent dilution when compared to the survival, reproduction, or growth of the test organism in the control.

6) The use of NOECs and LOECs assumes either a monotonic (continuous) concentration-response relationship or a threshold model of the concentration-response relationship. For any test result that demonstrates a non-monotonic (non-continuous) response, the NOEC should be determined based on the guidance manual referenced in Item 3.

7) Pursuant to the responsibility assigned to the permittee in Part 2.b.3), test results that demonstrate a non-monotonic (non-continuous) concentration-response relationship may be submitted, prior to the due date, for technical review. The guidance manual referenced in Item 3 will be used when making a determination of test acceptability.

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

c. Dilution Water

1) Dilution water used in the toxicity tests must be the receiving water collected as close to the point of discharge as possible but unaffected by the discharge.

2) Where the receiving water proves unsatisfactory as a result of pre-existing instream toxicity (i.e. fails to fulfill the test acceptance criteria of Part 2.a.), the permittee may substitute synthetic dilution water for the receiving water in all subsequent tests provided the unacceptable receiving water test met the following stipulations:

a) a synthetic lab water control was performed (in addition to the receiving water control) which fulfilled the test acceptance requirements of Part 2.a;

b) the test indicating receiving water toxicity was carried out to completion (i.e., 7 days);

c) the permittee submitted all test results indicating receiving water toxicity with the reports and information required in Part 3.

3) The synthetic dilution water shall consist of standard, moderately hard, reconstituted water. Upon approval, the permittee may substitute other appropriate dilution water with chemical and physical characteristics similar to that of the receiving water.

d. Samples and Composites

1) The permittee shall collect a minimum of three composite samples from Outfalls 001 and 007. The second and third composite samples will be used for the renewal of the dilution concentrations for each toxicity test.

2) The permittee shall collect the composite samples such that the samples are representative of any periodic episode of chlorination, biocide usage, or other potentially toxic substance being discharged on an intermittent basis.

3) The permittee shall initiate the toxicity tests within 36 hours after collection of the last portion of the first composite sample. The holding time for any subsequent composite sample shall not exceed 72 hours. Samples shall be maintained at a temperature of 0-6 degrees Centigrade during collection, shipping, and storage.

4) If Outfalls 001 or 007 ceases discharging during the collection of effluent samples, the requirements for the minimum number of effluent samples, the minimum number of effluent portions, and the sample holding time are waived during that sampling period. However, the permittee must have collected an effluent composite sample volume sufficient to complete the required toxicity tests with renewal of the effluent. When possible, the effluent samples used for the toxicity tests shall be collected on separate days if the discharge occurs over multiple days. The sample collection duration and the static renewal protocol associated with the abbreviated sample collection must be documented in the full report.

3. Reporting

All reports, tables, plans, summaries, and related correspondence required this section shall be submitted to the attention of the Standards Implementation Team (MC 150) of the Water Quality Division.

a. The permittee shall prepare a full report of the results of all tests conducted in accordance with the manual referenced in Part 1.b. for every valid and invalid toxicity test initiated whether carried to completion or not.

b. The permittee shall routinely report the results of each biomonitoring test on the Table 1 forms provided with this permit.

1) Annual biomonitoring test results are due on or before January 20th for biomonitoring conducted during the previous 12-month period.

2) Semiannual biomonitoring test results are due on or before July 20th and January 20th for biomonitoring conducted during the previous 6-month period.

3) Quarterly biomonitoring test results are due on or before April 20th, July 20th, October 20th, and January 20th for biomonitoring conducted during the previous calendar quarter.

4) Monthly biomonitoring test results are due on or before the 20th day of the month following sampling.

c. Enter the following codes for the appropriate parameters for valid tests only:

1) For the water flea, Parameter TLP3B, enter a "1" if the NOEC for survival is less than the critical dilution; otherwise, enter a "0."

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

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

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

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

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

7) For the fathead minnow, Parameter TLP6C, enter a "1" if the NOEC for survival is less than the critical dilution; otherwise, enter a "0."

8) For the fathead minnow, Parameter TOP6C, report the NOEC for survival.

9) For the fathead minnow, Parameter TXP6C, report the LOEC for survival.

10) For the fathead minnow, Parameter TWP6C, enter a "1" if the NOEC for growth is less than the critical dilution; otherwise, enter a "0."

11) For the fathead minnow, Parameter TPP6C, report the NOEC for growth.

12) For the fathead minnow, Parameter TYP6C, report the LOEC for growth.

d. Enter the following codes for retests only:

1) For retest number 1, Parameter 22415, enter a "1" if the NOEC for survival is less than the critical dilution; otherwise, enter a "0."

2) For retest number 2, Parameter 22416, enter a "1" if the NOEC for survival is less than the critical dilution; otherwise, enter a "0."

4. Persistent Toxicity

The requirements of this Part apply only when a test demonstrates a significant effect at the critical dilution. Significant effect and significant lethality were defined in Part 2.b. Significant sublethality is defined as a statistically significant difference in growth/reproduction at the critical dilution when compared to the growth/reproduction of the test organism in the control.

a. The permittee shall conduct a total of 2 additional tests (retests) for any species that demonstrates a significant effect (lethal or sublethal) at the critical dilution. The two retests shall be conducted monthly during the next two consecutive months. The permittee shall not substitute either of the two retests in lieu of routine toxicity testing. All reports shall be submitted within 20 days of test completion. Test completion is defined as the last day of the test.

b. If the retests are performed due to a demonstration of significant lethality, and one or both of the two retests specified in Part 4.a. demonstrates significant lethality, the permittee shall initiate the TRE requirements as specified in Part 5. The provisions of Part 4.a. are suspended upon completion of the two retests and submittal of the TRE action plan and schedule defined in Part 5.

If neither test demonstrates significant lethality and the permittee is testing under the reduced testing frequency provision of Part 1.e., the permittee shall return to a quarterly testing frequency for that species.

c. If the two retests are performed due to a demonstration of significant sublethality, and one or both of the two retests specified in Part 4.a. demonstrates significant lethality, the permittee shall again perform two retests as stipulated in Part 4.a.

d. If the two retests are performed due to a demonstration of significant sublethality, and neither test demonstrates significant lethality, the permittee shall continue testing at the quarterly frequency.

e. Regardless of whether retesting for lethal or sublethal effects or a combination of the two, no more than one retest per month is required for a species.

5. Toxicity Reduction Evaluation

a. Within 45 days of the retest that demonstrates significant lethality, or within 45 days of being so instructed due to multiple toxic events, the permittee shall submit a general outline for initiating a TRE. The outline shall include, but not be limited to, a description of project personnel, a schedule for obtaining consultants (if needed), a discussion of influent and effluent data available for review, a sampling and analytical schedule, and a proposed TRE initiation date.

b. Within 90 days of the retest that demonstrates significant lethality, or within 90 days of being so instructed due to multiple toxic events, the permittee shall submit a TRE action plan and schedule for conducting a TRE. The plan shall specify the approach and methodology to be used in performing the TRE. A TRE is a step-wise investigation combining toxicity testing with physical and chemical analyses to determine actions necessary to eliminate or reduce effluent toxicity to a level not effecting significant lethality at the critical dilution. The TRE action plan shall describe an approach for the reduction or elimination of lethality for both test species defined in Part 1.b. At a minimum, the TRE action plan shall include the following:

1) Specific Activities - The TRE action plan shall specify the approach the permittee intends to utilize in conducting the TRE, including toxicity characterizations, identifications, confirmations, source evaluations, treatability studies, and alternative approaches. When conducting characterization analyses, the permittee shall perform multiple characterizations and follow the procedures specified in the document entitled “Toxicity Identification Evaluation: Characterization of Chronically Toxic Effluents, Phase I” (EPA/600/6-91/005F) or alternate procedures. The permittee shall perform multiple identifications and follow the methods specified in the documents entitled “Methods for Aquatic Toxicity Identification Evaluations: Phase II Toxicity Identification Procedures for Samples Exhibiting Acute and Chronic Toxicity” (EPA/600/R-92/080) and “Methods for Aquatic Toxicity Identification Evaluations: Phase III Toxicity Confirmation Procedures for Samples Exhibiting

Acute and Chronic Toxicity" (EPA/600/R-92/081). All characterization, identification, and confirmation tests shall be conducted in an orderly and logical progression;

2) Sampling Plan - The TRE action plan should describe sampling locations, methods, holding times, chain of custody, and preservation techniques. The effluent sample volume collected for all tests shall be adequate to perform the toxicity characterization/identification/confirmation procedures and chemical-specific analyses when the toxicity tests show significant lethality. Where the permittee has identified or suspects a specific pollutant and source of effluent toxicity, the permittee shall conduct, concurrent with toxicity testing, chemical-specific analyses for the identified and suspected pollutant and source of effluent toxicity;

3) Quality Assurance Plan - The TRE action plan should address record keeping and data evaluation, calibration and standardization, baseline tests, system blanks, controls, duplicates, spikes, toxicity persistence in the samples, randomization, reference toxicant control charts, and mechanisms to detect artifactual toxicity; and

4) Project Organization - The TRE action plan should describe the project staff, project manager, consulting engineering services (where applicable), consulting analytical and toxicological services, etc.

c. Within 30 days of submittal of the TRE action plan and schedule, the permittee shall implement the TRE.

d. The permittee shall submit quarterly TRE activities reports concerning the progress of the TRE. The quarterly reports are due on or before April 20th, July 20th, October 20th, and January 20th. The report shall detail information regarding the TRE activities including:

1) results and interpretation of any chemical-specific analyses for the identified and suspected pollutant performed during the quarter;

2) results and interpretation of any characterization, identification, and confirmation tests performed during the quarter;

3) any data and substantiating documentation which identifies the pollutant and source of effluent toxicity;

4) results of any studies/evaluations concerning the treatability of the facility's effluent toxicity;

5) any data which identifies effluent toxicity control mechanisms that will reduce effluent toxicity to the level necessary to meet no significant lethality at the critical dilution; and

6) any changes to the initial TRE plan and schedule that are believed necessary as a result of the TRE findings.

e. During the TRE, the permittee shall perform, at a minimum, quarterly testing using the more sensitive species. Testing for the less sensitive species shall continue at the

frequency specified in Part 1.b.

f. If the effluent ceases to effect significant lethality, i.e., there is a cessation of lethality, the permittee may end the TRE. A cessation of lethality is defined as no significant lethality for a period of 12 consecutive months with at least monthly testing. At the end of the 12 months, the permittee shall submit a statement of intent to cease the TRE and may then resume the testing frequency specified in Part 1.b.

This provision accommodates situations where operational errors and upsets, spills, or sampling errors triggered the TRE, in contrast to a situation where a single toxicant or group of toxicants cause lethality. This provision does not apply as a result of corrective actions taken by the permittee. Corrective actions are herein defined as proactive efforts that eliminate or reduce effluent toxicity. These include, but are not limited to, source reduction or elimination, improved housekeeping, changes in chemical usage, and modifications of influent streams and effluent treatment.

The permittee may only apply this cessation of lethality provision once. If the effluent again demonstrates significant lethality to the same species, the permit will be amended to add a WET limit with a compliance period, if appropriate. However, prior to the effective date of the WET limit, the permittee may apply for a permit amendment removing and replacing the WET limit with an alternate toxicity control measure by identifying and confirming the toxicant and an appropriate control measure.

g. The permittee shall complete the TRE and submit a final report on the TRE activities no later than 28 months from the last test day of the retest that confirmed significant lethal effects at the critical dilution. The permittee may petition the Executive Director (in writing) for an extension of the 28-month limit. However, to warrant an extension the permittee must have demonstrated due diligence in its pursuit of the toxicity identification evaluation/TRE and must prove that circumstances beyond its control stalled the toxicity identification evaluation/TRE. The report shall provide information pertaining to the specific control mechanism selected that will, when implemented, result in reduction of effluent toxicity to no significant lethality at the critical dilution. The report will also provide a specific corrective action schedule for implementing the selected control mechanism.

h. Based upon the results of the TRE and proposed corrective actions, this permit may be amended to modify the biomonitoring requirements, where necessary, require a compliance schedule for implementation of corrective actions, specify a WET limit, specify a best management practice, and specify a chemical-specific limit.

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

TABLE 1 (SHEET 1 OF 4)

BIOMONITORING REPORTING

CERIODAPHNIA DUBIA SURVIVAL AND REPRODUCTION

		Date Time		Date Time
Dates and Times Composites Collected	No. 1 FROM:	_____	TO:	_____
	No. 2 FROM:	_____	TO:	_____
	No. 3 FROM:	_____	TO:	_____

Test initiated: _____am/pm _____date

Dilution water used: _____ Receiving Water _____ Synthetic Dilution Water

NUMBER OF YOUNG PRODUCED PER ADULT AT END OF TEST

	Percent effluent (%)					
REP	0%	32%	42%	56%	75%	100%
A						
B						
C						
D						
E						
F						
G						
H						
I						
J						
Survival Mean						
Total Mean						
CV%*						
PMSD						

*Coefficient of Variation = standard deviation x 100/mean (calculation based on young of the surviving adults) Designate males (M), and dead females (D), along with number of neonates (x) released prior to death.

TABLE 1 (SHEET 2 OF 4)

CERIODAPHNIA DUBIA SURVIVAL AND REPRODUCTION TEST

1. Dunnett's Procedure or Steel's Many-One Rank Test or Wilcoxon Rank Sum Test (with Bonferroni adjustment) or t-test (with Bonferroni adjustment) as appropriate:

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

   CRITICAL DILUTION (100%): _____ YES _____ NO

PERCENT SURVIVAL

	Percent effluent					
Time of Reading	0%	32%	42%	56%	75%	100%
24h						
48h						
End of Test						

2. Fisher's Exact Test:

   Is the mean survival at test end significantly less than the control survival for the % effluent corresponding to lethality?

   CRITICAL DILUTION (100%): _____ YES _____ NO

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

   a.) NOEC survival = _____% effluent

   b.) LOEC survival = _____% effluent

   c.) NOEC reproduction = _____% effluent

   d.) LOEC reproduction = _____% effluent

TABLE 1 (SHEET 3 OF 4)

BIOMONITORING REPORTING

FATHEAD MINNOW LARVAE GROWTH AND SURVIVAL

		Date Time		Date Time
Dates and Times Composites Collected	No. 1 FROM:	_____	TO:	_____
	No. 2 FROM:	_____	TO:	_____
	No. 3 FROM:	_____	TO:	_____

Test initiated: _____am/pm _____date

Dilution water used: _____ Receiving Water _____ Synthetic Dilution Water

FATHEAD MINNOW GROWTH DATA

Effluent Concentration	Average Dry Weight in milligrams in replicate chambers					Mean Dry Weight	CV%*
	A	B	C	D	E		
0%							
32%							
42%							
56%							
75%							
100%							
PMSD							

* Coefficient of Variation = standard deviation x 100/mean

1. Dunnett's Procedure or Steel's Many-One Rank Test or Wilcoxon Rank Sum Test (with Bonferroni adjustment) or t-test (with Bonferroni adjustment) as appropriate:

   Is the mean dry weight (growth) at 7 days significantly less than the control's dry weight (growth) for the % effluent corresponding to significant nonlethal effects?

CRITICAL DILUTION (100%): _____ YES _____ NO

TABLE 1 (SHEET 4 OF 4)

BIOMONITORING REPORTING

FATHEAD MINNOW GROWTH AND SURVIVAL TEST

FATHEAD MINNOW SURVIVAL DATA

Effluent Concentration	Percent Survival in replicate chambers					Mean percent survival			CV%*
	A	B	C	D	E	24h	48h	7 day	
0%									
32%									
42%									
56%									
75%									
100%									

* Coefficient of Variation = standard deviation x 100/mean

2. Dunnett's Procedure or Steel's Many-One Rank Test or Wilcoxon Rank Sum Test (with Bonferroni adjustment) or t-test (with Bonferroni adjustment) as appropriate:

   Is the mean survival at 7 days significantly less (p=0.05) than the control survival for the % effluent corresponding to lethality?

   CRITICAL DILUTION (100%): _____ YES _____ NO

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

   a.) NOEC survival = _____% effluent

   b.) LOEC survival = _____% effluent

   c.) NOEC growth = _____% effluent

   d.) LOEC growth = _____% effluent

24-HOUR ACUTE BIOMONITORING REQUIREMENTS: FRESHWATER

The provisions of this section apply to Outfalls 001 and 007 for whole effluent toxicity (WET) testing.

1. Scope, Frequency, and Methodology

a. The permittee shall test the effluent for lethality in accordance with the provisions in this section. Such testing will determine compliance with Texas Surface Water Quality Standard 30 TAC § 307.6(e)(2)(B), which requires greater than 50% survival of the appropriate test organisms in 100% effluent for a 24-hour period.

b. The toxicity tests specified shall be conducted once per six months. The permittee shall conduct the following toxicity tests using the test organisms, procedures, and quality assurance requirements specified in this section of the permit and in accordance with "Methods for Measuring the Acute Toxicity of Effluents and Receiving Waters to Freshwater and Marine Organisms," fifth edition (EPA-821-R-02-012) or its most recent update:

1) Acute 24-hour static toxicity test using the water flea (*Daphnia pulex* or *Ceriodaphnia dubia*). A minimum of five replicates with eight organisms per replicate shall be used in the control and each dilution.

2) Acute 24-hour static toxicity test using the fathead minnow (*Pimephales promelas*). A minimum of five replicates with eight organisms per replicate shall be used in the control and each dilution.

The permittee must perform and report a valid test for each test species during the prescribed reporting period. An invalid test must be repeated during the same reporting period. An invalid test is defined as any test failing to satisfy the test acceptability criteria, procedures, and quality assurance requirements specified in the test methods and permit. All test results, valid or invalid, must be submitted as described below.

c. In addition to an appropriate control, a 100% effluent concentration shall be used in the toxicity tests. The control and dilution water shall consist of standard, synthetic, moderately hard, reconstituted water.

d. This permit may be amended to require a WET limit, a best management practice, a chemical-specific limit, or other appropriate actions to address toxicity. The permittee may be required to conduct a toxicity reduction evaluation (TRE) after multiple toxic events.

e. As the dilution series specified in the Chronic Biomonitoring Requirements includes a 100% effluent concentration, the results from those tests may fulfill the requirements of this section; any tests performed in the proper time interval may be substituted. Compliance will be evaluated as specified in Part 1.a. The 50% survival in 100% effluent for a 24-hour period standard applies to all tests utilizing a 100% effluent dilution, regardless of whether the results are submitted to comply with the minimum testing frequency.

2. Required Toxicity Testing Conditions

a. Test Acceptance – The permittee shall repeat any toxicity test, including the control, if

the control fails to meet a mean survival equal to or greater than 90%.

b. Dilution Water - In accordance with Part 1.c., the control and dilution water shall consist of standard, synthetic, moderately hard, reconstituted water.

c. Samples and Composites

1) The permittee shall collect one composite sample from Outfalls 001 and 007.

2) The permittee shall collect the composite sample such that the sample is representative of any periodic episode of chlorination, biocide usage, or other potentially toxic substance discharged on an intermittent basis.

3) The permittee shall initiate the toxicity tests within 36 hours after collection of the last portion of the composite sample. Samples shall be maintained at a temperature of 0-6 degrees Centigrade during collection, shipping, and storage.

4) If Outfalls 001 or 007 ceases discharging during the collection of the effluent composite sample, the requirements for the minimum number of effluent portions are waived. However, the permittee must have collected a composite sample volume sufficient for completion of the required test. The abbreviated sample collection, duration, and methodology must be documented in the full report.

3. Reporting

All reports, tables, plans, summaries, and related correspondence required in this section shall be submitted to the attention of the Standards Implementation Team (MC 150) of the Water Quality Division.

a. The permittee shall prepare a full report of the results of all tests conducted pursuant to this permit in accordance with the manual referenced in Part 1.b. for every valid and invalid toxicity test initiated.

b. The permittee shall routinely report the results of each biomonitoring test on the Table 2 forms provided with this permit.

1) Semiannual biomonitoring test results are due on or before July 20th and January 20th for biomonitoring conducted during the previous 6-month period.

2) Quarterly biomonitoring test results are due on or before April 20th, July 20th, and October 20th, and January 20th for biomonitoring conducted during the previous calendar quarter.

c. Enter the following codes for the appropriate parameters for valid tests only:

1) For the water flea, Parameter TIE3D, enter a “0” if the mean survival at 24 hours is greater than 50% in the 100% effluent dilution; if the mean survival is less than or equal to 50%, enter “1.”

2) For the fathead minnow, Parameter TIE6C, enter a “0” if the mean survival at 24 hours is greater than 50% in the 100% effluent dilution; if the mean survival is less than or equal to 50%, enter “1.”

d. Enter the following codes for retests only:

1) For retest number 1, Parameter 22415, enter a "0" if the mean survival at 24 hours is greater than 50% in the 100% effluent dilution; if the mean survival is less than or equal to 50%, enter "1."

2) For retest number 2, Parameter 22416, enter a "0" if the mean survival at 24 hours is greater than 50% in the 100% effluent dilution; if the mean survival is less than or equal to 50%, enter "1."

4. Persistent Mortality

The requirements of this part apply when a toxicity test demonstrates significant lethality, which is defined as a mean mortality of 50% or greater to organisms exposed to the 100% effluent concentration for 24 hours.

a. The permittee shall conduct 2 additional tests (retests) for each species that demonstrates significant lethality. The two retests shall be conducted once per week for 2 weeks. Five effluent dilution concentrations in addition to an appropriate control shall be used in the retests. These effluent concentrations are 6%, 13%, 25%, 50%, and 100% effluent. The first retest shall be conducted within 15 days of the laboratory determination of significant lethality. All test results shall be submitted within 20 days of test completion of the second retest. Test completion is defined as the 24th hour.

b. If one or both of the two retests specified in Part 4.a. demonstrates significant lethality, the permittee shall initiate the TRE requirements as specified in Part 5.

5. Toxicity Reduction Evaluation

a. Within 45 days of the retest that demonstrates significant lethality, the permittee shall submit a general outline for initiating a TRE. The outline shall include, but not be limited to, a description of project personnel, a schedule for obtaining consultants (if needed), a discussion of influent and effluent data available for review, a sampling and analytical schedule, and a proposed TRE initiation date.

b. Within 90 days of the retest that demonstrates significant lethality, the permittee shall submit a TRE action plan and schedule for conducting a TRE. The plan shall specify the approach and methodology to be used in performing the TRE. A TRE is a step-wise investigation combining toxicity testing with physical and chemical analyses to determine actions necessary to eliminate or reduce effluent toxicity to a level not effecting significant lethality at the critical dilution. The TRE action plan shall lead to the successful elimination of significant lethality for both test species defined in item 1.b. As a minimum, the TRE action plan shall include the following:

1) Specific Activities - The TRE action plan shall specify the approach the permittee intends to utilize in conducting the TRE, including toxicity characterizations, identifications, confirmations, source evaluations, treatability studies, and alternative approaches. When conducting characterization analyses, the permittee shall perform multiple characterizations and follow the procedures specified in the document entitled "Methods for Aquatic Toxicity Identification Evaluations: Phase I Toxicity Characterization Procedures" (EPA/600/6-91/003) or alternate procedures. The permittee shall perform

multiple identifications and follow the methods specified in the documents entitled "Methods for Aquatic Toxicity Identification Evaluations: Phase II Toxicity Identification Procedures for Samples Exhibiting Acute and Chronic Toxicity" (EPA/600/R-92/080) and "Methods for Aquatic Toxicity Identification Evaluations: Phase III Toxicity Confirmation Procedures for Samples Exhibiting Acute and Chronic Toxicity" (EPA/600/R-92/081). All characterization, identification, and confirmation tests shall be conducted in an orderly and logical progression;

2) Sampling Plan - The TRE action plan should describe sampling locations, methods, holding times, chain of custody, and preservation techniques. The effluent sample volume collected for all tests shall be adequate to perform the toxicity characterization/identification/confirmation procedures and chemical-specific analyses when the toxicity tests show significant lethality. Where the permittee has identified or suspects a specific pollutant and source of effluent toxicity, the permittee shall conduct, concurrent with toxicity testing, chemical-specific analyses for the identified and suspected pollutant and source of effluent toxicity;

3) Quality Assurance Plan - The TRE action plan should address record keeping and data evaluation, calibration and standardization, baseline tests, system blanks, controls, duplicates, spikes, toxicity persistence in the samples, randomization, reference toxicant control charts, and mechanisms to detect artifactual toxicity; and

4) Project Organization - The TRE action plan should describe the project staff, manager, consulting engineering services (where applicable), consulting analytical and toxicological services, etc.

c. Within 30 days of submittal of the TRE action plan and schedule, the permittee shall implement the TRE.

d. The permittee shall submit quarterly TRE activities reports concerning the progress of the TRE. The quarterly TRE activities reports are due on or before April 20th, July 20th, October 20th, and January 20th. The report shall detail information regarding the TRE activities including:

1) results and interpretation of any chemical-specific analyses for the identified and suspected pollutant performed during the quarter;

2) results and interpretation of any characterization, identification, and confirmation tests performed during the quarter;

3) any data and substantiating documentation that identifies the pollutant(s) and source of effluent toxicity;

4) results of any studies/evaluations concerning the treatability of the facility's effluent toxicity;

5) any data that identifies effluent toxicity control mechanisms that will reduce effluent toxicity to the level necessary to eliminate significant lethality; and

6) any changes to the initial TRE Plan and Schedule that are believed necessary as

a result of the TRE findings.

e. During the TRE, the permittee shall perform, at a minimum, quarterly testing using the more sensitive species. Testing for the less sensitive species shall continue at the frequency specified in Part 1.b.

f. If the effluent ceases to effect significant lethality, i.e., there is a cessation of lethality, the permittee may end the TRE. A cessation of lethality is defined as no significant lethality for a period of 12 consecutive weeks with at least weekly testing. At the end of the 12 weeks, the permittee shall submit a statement of intent to cease the TRE and may then resume the testing frequency specified in Part 1.b.

This provision accommodates situations where operational errors and upsets, spills, or sampling errors triggered the TRE, in contrast to a situation where a single toxicant or group of toxicants cause lethality. This provision does not apply as a result of corrective actions taken by the permittee. Corrective actions are herein defined as proactive efforts that eliminate or reduce effluent toxicity. These include, but are not limited to, source reduction or elimination, improved housekeeping, changes in chemical usage, and modifications of influent streams and effluent treatment.

The permittee may only apply this cessation of lethality provision once. If the effluent again demonstrates significant lethality to the same species, the permit will be amended to add a WET limit with a compliance period, if appropriate. However, prior to the effective date of the WET limit, the permittee may apply for a permit amendment removing and replacing the WET limit with an alternate toxicity control measure by identifying and confirming the toxicant and an appropriate control measure.

g. The permittee shall complete the TRE and submit a final report on the TRE activities no later than 18 months from the last test day of the retest that demonstrates significant lethality. The permittee may petition the Executive Director (in writing) for an extension of the 18-month limit. However, to warrant an extension the permittee must have demonstrated due diligence in its pursuit of the toxicity identification evaluation/TRE and must prove that circumstances beyond its control stalled the toxicity identification evaluation/TRE. The report shall specify the control mechanism that will, when implemented, reduce effluent toxicity as specified in item 5.h. The report shall also specify a corrective action schedule for implementing the selected control mechanism.

h. Within 3 years of the last day of the test confirming toxicity, the permittee shall comply with 30 TAC § 307.6(e)(2)(B), which requires greater than 50% survival of the test organism in 100% effluent at the end of 24-hours. The permittee may petition the Executive Director (in writing) for an extension of the 3-year limit. However, to warrant an extension the permittee must have demonstrated due diligence in its pursuit of the toxicity identification evaluation/TRE and must prove that circumstances beyond its control stalled the toxicity identification evaluation/TRE.

The permittee may be exempted from complying with 30 TAC § 307.6(e)(2)(B) upon proving that toxicity is caused by an excess, imbalance, or deficiency of dissolved salts. This exemption excludes instances where individually toxic components (e.g., metals) form a salt compound. Following the exemption, this permit may be amended to include an ion-adjustment protocol, alternate species testing, or single species testing.

i. Based upon the results of the TRE and proposed corrective actions, this permit may be

amended to modify the biomonitoring requirements where necessary, require a compliance schedule for implementation of corrective actions, specify a WET limit, specify a best management practice, and specify a chemical specific limit.

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

TABLE 2 (SHEET 1 OF 2)

WATER FLEA SURVIVAL

GENERAL INFORMATION

	Time	Date
Composite Sample Collected		
Test Initiated		

PERCENT SURVIVAL

Time	Rep	Percent effluent					
		0%	6%	13%	25%	50%	100%
24h	A						
	B						
	C						
	D						
	E						
	MEAN*						

Enter percent effluent corresponding to the LC50 below:

24 hour LC50 = _____% effluent

TABLE 2 (SHEET 2 OF 2)

FATHEAD MINNOW SURVIVAL

GENERAL INFORMATION

	Time	Date
Composite Sample Collected		
Test Initiated		

PERCENT SURVIVAL

Time	Rep	Percent effluent					
		0%	6%	13%	25%	50%	100%
24h	A						
	B						
	C						
	D						
	E						
	MEAN						

Enter percent effluent corresponding to the LC50 below:

24 hour LC50 = _____% effluent

FACT SHEET AND EXECUTIVE DIRECTOR'S PRELIMINARY DECISION

For draft Texas Pollutant Discharge Elimination System (TPDES) Permit No. WQ0001514000, U.S. Environmental Protection Agency (EPA) ID No. TX0063691, to discharge to water in the state

Issuing Office:	Texas Commission on Environmental Quality (TCEQ) P.O. Box 13087 Austin, Texas 78711-3087
Applicant:	City Public Service of San Antonio P.O. Box 1711 San Antonio, Texas 78296
Prepared By:	Thomas E. Starr Wastewater Permitting Section Water Quality Division (512) 239-4570
Date:	July 21, 2025
Permit Action:	Major amendment with renewal remove internal Outfalls 103 and 109; remove total suspended solids limitations/monitoring from internal Outfall 108; add internal Outfalls 112(d) and 112(e) and revise Other Requirement 21; reduce pH monitoring frequency from once per day to once per week for internal Outfalls 111, 112(a), 112(b), and 112(c); reduce pH monitoring frequency from once per day to once per six months for internal Outfalls 712(a) and 712(b); revise Other Requirement 6 and 13; and revise effluent monitoring location for Outfalls 002 and internal Outfalls 104, 110(a-c), 712(a-b), and 713

I. 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 Texas Administrative Code (TAC) §305.127(1)(C)(i).

II. APPLICANT ACTIVITY

The applicant currently operates Calaveras Power Station, a steam electric power generating facility.

III. DISCHARGE LOCATION

As described in the application, the facility is located at 12940 U.S. Highway 181 South, near the City of San Antonio, Bexar County, Texas 78223. Discharge is via Outfalls 001, 002, 006, 007, 014, 015, 016, 017, and 018 to Calaveras Lake, thence to Calaveras Creek, thence to Upper San Antonio River in Segment No. 1911 of the San Antonio River Basin.

IV. RECEIVING STREAM USES

The unclassified receiving water uses are high aquatic life use for Calaveras Lake and minimal aquatic life use for Calaveras Creek. The designated uses for Segment No. 1911 are primary contact recreation and high aquatic life use.

V. STREAM STANDARDS

The general criteria and numerical criteria that make up the stream standards are provided in 30 TAC §§ 307.1 - 307.10.

VI. DISCHARGE DESCRIPTION

The following is a quantitative description of the discharge described in the monthly effluent report data for the period April 2020 through March 2025. The "average of daily average" values presented in the following table are the average of all daily average values for the reporting period for each pollutant. The "maximum of daily maximum" values presented in the following table are the individual maximum values for the reporting period for each pollutant. Flows are expressed in millions of gallons per day (MGD). All pH values are expressed in standard units (SU). There is no reported data for effluent parameters that are not applicable (N/A).

A. Flow

Outfall	Frequency	Average of Daily Average, MGD	Maximum of Daily Maximum, MGD
001	Continuous	440	1,045
101	Intermittent	0.053	0.062
102	Intermittent	0.093	0.194
103	Intermittent	0	0
104	Intermittent	0.222	0.325
108	Intermittent	0.013	0.041
109	Intermittent	0.003	0.05
110	Continuous	0.005	0.013
111	Intermittent	0.652	1.14
112	Intermittent	0.272	2.75
002	Intermittent	0.902	7.76
006	Intermittent	0.691	0.691
007	Continuous	1,060	1,303
712	Intermittent	0.771	1.16
713	Intermittent	0.662	3.49
714	Intermittent	0.347	1.19
014	Intermittent	0.533	4.03
015	Intermittent	0.204	0.236
016	Intermittent	0.203	0.236
017	Intermittent	0.380	1.26
018	Intermittent	0.159	0.864

B. Temperature

Outfall	Average of Daily Average, °F	Maximum of Daily Maximum, °F
001	78.6	99.1
007	84.4	104

C. Effluent Characteristics

Outfall	Pollutant	Average of Daily Average		Maximum of Daily Maximum	
		lbs/day	mg/L	lbs/day	mg/L
001	Total Residual Chlorine (TRC)	N/A	N/A	114	0.14

C. Effluent Characteristics

Outfall	Pollutant	Average of Daily Average		Maximum of Daily Maximum	
		lbs/day	mg/L	lbs/day	mg/L
001	Chemical Oxygen Demand (COD)	N/A	N/A	N/A	118
	Free Available Chlorine (FAC)	N/A	0	N/A	0
	Oil and Grease (O&G)	N/A	4.97	N/A	5.6
	pH	8.240 SU, minimum		10.0 SU	
101	TSS	N/A	5.33	N/A	24.8
	O&G	N/A	4.90	N/A	5.59
102	TSS	N/A	8.92	N/A	25.5
	O&G	N/A	4.91	N/A	5.60
104	COD	N/A	N/A	N/A	76.5
	TSS	N/A	N/A	N/A	21.2
	O&G	N/A	4.80	N/A	4.80
108	TSS	N/A	3.42	N/A	25.4
	O&G	N/A	4.95	N/A	5.00
	pH	N/A SU, minimum		N/A SU	
110	Biochemical Oxygen Demand, 5-day (BOD_5)	0.073	3.08	N/A	42.0
	TSS	0.114	6.37	N/A	21.5
	TRC	N/A	1 minimum	N/A	N/A
	E. coli	1.00 CFU/100 mL		1.00 CFU/100 mL	
	pH	6.83 SU, minimum		8.99 SU	
111	COD	N/A	N/A	N/A	46.7
	TSS	N/A	8.4	N/A	8.4
	O&G	N/A	N/A	N/A	5.00
	pH	7.44 SU, minimum		8.15 SU	
112	TSS	N/A	6.54	N/A	47.8
	O&G	N/A	4.92	N/A	7.9
	pH	6.05 SU, minimum		9.60 SU	
007	TRC	N/A	N/A	0.0	0.0
	FAC	0	0	0	0
	COD	N/A	N/A	N/A	125
	TSS	N/A	20.9	N/A	32
	O&G	N/A	18.1	N/A	32.0
	pH	7.21 SU, minimum		10 SU	

Outfall	Pollutant	Average of Daily Average,	Maximum of Daily Maximum,
		mg/L	mg/L
002	TSS	11.5	33.0
	COD	N/A	111
002	O&G	4.98	8.30
	pH	6.82 SU, minimum	10 SU
006	TSS	28.7	28.7
	COD	N/A	69.0
	O&G	4.80	4.80
	pH	8.0 SU, minimum	8.99 SU

C. Effluent Characteristics

Outfall	Pollutant	Average of Daily Average		Maximum of Daily Maximum	
		lbs/day	mg/L	lbs/day	mg/L
712	COD		N/A		101
	TSS		20.5		28.8
	O&G		4.86		5.00
	pH		8.08 SU, minimum		8.08 SU
713	TSS		16.8		16.8
	O&G		N/A		4.9
	Total Selenium		N/A		0.014
	pH		8.08 SU, minimum		8.08 SU
714	TSS		18.6		39.0
	O&G		4.99		10.3
	pH		8.08 SU, minimum		9.08 SU
014	COD		N/A		111
	O&G		N/A		5.90
	pH		7.55 SU, minimum		8.61 SU
015	COD		N/A		112
	O&G		N/A		5.90
	pH		7.62 SU, minimum		8.66 SU
016	COD		N/A		112
	O&G		N/A		5.9
	pH		7.62 SU, minimum		8.77 SU
017	COD		N/A		112
	O&G		N/A		5.90
	pH		6.79 SU, minimum		8.66 SU
018	COD		N/A		71.0
	O&G		N/A		5.90
	pH		7.10 SU, minimum		8.91 SU

No effluent limit violations were documented in the monthly effluent reports.

VII. DRAFT EFFLUENT LIMITATIONS

See Appendix D of this fact sheet for effluent limitations comparison table (technology-based, water quality-based, and existing) and final effluent limitations established in the draft permit.

OUTFALL LOCATIONS

Outfall	Latitude	Longitude
001	29.312903 N	98.334302 W
002	29.305329 N	98.327274 W
006	29.303434 N	98.32572 W
007	29.333722 N	98.297921 W
014	29.30249 N	98.324922 W
015	29.301087 N	98.324093 W
016	29.298631 N	98.322986 W
017	29.296133 N	98.321889 W

018	29.30933 N	98.314355 W

VIII. SUMMARY OF CHANGES FROM APPLICATION

1. The request to remove TSS from internal Outfall 108 from the application has been removed by the permittee.

2. The request to remove domestic wastewater as a wastestream in the evaporation pond in Other Requirement No. 18 from the application has been removed by the permittee.

IX. SUMMARY OF CHANGES FROM EXISTING PERMIT

The permittee requested the following amendments that the Executive Director recommends granting:

1. To remove internal Outfalls 103 and 109 as all flows have either been stopped or redirected to other Outfalls. Existing permit pages 2d through 2r were renumbered 2c through 2p.

2. To add internal Outfalls 112(d) and 112(e) and revise Other Requirement 20. These changes allows for sampling when the boiler blowdown is being discharged.

3. To reduce pH monitoring frequency from once per day to once per week for internal Outfalls 111, 112(a), 112(b), and 112(c); reduce pH monitoring frequency from once per day to once per six months for internal Outfalls 712(a) and 712(b). These internal outfalls had been removed in the past permit renewal; at the time of the outfalls removal, the pH monitoring frequency was once per week and once per six months respectfully. When the internal outfalls were re-established in the permit from the subsequent permit amendment, the sampling frequency was mistakenly established at once per day. This is a correction that justifies the application of a less stringent effluent limitation under antibacksliding 40 CFR 122.44(l).

4. To revise Other Requirement No. 6 to remove the quarterly reporting requirement since the infrequent nature of the discharges at Outfall 006.

5. To revise Other Requirement No. 13 to remove calculations for 2 hours of chlorination, change the limitations for TRC to 0.1 mg/L and FAC to 0.25 mg/L, and relate to the approved method of Zebra Mussel mitigation added in Other Requirement No. 1. Per the anti-backsliding exception of 40 CFR § 122.44(l)(2)(i)(A) the mass limits are now removed based on the more stringent concentration limits being imposed to allow for the new Zebra Mussel extended chlorination.

6. To revise effluent monitoring location for Outfalls 001 and 002 and internal Outfalls 104, 110(a-c), 712(a-b), and 713.

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

1. Pages 3-13 were updated (May 2021 version).
2. Other Requirement No. 1 was added to the draft permit to require reporting prior to enacting the approved mitigation method for Zebra Mussels.

3. Other Requirement No. 21 was added to the draft permit to replace the existing Stormwater Associated with Construction Activities section after the existing Other Requirement section to comply with the current TCEQ standards.

X. DRAFT PERMIT RATIONALE

The following section sets forth the statutory and regulatory requirements considered in preparing the draft permit. Also set forth are any calculations or other necessary explanations of the derivation of specific effluent limitations and conditions, including a citation to the applicable effluent limitation guidelines and water quality standards.

A. REASON FOR PERMIT ISSUANCE

City Public Service of San Antonio has applied to the TCEQ for a major amendment of TPDES Permit No. WQ0001514000 to authorize the removal of internal Outfalls 103 and 109; reduced frequency of pH monitoring at internal Outfalls 111, 112, and 712; the addition of internal Outfalls 112(d) and 112(e); the removal of total suspended solids monitoring from internal Outfall 108; clarifications to authorized discharges, sample locations and Other Requirements, including Other Requirement 6 (related to Outfall 006 progress reports), and Other Requirement 13.J. (related to daily mass loading calculations for total residual chlorine) and 13.J. (related to periods of chlorination). The draft permit authorizes the discharge of once-through cooling water, and previously monitored effluents (PMEs, low-volume waste sources, water treatment waste, and water treatment bulk chemical secondary containments via internal Outfall 101; low-volume waste sources, water treatment waste, polisher wastewater, and water treatment bulk chemical secondary containments via internal Outfall 102; coal pile runoff, PME (treated domestic effluent from the rail car maintenance and coal handling facility sewage package treatment plants via internal Outfall 110), low volume waste sources, stormwater, utility wastewater, and uncontaminated stormwater from secondary containments via internal Outfall 104; boiler blowdown via internal Outfall 108; stormwater, washdown from plant yard drains, stormwater associated with construction activities, low volume waste sources, utility wastewater, and uncontaminated stormwater from secondary containments via internal Outfall 111; low volume waste sources, car and equipment wash water, stormwater, utility wastewater, and uncontaminated stormwater from secondary containments via internal Outfall 112), stormwater, and stormwater associated with construction activity via Outfall 001 at a daily average flow not to exceed 1,440,000 gallons per day; low volume waste sources, utility wastewater, water treatment wastes, stormwater, and uncontaminated stormwater from secondary containments on an intermittent and flow-variable basis via Outfall 002; stormwater on an intermittent and flow-variable basis via Outfall 006; once-through cooling water from the Spruce Units 1 & 2, PMEs (stormwater associated with industrial activity, stormwater associated with construction activity, steam condensate tank overflow, fire water/lake water, wash water, and utility wastewater via internal Outfall 712; stormwater collected in the Sludge and Fly Ash Disposal Landfill, the Class 1 Landfill and Retention Pond and stormwater from the Sludge and Fly Ash Disposal Landfill and the Class 1 Landfill via internal Outfall 713; and flue gas desulphurization wastewater, low volume waste sources, auxiliary cooling water area drains, quench water, wash down water, stormwater, Sludge Recycle Holding pond dewatering, and utility wastewater via internal Outfall 714), stormwater associated with industrial activity, and stormwater associated with construction activity via Outfall 007 at a daily average flow not to exceed 1,440,000 gallons per day; stormwater associated with industrial activity and stormwater associated with construction activities on and intermittent and flow-variable basis via Outfalls 014, 015,

016, 017, and 018; and low volume waste sources, and metal cleaning waste via evaporation.

B. WATER QUALITY SUMMARY

Discharge Routes
The discharge route is via Outfalls 001, 002, 006, 007, 014, 015, 016, 017, and 018 to Calaveras Lake, thence to Calaveras Creek, thence to Upper San Antonio River in Segment No. 1911 of the San Antonio River Basin. The unclassified receiving water uses are high aquatic life use for Calaveras Lake and minimal aquatic life use for Calaveras Creek. The designated uses for Segment No. 1911 are primary contact recreation and high aquatic life use. Effluent limitations and conditions established in the draft permit comply with state water quality standards and the applicable water quality management plan. The effluent limits in the draft permit will maintain and protect the existing instream uses. Additional discussion of the water quality aspects of the draft permit can be found at Section X.D. of this fact sheet.

Antidegradation Review
In accordance with 30 TAC § 307.5 and TCEQ's *Procedures to Implement the Texas Surface Water Quality Standards* (June 2010), an antidegradation review of the receiving waters was performed. A Tier 1 antidegradation review has preliminarily determined that existing water quality uses will not be impaired by this permit action. Numerical and narrative criteria to protect existing uses will be maintained. A Tier 2 review has preliminarily determined that no significant degradation of water quality is expected in Calaveras Lake, which has been identified as having high aquatic life use. Existing uses will be maintained and protected. The preliminary determination can be reexamined and may be modified if new information is received.

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 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. 1911 is currently listed on the state's inventory of impaired and threatened waters, the 2024 Clean Water Act Section 303(d) list. The listings are for impaired fish community from just upstream of the confluence with Sixmile Creek to the upper end of the segment (AUs 1911_08 & 1911_09). Segment No. 1911 is also listed for impaired macrobenthic community from just upstream of the confluence with Sixmile Creek to just upstream of the confluence with San Pedro Creek (AU 1911_08). The draft permit includes requirements for whole effluent toxicity testing, which would identify toxicity in discharges via Outfalls 001 and 007. In addition, the amendments requested in this major amendment with renewal do not include increased flow or increased loadings and the draft permit is not expected to contribute to the impairments.

Completed Total Maximum Daily Loads (TMDLs)

TMDL Project No. 34D has been approved for this segment: *Three Total Maximum Daily Loads for Bacteria in the San Antonio Area for Segment Numbers 1910, 1910A, and 1911.*

On August 8, 2007, TCEQ adopted Three Total Maximum Daily Loads for Bacteria in the San Antonio Area, Project No. 34D. The U.S. Environmental Protection Agency (USEPA) approved the TMDL on April 21, 2009. This document describes a project development to address water quality impairments related to bacteria for three streams located in and around the City of San Antonio: Salado Creek, Segment No. 1910; Walzem Creek, Segment No. 1910A; and the Upper San Antonio River, Segment No. 1911. This facility is not located in the area covered by the waste load allocation (WLA) requirements of the TMDL. The draft permit is not subject to the requirements of the TMDL. Effluent limits for bacteria are included for *E. coli* at 126 CFU/100 mL at internal Outfall 110, which discharges treated domestic wastewater. The draft permit is consistent with the requirements of the approved TMDL.

C. TECHNOLOGY-BASED EFFLUENT LIMITATIONS/CONDITIONS

1. GENERAL COMMENTS

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.

The draft permit authorizes the discharge of once-through cooling water from the Sommers Units 1 & 2, PMEs, utility wastewater, stormwater associated with industrial activity, and stormwater associated with construction activity via Outfall 001 at a daily average flow not to exceed 1,440 MGD; low volume waste sources, utility wastewater, water treatment wastes, stormwater associated with industrial activity on an intermittent and flow-variable basis via Outfall 002; stormwater associated with industrial activity on an intermittent and flow-variable basis via Outfall 006; once-through cooling water from the Spruce Units 1 & 2, PMEs, utility wastewater, stormwater associated with industrial activity, and stormwater associated with construction activity via Outfall 007 at a daily average flow not to exceed 1,440 MGD; stormwater on and intermittent and flow-variable basis via Outfalls 014, 015, 016, 017, and 018; and low volume waste sources, and metal cleaning waste via evaporation.

The discharge of once-through cooling water and PMEs (low volume waste sources, coal pile runoff, and FGD wastewater) via Outfall 001, low volume waste sources via Outfall 002, and once-through cooling water and PMEs (low volume waste sources and FGD wastewater) via Outfall 007 from this facility are subject to federal effluent limitation guidelines at 40 CFR Part 423. A new source determination was performed, and the discharge of once-through cooling water, coal pile runoff, FGD wastewater, and low volume waste sources is not a new source as defined at 40 CFR §122.2. Therefore, new source performance standards (NSPS) are not required for this discharge.

The discharge of domestic wastewater via internal Outfall 110 is subject to federal regulations at 40 CFR Part 133, Secondary Treatment Regulation and 30 TAC Chapter 309.

The discharge of PMEs (water treatment waste, car and equipment washwater, utility wastewater, stormwater and washdown water from plant yard drains, stormwater associated with industrial activity, stormwater associated with construction activities), utility wastewater, and washdown water from plant yard drains via Outfall 001; water treatment wastes, screen wash, utility water, stormwater associated with industrial activity, wash water, stormwater associated with construction activities via Outfall 002; stormwater associated with industrial activity, stormwater associated with construction activities via Outfall 006; PMEs (wash water, utility wastewater, wastewater from fire booster pumps, stormwater runoff collected in the Sludge and Fly Ash Disposal Landfill, the Class 1 landfill, and Pond No. 9, stormwater associated with industrial activity, stormwater associated with construction activities, utility wastewater, and stormwater and washdown water from plant yard drains via Outfall 007; stormwater via Outfalls 014, 015, 016, 017 and 018; and the disposal of low volume waste sources, and metal cleaning waste via evaporation is not subject to federal effluent limitation guidelines and any technology-based effluent limitations are based on best professional judgment.

The wastewater system at this facility consists of: 1. Once-through cooling water is discharged from Discharge Canal #1 through the Hot Pond to Outfall 001 and from Discharge Canal #2 to Outfall 007; Outfalls 001 and 007 are located in Calaveras Lake, and the lake water is recirculated back into the plant via the intake canal. 2. Coal pile runoff (from the coal yard, rail car maintenance area, coal handling facility and transfer conveyor) flows to Pond #2 and is pumped to a clarifier for treatment, then discharged via internal Outfall 104 in the intake canal. 3. Boiler blowdown-from four boilers (Sommers units and Spruce 1 unit) discharges into the intake canal; Spruce 2 unit-discharges into Pond #13, then to internal Outfall 714 (Discharge Canal #2). 4. Water treatment and neutralization basin wastes-demineralizer regenerant wastewater is discharged into the intake canal; reverse osmosis reject water is discharged into the lake (Outfalls 001, 002 & 007). 5. Treated sewage effluent from four sewage package treatment plants discharge via internal Outfall 110 (b)/intake canal, via internal Outfall 110(a)/Discharge Canal #1 and coal yard runoff basin via internal Outfalls 110(c) and (d), thence internal Outfalls 104 (a) and (b)/intake canal. 6. Floor and yard drains-into collection boxes or oil/water separators for treatment, then into the intake canal and the lake; Spruce unit's floor and yard drains and flue gas desulfurization (FGD) scrubber water go to Pond #13, then to internal Outfall Outfall 714; 7. Runoff from landfill area-into Pond #9, then to internal Outfall 713/ Discharge Canal #2. 8. Stormwater runoff from various areas of the power station-go to various outfalls.

2. CALCULATIONS

See Appendix A of this fact sheet for calculations and further discussion of technology-based effluent limitations proposed in the draft permit. See Appendix D of this fact sheet for a limitations comparison table (existing, water-quality based and technology-based limitations) and the final technology-based effluent limitations proposed in the draft permit.

3. 316(B) COOLING WATER INTAKE STRUCTURES

a. SCREENING

The facility obtains water for cooling purposes from Calaveras Lake. The reservoir was constructed by impounding Calaveras and Chupaderas Creeks, minor tributaries to the San Antonio River. These are wet-weather creeks (normally dry creeks which only flow when there is sufficient precipitation), and because inflow from the watershed is insufficient to maintain cooling reservoir levels, make-up water is used to replenish the reservoir. The facility obtains make-up water from the San Antonio Water System (SAWS) Dos Rios Water Recycling Center under TPDES Permit No. WQ0010137033. The make-up water, consisting of treated sewage effluent, is delivered to Calaveras Lake via the bed and banks of the San Antonio River. The water supply is secured by a 50,000-acre-ft-per-year reclaimed water contract with the SAWS. The treated effluent is pumped from the banks of the San Antonio River as needed uphill through 4.3 miles of pipeline to the reservoir. Withdrawal from the San Antonio River is authorized under Certificate of Adjudication No. 19-2162, as amended (originally issued in 1967) and Permit to Appropriate State Water No. 2325, as amended (originally issued in 1968).

According to the rules applicable to cooling water intake structures (40 CFR § 125.91(c)), the use of reclaimed domestic effluent from a publicly-owned treatment works does not constitute the use of a cooling water intake structure; therefore, the facility is not subject to Section 316(b) of the CWA or 40 CFR Part 125, Subpart J.

b. PERMIT ACTION

The Other Requirement No. 3 has been carried forward in the draft to require the permittee to notify the TCEQ of any changes 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.

D. WATER QUALITY-BASED EFFLUENT LIMITATIONS/CONDITIONS

1. GENERAL COMMENTS

The *Texas Surface Water Quality Standards* found at 30 TAC Chapter 307 state that surface waters will not be toxic to man from ingestion of water, consumption of aquatic organisms, or contact with the skin, or to terrestrial or aquatic life. The methodology outlined in the TCEQ guidance document *Procedures to Implement the Texas Surface Water Quality Standards* (IPs) is designed to ensure compliance with 30 TAC Chapter 307. Specifically, the methodology is designed to ensure that no source will be allowed to discharge any wastewater that (1) results in instream aquatic toxicity; (2) causes a violation of an applicable narrative or numerical state water quality standard; (3) results in the endangerment of a drinking water supply; or (4) results in aquatic

bioaccumulation that threatens human health. Calculated water quality-based effluent limits can be found in Appendix B of this fact sheet.

TPDES permits contain technology-based effluent limits reflecting the best controls available. Where these technology-based permit limits do not protect water quality or the designated uses, additional water quality-based effluent limitations or conditions are included. State narrative and numerical water quality standards are used in conjunction with EPA criteria and other toxicity databases to determine the adequacy of technology-based permit limits and the need for additional water quality-based controls. A comparison of technology-based effluent limits and calculated water quality-based effluent limits can be found in Appendix D of this fact sheet.

2. AQUATIC LIFE CRITERIA

a. SCREENING

Water quality-based effluent limitations are calculated from freshwater aquatic life criteria found in Table 1 of the *Texas Surface Water Quality Standards* (30 TAC Chapter 307).

Outfalls 001 and 007

Acute freshwater criteria are applied at the edge of the zone of initial dilution (ZID), and chronic freshwater criteria are applied at the edge of the aquatic life mixing zone. The ZID for these discharges is defined as volume within a radius of 25 feet from the point where the discharge enters Calaveras Lake. The aquatic life mixing zone for these discharges is defined as volume within a radius of 100 feet from the point where the discharges enter Calaveras Lake.

TCEQ uses the EPA horizontal jet plume model to estimate dilution at the edges of the ZID and aquatic life mixing zone for discharges greater than 10 MGD into lakes or reservoirs. General assumptions used in the horizontal jet plume model are a non-buoyant discharge, a submersed pipe, and no cross flow. Based on this analysis, the following critical effluent percentages are calculated based on the two-year maximum monthly average flow of >100 MGD:

Acute Effluent %	100%	Chronic Effluent %	100%

Outfall 002

TCEQ practice is to establish minimum estimated effluent percentages at the edges of the ZID and aquatic life mixing zone for discharges that are 10 MGD or less into sections of lakes or reservoirs that are at least 200 feet wide. These critical effluent percentages are as follows:

Acute Effluent %	60%	Chronic Effluent %	15%

Outfalls 006, 014, 015, 016, 017, and 018

Discharges via Outfalls 006, 014, 015, 016, 017, and 018 are predominately stormwater. Aquatic life screening is not applicable because TPDES stormwater permits generally do not contain water quality-based effluent limitations. As stated in 30 TAC §307.8(e), controls

on the quality of permitted stormwater discharges are largely based on implementing best management practices and/or technology-based limits in combination with instream monitoring to assess standards attainment and to determine whether additional controls on stormwater are needed.

General Screening Procedures
Wasteload allocations (WLAs) are calculated using the above estimated effluent percentages, criteria outlined in the *Texas Surface Water Quality Standards*, and partitioning coefficients for metals (when appropriate and designated in the implementation procedures). The WLA is the end-of-pipe effluent concentration that can be discharged when, after mixing in the receiving stream, the instream numerical criteria will not be exceeded.

From the WLA, a long-term average (LTA) is calculated using a lognormal probability distribution, a given coefficient of variation (0.6), and a 99th percentile confidence level. The LTA is the long-term average effluent concentration for which the WLA will never be exceeded using a selected percentile confidence level.

The lower of the two LTAs (acute and chronic) is used to calculate a daily average and daily maximum effluent limitation for the protection of aquatic life using the same statistical considerations with the 99th percentile confidence level and a standard number of monthly effluent samples collected (12).

Assumptions used in deriving the effluent limitations include segment-specific values for TSS, pH, hardness, and chloride according to the *IPs*. The segment values are 4 mg/L for TSS, 7.4 standard units for pH, 204 mg/L for hardness (as calcium carbonate, $CaCO_3$), and 59 mg/L for chloride. For additional details on the calculation of water quality-based effluent limitations, refer to the *IPs*.

TCEQ practice for determining significant potential is to compare the reported analytical data against percentages of the calculated daily average water quality-based effluent limitation. Permit limitations are required when analytical data reported in the application equals or 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 equals or exceeds 70 percent of the calculated daily average water quality-based effluent limitation.

b. PERMIT ACTION

Analytical data reported in the application was screened against calculated water quality-based effluent limitations for the protection of aquatic life. Reported analytical data does not exceed 70 percent of the calculated daily average water quality-based effluent limitation for aquatic life protection. No additional limits or monitoring and reporting requirements have been added to the draft permit.

3. WHOLE EFFLUENT TOXICITY (BIOMONITORING) CRITERIA (7-DAY CHRONIC)

a. SCREENING AND REASONABLE POTENTIAL ANALYSIS

The existing permit includes chronic freshwater biomonitoring requirements at Outfalls 001 and 007.

For Outfall 001, in the past three years, the permittee performed nine chronic tests, with no demonstrations of significant toxicity (i.e., zero failures) by the water flea and no demonstrations of significant toxicity by the fathead minnow.

For Outfall 007, in the past three years, the permittee performed nine chronic tests, with no demonstrations of significant toxicity (i.e., zero failures) by the water flea and no demonstrations of significant toxicity by the fathead minnow.

A reasonable potential determination was performed in accordance with 40 CFR §122.44(d)(1)(ii) to determine whether the discharge will reasonably be expected to cause or contribute to an exceedance of a state water quality standard or criterion within that standard. Each test species is evaluated separately. The RP determination is based on representative data from the previous three years of chronic WET testing. This determination was performed in accordance with the methodology outlined in the TCEQ letter to the EPA dated December 28, 2015, and approved by the EPA in a letter dated December 28, 2015.

With zero failures, a determination of no RP was made.

b. PERMIT ACTION

The provisions of this section apply to Outfalls 001 and 007.

Based on information contained in the permit application, the TCEQ has determined that there may be pollutants present in the effluent(s) that may have the potential to cause toxic conditions in the receiving stream.

Whole effluent toxicity testing (biomonitoring) is the most direct measure of potential toxicity, which incorporates the effects of synergism of effluent components and receiving stream water quality characteristics. Biomonitoring of the effluent is, therefore, required as a condition of this permit to assess potential toxicity. The biomonitoring procedures stipulated as a condition of this permit are as follows:

i) Chronic static renewal survival and reproduction test using the water flea (*Ceriodaphnia dubia*). The frequency of the testing shall be once per year

ii) Chronic static renewal 7-day larval survival and growth test using the fathead minnow (*Pimephales promelas*). The frequency of testing shall be once per six months

Toxicity tests shall be performed in accordance with protocols described in *Short-Term Methods for Estimating the Chronic Toxicity of Effluents and Receiving Waters to Freshwater Organisms,* Fourth Edition (EPA-821-R-02-013) or the latest revision. The stipulated test species are appropriate to measure the toxicity of the effluent consistent with the requirements of the state water quality standards. The biomonitoring frequency has been established to reflect the likelihood of ambient toxicity and to provide data representative of the toxic potential of the facility's discharge.

This permit may be reopened to require effluent limits, additional testing, or other appropriate actions to address toxicity if biomonitoring data show actual or potential ambient toxicity to be the result of the permittee's discharge to the receiving stream or water body.

c. DILUTION SERIES

The permit requires five (5) dilutions in addition to the control (0% effluent) to be used in the toxicity tests. These additional effluent concentrations shall be 32%, 42%, 56%, 75%, and 100%. The low-flow effluent concentration (critical dilution) is defined as 100% effluent.

The dilution series outlined above was calculated using a 0.75 factor applied to the critical dilution. The critical dilution is the estimated effluent dilution at the edge of the aquatic life mixing zone, which is discussed in Section X.D.2.a. of this fact sheet.

4. AQUATIC ORGANISM TOXICITY CRITERIA (24-HOUR ACUTE)

a. SCREENING

The existing permit includes 24-hour acute freshwater biomonitoring requirements for Outfalls 001 and 007. In the past three years, the permittee has performed twenty-four 24-hour acute tests, with zero demonstrations of significant mortality (i.e., zero failures).Minimum 24-hour acute freshwater biomonitoring requirements are proposed in the draft permit as outlined below.

b. PERMIT ACTION

Twenty-four-hour 100% acute biomonitoring tests are required at Outfalls 001 and 007 at a frequency of once per six months for the life of the permit.

The biomonitoring procedures stipulated as a condition of this permit are as follows:

i) Acute 24-hour static toxicity test using the water flea (*Ceriodaphnia dubia* or *Daphnia pulex*). A minimum of five (5) replicates with eight (8) organisms per replicate shall be used for this test.

ii) Acute 24-hour static toxicity test using the fathead minnow (*Pimephales promelas*). A minimum of five (5) replicates with eight (8) organisms per replicate shall be used for this test.

Toxicity tests shall be performed in accordance with protocols described in *Methods for Measuring the Acute Toxicity of Effluents and Receiving Waters to Freshwater and Marine Organisms*, Fifth Edition (EPA-821-R-02-012) or the latest revision.

5. AQUATIC ORGANISM BIOACCUMULATION CRITERIA

a. SCREENING

Water quality-based effluent limitations for the protection of human health are calculated using criteria for the consumption of fish tissue found in Table 2 of the *Texas Surface Water Quality Standards* (30 TAC Chapter 307).

Outfalls 001 and 007
Fish tissue bioaccumulation criteria are applied at the edge of the human health mixing zone for discharges into lakes and reservoirs. The human health mixing zone for these discharges is defined as a volume within a radius of 200 feet from the point where the discharges enter Calaveras Lake. TCEQ uses the EPA horizontal jet plume model to estimate dilution at the edge of the human health mixing zone for discharges greater than 10 MGD into lakes or reservoirs. General assumptions used in the horizontal jet plume model are a non-buoyant discharge, a submersed pipe, and no cross flow. Based on this analysis, the following critical effluent percentage is calculated based on the two-year average monthly average flow of >100 MGD:

Human Health Effluent %: 100%

Outfall 002
Fish tissue bioaccumulation criteria are applied at the edge of the human health mixing zone for discharges into lakes and reservoirs. The human health mixing zone for this discharge is defined as a volume within a radius of 200 feet from the point where the discharge enters Calaveras Lake. TCEQ practice is to establish a minimum estimated effluent percentage at the edge of the human health mixing zone for discharges that are 10 MGD or less into sections of lakes or reservoirs that are at least 200 feet wide. This critical effluent percentage is:

Human Health Effluent %: 8%

Outfalls 006, 014, 015, 016, 017, and 018
Discharges via Outfalls 006, 014, 015, 016, 017, and 018 are predominately stormwater. Human health screening is not applicable because TPDES stormwater permits generally do not contain water quality-based effluent limitations. As stated in 30 TAC §307.8(e), controls on the quality of permitted stormwater discharges are largely based on implementing best management practices and/or technology-based limits

in combination with instream monitoring to assess standards attainment and to determine whether additional controls on stormwater are needed.

Water quality-based effluent limitations for human health protection against the consumption of fish tissue are calculated using the same procedure as outlined for calculation of water quality-based effluent limitations for aquatic life protection. A 99th percentile confidence level in the long-term average calculation is used, with only one long-term average value being calculated.

Significant potential is again determined by comparing reported analytical data against 70 percent and 85 percent of the calculated daily average water quality-based effluent limitation.

b. PERMIT ACTION

Analytical data reported in the application was screened against calculated water quality-based effluent limitations for the protection of human health. Reported analytical data does not exceed 70 percent of the calculated daily average water quality-based effluent limitation for human health protection. No additional limits or monitoring and reporting requirements have been added to the draft permit.

6. DRINKING WATER SUPPLY PROTECTION

a. SCREENING

Segment No. 1911, which receives the discharge from this facility, is not designated as a public water supply. Screening reported analytical data of the effluent against water quality-based effluent limitations calculated for the protection of a drinking water supply is not applicable.

b. PERMIT ACTION

None.

7. TOTAL DISSOLVED SOLIDS, CHLORIDE, AND SULFATE STANDARDS PROTECTION

a. SCREENING

The average concentrations of TDS, chloride, and sulfate in the effluent discharged via Outfalls 001, 002, and 007 are greater than the segment criterion. A once-through cooling water exemption for Outfalls 001 and 007 discharges into Calaveras Lake was previously granted. Screening procedures and effluent limitations for TDS, chloride, and sulfate (Outfall 002) are calculated using the methodology in the *IPs* and criteria in the *Texas Surface Water Quality Standards* (30 TAC Chapter 307). Detailed calculations are presented in Appendix C.

Data submitted for Outfall 002 was screened and no new limits or monitoring requirements for TDS, chloride, or sulfate are necessary.

b. PERMIT ACTION

Other Requirement No. 5 has been carried forward in the draft permit.

8. PROTECTION OF pH STANDARDS

a. SCREENING

Outfalls 001, 002, and 007
The existing permit includes limits on pH of 6.0 – 10.0 SU at Outfalls 001, 002, and 007, which discharge into Calaveras Lake, an unclassified water body. These pH limits have been in the permit since February 11, 1992. According to data submitted by the applicant with a letter dated March 30, 2001, the pH of the make-up water from Calaveras Lake, as measured at the inlet, is regularly at or above 9.0 SU. Although the existing pH limitations vary from 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 these discharges to unclassified water bodies to meet pH limits of 6.0 – 10.0 SU is still expected to reasonably ensure instream compliance with Texas Surface Water Quality Standards pH criteria for Segment No. 1911.

Outfalls 006, 014, 015, 016, 017, and 018
Discharges from Outfalls 006 and 014-018 were not screened against pH criteria, consistent with TCEQ practice for outfalls which predominately discharge stormwater.

b. PERMIT ACTION

The existing pH limits of 6.0 – 10.0 SU at Outfalls 001, 002, and 007 are still protective and have been carried forward in the draft permit. Additionally, the existing pH limits of 6.0 – 9.0 SU at Outfalls 006, 014, 015, 016, 017, and 018 are still protective and have been carried forward in the draft permit.

9. DISSOLVED OXYGEN PROTECTION

a. SCREENING

Only internal Outfall 110 is expected to contain significant concentrations of oxygen-demanding constituents. Internal Outfall 110 is currently permitted to discharge a daily average flow of 0.04 MGD with effluent limits of 20 mg/L BOD_5 (6.6 lbs/day). Effluent from internal Outfall 110 is ultimately discharged via Outfall 001. The proposed flow via Outfall 001 is 1,440 MGD. Due to the large dilution expected from Outfall 001 waste streams, no significant dissolved oxygen depletion is expected in the receiving waters as a result of this discharge.

b. PERMIT ACTION

Effluent limitations for BOD_5 are continued from the existing permit at internal Outfall 110.

10. BACTERIA STANDARDS PROTECTION

a. SCREENING

Internal Outfall 110 is authorized to discharge treated domestic wastewater into the discharge canal, the intake canal, and Pond #2, which discharges via internal Outfall 104 to the intake canal. The existing limits for *E. coli* were placed at internal Outfall 110 in the previous permit action based on requirements at 30 TAC § 307.7(b)(1)(A) for discharges to freshwater bodies with primary contact recreation.

b. PERMIT ACTION

The existing limits for *E. coli* at internal Outfall 110 are still protective and have been carried forward in the draft permit.

11. THERMAL STANDARDS PROTECTION

a. SCREENING

An effluent temperature screening was not conducted for this facility's discharge per 30 TAC § 307.4(f), "…Numerical temperature criteria have not been specifically established for industrial cooling impoundments, which in most areas of the state contribute to water conservation and water quality objectives. In addition, numerical criteria for temperature are not applicable in designated industrial cooling water areas,…."

b. PERMIT ACTION

Existing temperature limits have been continued in the draft permit at Outfalls 001 and 007.

XI. PRETREATMENT REQUIREMENTS

This facility is not defined as a publicly owned treatment works. Pretreatment requirements are not proposed in the draft permit.

XII. VARIANCE REQUESTS

No variance requests have been received.

XIII. 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, along with the Executive Director's preliminary decision, as contained in the technical summary or fact sheet, to the Chief Clerk. At that time, the Notice of Application and Preliminary Decision will be mailed to the same people and published in the same newspaper as the prior notice. This notice sets a deadline for making public comments. The applicant must place a copy of the Executive Director's preliminary decision and draft permit in the public place with the application.

Any interested person may request a public meeting on the application until the deadline for filing public comments. A public meeting is intended for the taking of public comment and is not a contested case proceeding.

After the public comment deadline, the Executive Director prepares a response to all significant public comments on the application or the draft permit raised during the public comment period. The Chief Clerk then mails the Executive Director's response to comments and final decision to people who have filed comments, requested a contested case hearing, or requested to be on the mailing list. This notice provides that if a person is not satisfied with the Executive Director's response and decision, they can request a contested case hearing or file a request to reconsider the Executive Director's decision within 30 days after the notice is mailed.

The Executive Director will issue the permit unless a written hearing request or request for reconsideration is filed within 30 days after the Executive Director's response to comments and final decision is mailed. If a hearing request or request for reconsideration is filed, the Executive Director will not issue the permit and will forward the application and request to the TCEQ commissioners for their consideration at a scheduled commission meeting. If a contested case hearing is held, it will be a legal proceeding similar to a civil trial in state district court.

If the Executive Director calls a public meeting or the commission grants a contested case hearing as described above, the commission will give notice of the date, time, and place of the meeting or hearing. If a hearing request or request for reconsideration is made, the commission will consider all public comments in making its decision and shall either adopt the Executive Director's response to public comments or prepare its own response.

For additional information about this application, contact Thomas E. Starr at (512) 239-4570.

XIV. ADMINISTRATIVE RECORD

The following section is a list of the fact sheet citations to applicable statutory or regulatory provisions and appropriate supporting references.

A. PERMIT(S)

TPDES Permit No. WQ0001514000 issued on September 7, 2023.

B. APPLICATION

TPDES wastewater permit application received on May 8, 2025 and additional information received on May 16, 2025, May 20, 2025, and August 27, 2025.

C. 40 CFR CITATION(S)

40 CFR Part 423 (BPT, BCT, BAT).

D. LETTERS/MEMORANDA/RECORDS OF COMMUNICATION

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).

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).

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).

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).

Letter dated December 28, 2015, from L'Oreal Stepney, P.E., Deputy Director, Office of Water, TCEQ, to Bill Honker, Director, Water Quality Protection Division, EPA (TCEQ proposed development strategy for procedures to determine reasonable potential for whole effluent toxicity limitations).

Letter dated December 28, 2015, 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 procedures to determine reasonable potential for whole effluent toxicity limitations).

TCEQ Interoffice Memorandum dated July 14, 2025, from Lauren Williams of the Standards Implementation Team, Water Quality Assessment Section, to the Industrial Permits Team, Wastewater Permitting Section (Standards Memo).

TCEQ Interoffice Memorandum dated June 10, 2025, from Claire M. Dittelmier of the Water Quality Assessment Team, Water Quality Assessment Section, to the Industrial Permits Team, Wastewater Permitting Section (Critical Conditions Memo).

TCEQ Interoffice Memorandum dated June 12, 2025, from Mara Guerin of the Water Quality Assessment Team, Water Quality Assessment Section, to the Industrial Permits Team, Wastewater Permitting Section (Modeling Memo).

TCEQ Interoffice Memorandum dated August 26, 2025, from Jenna R. Lueg of the Standards Implementation Team, Water Quality Assessment Section, to the Industrial Permits Team, Wastewater Permitting Section (Biomonitoring Memo).

E. MISCELLANEOUS

The *State of Texas 2022 Integrated Report* – Texas 303(d) List (Category 5), TCEQ, July 7, 2022.

Texas Surface Water Quality Standards, 30 TAC §§307.1 - 307.10, TCEQ, effective March 1, 2018, as approved by EPA Region 6.

Texas Surface Water Quality Standards, 30 TAC §§307.1 - 307.10, TCEQ, effective March 6, 2014, as approved by EPA Region 6, for portions of the 2018 standards not approved by EPA Region 6.

Texas Surface Water Quality Standards, 30 TAC §§307.1 - 307.10, TCEQ, effective July 22, 2010, as approved by EPA Region 6, for portions of the 2014 standards not yet approved by EPA Region 6.

Texas Surface Water Quality Standards, 30 TAC §§307.1 - 307.10, TCEQ, effective August 17, 2000, and Appendix E, effective February 27, 2002, for portions of the 2010 standards not yet approved by EPA Region 6.

Short-Term Methods for Estimating the Chronic Toxicity of Effluents and Receiving Waters to Freshwater Organisms, Fourth Edition (EPA-821-R-02-013).

Methods for Measuring the Acute Toxicity of Effluents and Receiving Waters to Freshwater and Marine Organisms, Fifth Edition (EPA-821-R-02-012).

Procedures to Implement the Texas Surface Water Quality Standards, TCEQ, June 2010, as approved by EPA Region 6.

Procedures to Implement the Texas Surface Water Quality Standards, TCEQ, January 2003, for portions of the 2010 IPs not approved by EPA Region 6.

Guidance Document for Establishing Monitoring Frequencies for Domestic and Industrial Wastewater Discharge Permits, TCEQ Document No. 98-001.000-OWR-WQ, May 1998.

Appendix A
Calculated Technology-Based Effluent Limits

City Public Service of San Antonio operates the Calaveras Power Station, which commenced operations in 1972. The facility uses two gas/oil-fired units (Sommers 1 & 2) and four coal-fired units (Deely 1 & 2, Spruce 1 & 2) with a combined generating capacity of 3,061 megawatts (MW). Deely 1 & 2, which had a combined generating capacity of 871 MW, were decommissioned on December 31, 2018. This facility is subject to 40 CFR 423 – Steam Electric Power Generating Point Source Category. A new source determination was performed and the discharges from this facility are not a new source as defined at 40 CFR §122.2.

Outfall 001
The draft permit authorizes the discharge of once-through cooling water (from Sommers Units 1 & 2), PMEs (coal pile-runoff, flue-gas desulphurization (FGD) wastewater, low volume waste sources, utility wastewater, water treatment waste, car and equipment wash water, stormwater, stormwater associated with construction activity, and treated domestic wastewater), utility wastewater, and stormwater associated with industrial activity at a daily average flow not to exceed 1,440 MGD via Outfall 001.

Best Practicable Control Technology (BPT) and Best Available Technology Economically Achievable (BAT) limitations apply to the discharge of once-through cooling water. The discharges of stormwater and utility wastewater are not subject to ELGs and requirements are based upon BPJ. Effluent limitations applicable to the PMEs will be applied at the internal outfalls for those waste streams.

a. Once-Through Cooling Water – Effluent limits for Free Available Chlorine (FAC) are required according to 40 CFR § 423.12(b)(6) [BPT] for the discharge of once-trough cooling water. Effluent limits for total residual chlorine (TRC) are required according to 40 CFR § 423.13(b)(1) [BAT] for a plant with a total rated electrical generating capacity of 25 or more megawatts. The permitted daily average flow of 1,440 MGD has been used to calculate the mass limit as follows [see 40 CFR § 423.13(b)(2)]:

   Example calculation:

   FAC daily average = 0.2 mg/L

   FAC daily maximum = 0.5 mg/L

   Loading, lbs/day = [(limit, mg/L)(Flow, MGD)(8.345)(2 hour chlorination/24 hour period)(2 units)][1]

   Daily Average = [(0.2 mg/L)(1440 MGD)(8.345)/12(2)] = 400.56 lbs/day

   Daily Maximum = [(0.5 mg/L)(1440 MGD)(8.345)/12(2)] = 1,001.4 lbs/day

   *Daily maximum limitation has been reduced to 0.25 mg/L to allow for alternate chlorination in the future for mitigation of Zebra Mussel and the mass limitations have been removed. The permittee has demonstrated to TCEQ that the facility cannot operate within these restrictions as allowed under 40 CFR Part 423 and thus the TRC and FAC concentration have been made more stringent and the chlorination restrictions to two hours per unit per day have been removed.

   TRC calculation:

   TRC daily average = N/A

   TRC daily maximum = 0.2 mg/L

   Daily Maximum = [(0.2 mg/L)(1440 MGD)(8.345)/12(2)] = 400.56 lbs/day

   *Daily maximum limitation has been reduced to 0.1 mg/L to allow for alternate chlorination in the future for mitigation of Zebra Mussels and the mass limitations have been removed. The permittee has demonstrated to TCEQ that the facility cannot operate within these restrictions as allowed

[1] V.H. Braunig Power Station is not limited to only running and/or chlorinating one unit per day.

under 40 CFR Part 423 and thus the TRC and FAC concentration have been made more stringent and the chlorination restrictions to two hours per unit per day have been removed.

b. Stormwater – Sources of stormwater authorized for discharge via Outfall 001 include stormwater associated with industrial activities (as defined at 40 CFR 122.26(b)(14)), stormwater associated with construction activities (as defined at TCEQ's Construction General Permit (TX1050000), and allowable non-stormwater wastestreams (as defined in TCEQ's Multi Sector General Permit (TXR050000). Effluent limits for chemical oxygen demand (COD), oil and grease, and pH are required based on BPJ, EPA guidance, and TCEQ practice for facilities which discharge stormwater associated with industrial activities commingled with once-through cooling water.

Parameter	Daily Maximum, mg/L
COD	Report
Oil and Grease	20
pH	Between 6.0 and 9.0 SU.

Technology-based limitations are proposed at Outfall 001 as follows:

Parameter	Daily Average		Daily Maximum	
FAC	mg/L	lbs/day	mg/L	lbs/day
	0.2	401	0.5	1001
	0.2	N/A	*0.25	N/A
TRC	N/A	N/A	0.2	401
	N/A	N/A	*0.1	N/A
COD	N/A	N/A	Report	N/A
Oil and Grease	15	N/A	20	N/A
pH	Between 6.0 and 10.0 SU.			

Internal Outfall 101
The draft permit authorizes the discharge of low volume waste sources, water treatment waste, and water treatment bulk chemical containments via internal Outfall 101.

a. Low Volume Waste Sources – Effluent limitations for TSS and oil and grease are required according to 40 CFR § 423.12(b)(3), and effluent limitations for pH are required according to 40 CFR § 423.12(b)(1) [BPT]:

TSS: Daily Average = 30 mg/L
Daily Maximum = 100 mg/L

Oil and Grease: Daily Average = 15 mg/L
Daily Maximum = 20 mg/L

pH: Between 6.0 and 9.0 SU

b. Water Treatment Waste – This waste stream is not subject to 40 CFR Part 423; however, the following effluent limitations have been applied based on BPJ:

TSS: Daily Average = 30 mg/L

Daily Maximum = 100 mg/L

Oil and Grease: Daily Average = 15 mg/L
Daily Maximum = 20 mg/L

pH: Between 6.0 and 9.0 SU

Technology-based limitations are assessed at internal Outfall 101 as follows:

Parameter	Daily Average, mg/L	Daily Maximum, mg/L
TSS	30	100
Oil and Grease	15	20

Internal Outfall 102
The draft permit authorizes the discharge of low volume waste sources, water treatment waste, and low volume waste sources, polisher wastewater and water treatment bulk chemical secondary containment via internal Outfall 102.

a. Low Volume Waste Sources - Effluent limitations for TSS and oil and grease are required according to 40 CFR § 423.12(b)(3), and effluent limitations for pH are required according to 40 CFR § 423.12(b)(1) [BPT]:

TSS: Daily Average = 30 mg/L
Daily Maximum = 100 mg/L

Oil and Grease: Daily Average = 15 mg/L
Daily Maximum = 20 mg/L

b. Water Treatment Waste – This waste stream is not subject to 40 CFR Part 423; however, the following effluent limitations have been applied based on BPJ:

TSS: Daily Average = 30 mg/L
Daily Maximum = 100 mg/L

Oil and Grease: Daily Average = 15 mg/L
Daily Maximum = 20 mg/L

Technology-based limitations are assessed at internal Outfall 102 as follows:

Parameter	Daily Average, mg/L	Daily Maximum, mg/L
TSS	30	100
Oil and Grease	15	20

Internal Outfall 104
The draft permit authorizes the discharge of coal pile runoff, PME (treated domestic effluent from the rail car maintenance and coal handling facility sewage units), low volume waste sources, stormwater, utility wastewater, and uncontaminated stormwater from secondary containments via internal Outfall 104. Effluent limitations applicable to the PME will be applied at internal Outfall 110.

a. Coal Pile Run-off – Effluent limits for TSS are required according to 40 CFR § 423.12(b)(9) [BPT], and effluent limits for pH are required according to 40 CFR § 423.12(b)(1) [BPT].

TSS:	Daily Average = N/A Daily Maximum = 50 mg/L
pH:	Between 6.0 and 9.0 SU

b. Low Volume Waste Sources - Effluent limitations for TSS and oil and grease are required according to 40 CFR § 423.12(b)(3), and effluent limitations for pH are required according to 40 CFR § 423.12 (b)(1) [BPT]:

TSS:	Daily Average = 30 mg/L Daily Maximum = 100 mg/L
Oil and Grease:	Daily Average = 15 mg/L Daily Maximum = 20 mg/L
pH:	Between 6.0 and 9.0 SU

c. Stormwater and uncontaminated stormwater from secondary containments are not subject to 40 CFR Part 423. Effluent limitations for COD, oil and grease, and pH are established based on BPJ.

Technology-based limitations are assessed at internal Outfall 104 as follows:

Parameter	Daily Average, mg/L	Daily Maximum, mg/L
TSS	N/A	50
COD	N/A	200
Oil and Grease	15	20

Internal Outfall 108
The draft permit authorizes the discharge of boiler blowdown via internal Outfall 108.

TSS:	Daily Average = 30 mg/L Daily Maximum = 100 mg/L
Oil and Grease:	Daily Average = 15 mg/L Daily Maximum = 20 mg/L
pH:	Between 6.0 and 10.0 SU

Internal Outfall 110
The draft permit authorizes the discharge of treated domestic wastewater at a daily average flow not to exceed 0.04 MGD via internal Outfall 110.

a. Domestic Wastewater – Effluent limitations for biochemical oxygen demand, 5-day (BOD_5), TSS, chloride residual, and pH are required according to 30 TAC Chapter 309.

Chlorine residual:	At least 1.0 mg/L after a detention time of at least 20 minutes (based on peak flow).
BOD_5 and TSS:	The permitted daily average flow of 0.04 MGD is used to calculate mass limitations as follows:

Example calculation:

$$Limit\ \left(\frac{mg}{L}\right) \times Flow\ (MGD) \times 8.345\ (Conversion\ Factor) = \frac{lbs}{day}$$

BOD_5 and TSS calculation:

$$20\frac{mg}{L} \times 0.04\ MGD \times 8.345 = 6.6\frac{lbs}{day}$$

b. Summary of final technology-based effluent limits at internal Outfall 110:

The existing limits for BOD5, TSS, chlorine residual, and pH are still protective and have been carried forward in the draft permit based on EPA's antibacksliding regulations at 40 CFR § 122.44(l).

Outfall	Parameter	Daily Average		Daily Maximum	
		mg/L	lbs/day	mg/L	lbs/day
110	BOD_5	20	6.6	45	N/A
	TSS	20	6.6	45	N/A
	Chlorine Residual	1.0 mg/L, min		N/A	
	pH	Between 6.0 and 9.0 SU.			

Internal Outfall 111

The draft permit authorizes the discharge of stormwater from plant areas, stormwater, uncontaminated stormwater from secondary containment, stormwater associated with construction activity and material storage area, washdown water, low volume waste sources, and utility wastewater via internal Outfall 111.

a. Low Volume Waste Sources - Effluent limitations for TSS and oil and grease are required according to 40 CFR § 423.12(b)(3), and effluent limitations for pH are required according to 40 CFR § 423.12 (b)(1) [BPT]:

TSS:	Daily Average = 30 mg/L Daily Maximum = 100 mg/L
Oil and Grease:	Daily Average = 15 mg/L Daily Maximum = 20 mg/L
pH:	Between 6.0 and 9.0 SU

c. Stormwater from plant areas, stormwater, uncontaminated stormwater from secondary containment, stormwater associated with construction activity and material storage area, washdown water, and utility wastewater are not subject to 40 CFR Part 423. Effluent limitations for TSS, COD, oil and grease, and pH are based on BPJ.

Technology-based limitation are assessed at internal Outfall 111 as follows:

Outfall	Parameter	Daily Average, mg/L	Daily Maximum, mg/L
111	TSS	30	100
	COD	N/A	200
	Oil and Grease	N/A	15
	pH	Between 6.0 and 10.0 SU	

Internal Outfall 112
The draft permit authorizes the discharge of low volume waste sources, car and equipment wash water, utility wastewater, stormwater, and uncontaminated stormwater from secondary containments via internal Outfall 112.

a. Low Volume Waste Sources - Effluent limitations for TSS and oil and grease are required according to 40 CFR § 423.12(b)(3), and effluent limitations for pH are required according to 40 CFR § 423.12 (b)(1) [BPT]:

TSS:	Daily Average = 30 mg/L Daily Maximum = 100 mg/L
Oil and Grease:	Daily Average = 15 mg/L Daily Maximum = 20 mg/L
pH:	Between 6.0 and 9.0 SU

b. Car and equipment wash water, utility wastewater, stormwater, and uncontaminated stormwater from secondary containments are not subject to 40 CFR Part 423.

Technology – based limitations are assessed at internal Outfall 112 as follows:

Outfall	Parameter	Daily Average, mg/L	Daily Maximum, mg/L
112	TSS	30	100
	Oil and Grease	15	20
	pH	Between 6.0 and 10.0 SU	

Outfall 002
The draft permit authorizes the discharge of low volume waste sources, utility wastewater, water treatment wastes, stormwater, and uncontaminated stormwater from secondary containments on an intermittent and flow-variable basis via Outfall 002.

BPT limits apply to the discharges of low-volume wastes. The discharges of water treatment wastes and stormwater are not subject to federal ELGs and any requirements are based upon BPJ.

a. Low-Volume Wastes - Sources of low-volume wastes authorized for discharge via Outfall 002 include, but are not limited to, electrical vault water, floor and yard drains, and wash water (including screen wash). Effluent limits for TSS and oil and grease are required according to 40 CFR § 423.12(b)(3), and effluent limits for pH are required according to 40 CFR § 423.12(b)(1) [BPT].

Parameter	Daily Average, mg/L	Daily Maximum, mg/L
TSS	30	100
Oil and Grease	15	20
pH	Between 6.0 and 9.0 SU.	

b. Stormwater - Sources of stormwater authorized for discharge via Outfall 002 include stormwater associated with industrial activities (as defined at 40 CFR 122.26(b)(14)), stormwater associated with construction activities (as defined in TX1050000, and allowable non-stormwater wastestreams (as defined in TXR050000. Effluent limits for chemical oxygen demand (COD), oil and grease, and pH are required based on BPJ, EPA guidance, and TCEQ practice for facilties

which discharge stormwater associated with industrial activities commingled with once-through cooling water.

Parameter	Daily Maximum, mg/L
COD	200
Oil and Grease	20
pH	Between 6.0 and 9.0 SU.

c. Summary of final technology-based effluent limits at Outfalls 002:

The existing limits for TSS, oil and grease, and pH are still protective and have been carried forward in the draft permit based on EPA's antibacksliding regulations at 40 CFR § 122.44(l).

Outfall	Parameter	Daily Average, mg/L	Daily Maximum, mg/L
002	TSS	30	100
	COD	N/A	200
	Oil and Grease	15	20
	pH	Between 6.0 and 10.0 SU.	

Outfalls 006, 014, 015, 016, 017, and 018
The draft permit authorizes the discharge of stormwater on an intermittent and flow-variable basis via Outfalls 006, 014, 015, 016, 017, and 018.

The discharge of stormwater is not subject to federal ELGs and any requirements are based upon BPJ.

a. Stormwater - Sources of stormwater authorized for discharge via Outfalls 006, 014, 015, 016, 017, and 018 include stormwater associated with industrial activities (as defined at 40 CFR 122.26(b)(14)), stormwater associated with construction activities (as defined in TX1050000, and allowable non-stormwater wastestreams (as defined in TXR050000).

Parameter	Daily Maximum, mg/L
COD	200
Oil and Grease	20
pH	Between 6.0 and 9.0 SU.

b. Summary of the final technology-based effluent limits at internal Outfalls 006, 014, 015, 016, 017, and 018:

The existing limits for oil and grease and pH at Outfall 006 and COD, oil and grease, and pH at Outfall 014 are still protective and have been carried forward in the draft permit based on EPA's antibacksliding regulations at 40 CFR § 122.44(l). Daily maximum limits for COD, oil and grease, and pH have been included in the draft permit at Outfalls 015, 016, 017, and 018 based on the presence of stormwaters in the proposed discharges. The existing limits for TSS at Outfall 006 have been in the permit since at least 1988 and have been carried forward in the draft permit based on EPA's antibacksliding regulations at 40 CFR § 122.44(l).

Outfall	Parameter	Daily Average, mg/L	Daily Maximum, mg/L
006	TSS	30	100
	COD	N/A	200

Outfall	Parameter	Daily Average, mg/L	Daily Maximum, mg/L
006	Oil and Grease	15	20
	pH	Between 6.0 and 9.0 SU	
014	COD	N/A	200
	Oil and Grease	N/A	15
	pH	Between 6.0 and 9.0 SU	
015, 016, 017, and 018	COD	N/A	200
	Oil and Grease	N/A	20
	pH	Between 6.0 and 9.0 SU.	

Outfall 007

The draft permit authorizes the discharge of once-through cooling water from Spruce Units 1 & 2, PMEs (wastewater from fire booster pump, wash water, utility wastewater, steam condensate tank overflow, stormwater associated with construction activities and material storage areas, stormwater runoff from the sludge and fly ash disposal area and landfill area, stormwater from the sludge and fly ash disposal area, uncontaminated stormwater from secondary containments, and stormwater), utility wastewater, stormwater, and uncontaminated stormwater from secondary containments via Outfall 007. BPT and BAT limitations apply to the discharge of once-through cooling water. Effluent limitations applicable to the PMEs will be applied at the internal outfalls for those waste streams.

a. Once-Through Cooling Water – Effluent limits for Free Available Chlorine (FAC) are required according to 40 CFR § 423.12(b)(6) [BPT] for the discharge of once-trough cooling water. Effluent limits for total residual chlorine (TRC) are required according to 40 CFR § 423.13(b)(1) [BAT] for a plant with a total rated electrical generating capacity of 25 or more megawatts. The existing concentration limit has been carried forward in the draft permit based on EPA's antibacksliding regulations at 40 CFR § 122.44(l).

   The permitted flow of 1,440 MGD and a total of two units (Spruce Units 1 & 2) have been used to calculate the daily maximum loading limit as follows [see 40 CFR § 423.13(b)(2)]:

   Loading, lbs/day = [(limit, mg/L)(Flow, MGD)(8.345)(2 hour chlorination/24 hour period)(2 units)][2]

   Daily Average = [(0.2 mg/L)(1440 MGD)(8.345)/12(2)] = 400.56 lbs/day

   Daily Maximum = [(0.5 mg/L)(1440 MGD)(8.345)/12(2)] = 1,001.4 lbs/day

   Example calculation:

   FAC daily average = 0.2 mg/L

   FAC daily maximum = 0.5 mg/L

   *Daily maximum limitation has been reduced to 0.25 mg/L to allow for alternate chlorination in the future for mitigation of Zebra Mussel.

   TRC calculation:

   TRC daily average = N/A

   TRC daily maximum = 0.2 mg/L

[2] V.H. Braunig Power Station is not limited to only running and/or chlorinating one unit per day.

Daily Maximum = [(0.2 mg/L)(1440 MGD)(8.345)/12(2 units)] = 400.56 lbs/day

*Daily maximum limitation has been reduced to 0.1 mg/L to allow for alternate chlorination in the future for mitigation of Zebra Mussel.

Parameter	Daily Average		Daily Maximum	
FAC	mg/L	lbs/day	mg/L	lbs/day
	0.2	401	0.5	1,001
	0.2	N/A	*0.25	N/A
TRC	N/A	N/A	0.2	401
TRC	N/A	N/A	*0.1	N/A

b. Stormwater - Sources of stormwater authorized for discharge via Outfall 007 include stormwater associated with industrial activities (as defined at 40 CFR 122.26(b)(14)), stormwater associated with construction activities (as defined in TX1050000, and allowable non-stormwater wastestreams (as defined in TXR050000). Effluent limits for COD, oil and grease, and pH are required based on BPJ, EPA guidance, and TCEQ practice for facilities which discharge stormwater associated with industrial activities commingled with once-through cooling water.

Parameter	Daily Maximum, mg/L
COD	Report
Oil and Grease	20
pH	Between 6.0 and 9.0 SU

Technology-based limitations are assessed at Outfall 007 as follows:

Parameter	Daily Average		Daily Maximum	
FAC	mg/L	lbs/day	mg/L	lbs/day
	0.2	401	0.5	1,001
	0.2	N/A	0.25	N/A
TRC	N/A	N/A	0.2	401
	N/A	N/A	0.1	N/A
COD	N/A	N/A	Report	N/A
Oil and Grease	15	N/A	20	N/A
pH	Between 6.0 and 10.0 SU.			

Outfall 712
The draft permit authorizes the discharge of stormwater runoff from plant areas, stormwater associated with construction activities and material storage areas, steam condensate tank overflow, fire booster pumps, stormwater, wash water, utility wastewater, and uncontaminated stormwater from secondary containments via internal Outfall 712.

The discharges are not subject to 40 CFR Part 423. Effluent limitations for TSS, COD, oil and grease, and pH are established based on BPJ.

Technology-based limitations are assessed at internal Outfall 712 as follows:

Outfall	Parameter	Daily Average, mg/L	Daily Maximum, mg/L
712	TSS	30	50
	COD	N/A	200
	Oil and Grease	N/A	15
	pH	Between 6.0 and 10.0 SU	

Outfall 713
The draft permit authorizes the discharge of stormwater runoff from the sludge and fly ash disposal area and landfill area via internal Outfall 713.

The discharge of stormwater is not subject to 40 CFR Part 423. Effluent limitations for TSS, oil and grease, and pH were originally established based on BPJ. The daily maximum limitation on total selenium was included based on 30 TAC § 319.22 (Hazardous Metals).

Technology-based effluent limitations are assessed at internal Outfall 713 as follows:

Outfall	Parameter	Daily Average, mg/L	Daily Maximum, mg/L
713	TSS	30	50
	Oil and Grease	N/A	15
	Selenium, Total	N/A	0.2
	pH	Between 6.0 and 9.0 SU	

Outfall 714
The draft permit authorizes the discharge of FGD wastewater, low volume waste sources, auxiliary cooling water area drains, washdown water, SRH pond dewatering, utility wastewater, quench water, and stormwater via internal Outfall 714.

a. FGD Wastewaters - Generated prior to December 31, 2028 (or discharged prior to April 30, 2029 if coal combustions cease by December 31, 2028, as described below): Effluent limits for TSS and oil and grease are required according to 40 CFR § 423.13(g)(1)(ii)[BAT] (40 CFR § 423.13(g)(2)(i)[BAT], if applicable) and 40 CFR § 423.12(b)(11)[BPT]. Effluent limits for pH are required according to 40 CFR § 423.12(b)(1) [BPT].

Parameter	Daily Average, mg/L	Daily Maximum, mg/L
TSS	30	100
Oil and Grease	15	20
pH	Between 6.0 and 9.0 SU.	

The permittee has submitted information that meets the voluntary incentives plan (VIP) in accordance with 40 CFR § 423.13(g)(3)(i). Dischargers who choose to meet the effluent limitations for FGD wastewater must meet such limitations by December 31, 2028. These effluent limitations apply to the discharge of FGD wastewater generated on and after December 31, 2028. In accordance with 40 CFR § 423.13(o)(1)(ii)(A), a facility that opted into the VIP may file a Notice of Planned Participation (NOPP) by December 31, 2025 to instead cease coal combustion by December 31, 2028 and comply with limits in 423.13(g)(2)(i).

If subject to the VIP, effluent limits for total arsenic, total mercury, total selenium, and nitrate/nitrite as N, bromide, and total dissolved solids (TDS) are required according to 40 CFR § 423.13(g)(3)(i) [BAT]. Alternatively, if the facility files the NOPP to cease coal combustion, the effluent limits are zero discharge of pollutants in FGD wastewater after April 30, 2029. Effluent

limits for pH are required according to 40 CFR § 423.12(b)(1) [BPT]. If ash-transport water is routed to the FGD scrubber system, the quantity of pollutants in the resulting effluent shall not exceed the quantity determined by multiplying the flow of ash-transport water times the concentration listed at 40 CFR § 423.13(g)(1)(i) [BAT].

Parameter	Daily Average, mg/L	Daily Maximum, mg/L
TSS	30	100
Oil and Grease	15	20
Total Arsenic	N/A	0.005
Total Mercury	0.000000001	0.0000000023
Total Selenium	N/A	0.01
Nitrate/Nitrite as N	1.2	2.0
Bromide	N/A	0.2
TDS	149	306
pH	Between 6.0 and 9.0 SU.	

b. Low Volume Waste Sources – Effluent limitations for TSS and oil and grease are required according to 40 CFR § 423.12(b)(3), and effluent limitations for pH are required according to 40 CFR § 423.12 (b)(1) [BPT]:

TSS: Daily Average = 30 mg/L
Daily Maximum = 100 mg/L

Oil and Grease: Daily Average = 15 mg/L
Daily Maximum = 20 mg/L

pH: Between 6.0 and 9.0 SU

c. Auxiliary cooling water area drains, washdown water, SRH pond dewatering, utility wastewater, quench water and stormwater are not subject to 40 CFR Part 423.

Technology-based limitations are assessed at internal Outfall 714 as follows:

Daily average and maximum limits for total arsenic, total mercury, total selenium, and nitrate/nitrite as N, bromide, and TDS have exist based on the presence of FGD wastewater and are effective on and after December 31, 2028 when discharges contain FGD wastewater. However, if the NOPP to cease coal combustion no later than December 31, 2028 is filed by December 31, 2025, then these limits would not apply and instead there would be no discharge of pollutants in FGD wastewater after April 30, 2029.

Outfall	Parameter	Daily Average		Daily Maximum	
		mg/L	lbs/day	mg/L	lbs/day
714	TSS	30	N/A	100	N/A
	Oil and Grease	15	N/A	20	N/A
	Total Arsenic[3]	N/A	N/A	0.005	N/A

[3] Limits are effective on and after December 31, 2028, when discharging FGD wastewaters and ceased when FGD is no

Outfall	Parameter	Daily Average		Daily Maximum	
714	Total Mercury[1]	0.000000001	N/A	0.0000000023	N/A
	Total Selenium[1]	N/A	N/A	0.01	N/A
	Nitrate/Nitrite as N[1]	1.2	N/A	2.0	N/A
	Bromide[1]	N/A	N/A	0.2	N/A
	TDS[1]	149	N/A	306	N/A
	pH	Between 6.0 and 10.0 SU.			

longer discharging via the permitted outfalls; except if the NOPP to cease coal combustion no later than December 31, 2028 is filed by December 31, 2025, then instead of these limits there would be no discharge of pollutants in FGD wastewater after April 30, 2029.

FACT SHEET AND EXECUTIVE DIRECTOR'S PRELIMINARY DECISION

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:	City Public Service of San Antonio
TPDES Permit No:	WQ0001514000
Outfall No:	001 and 007
Prepared by:	Thomas Starr
Date:	July 10, 2025

DISCHARGE INFORMATION

Receiving Waterbody:	Calaveras Lake
Segment No.:	1911
TSS (mg/L):	4
pH (Standard Units):	7.4
Hardness (mg/L as $CaCO_3$):	204
Chloride (mg/L):	59
Effluent Flow for Aquatic Life (MGD):	100
% Effluent for Chronic Aquatic Life (Mixing Zone):	100
% Effluent for Acute Aquatic Life (ZID):	100
Effluent Flow for Human Health (MGD):	100
% Effluent for Human Health:	100
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	173978.75	0.590		1.00	Assumed
Cadmium	6.55	-0.92	991071.09	0.201		1.00	Assumed
Chromium (total)	6.34	-0.27	1504678.80	0.142		1.00	Assumed
Chromium (trivalent)	6.34	-0.27	1504678.80	0.142		1.00	Assumed
Chromium (hexavalent)	N/A	N/A	N/A	1.00	Assumed	1.00	Assumed
Copper	6.45	-0.90	809367.96	0.236		1.00	Assumed
Lead	6.31	-0.53	979282.98	0.203		1.00	Assumed
Mercury	N/A	N/A	N/A	1.00	Assumed	1.00	Assumed
Nickel	6.34	-0.76	762841.67	0.247		1.00	Assumed
Selenium	N/A	N/A	N/A	1.00	Assumed	1.00	Assumed
Silver	6.38	-1.03	575278.59	0.303		1.00	Assumed
Zinc	6.52	-0.68	1290028.21	0.162		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	3.00	N/A	0.960	N/A	1.41	2.98
Aluminum	991	N/A	991	N/A	317	N/A	466	986
Arsenic	340	150	577	254	185	155	228	482
Cadmium	17.16	0.403	85.2	2.00	27.3	1.22	1.79	3.80
Carbaryl	2.0	N/A	2.00	N/A	0.640	N/A	0.940	1.99
Chlordane	2.4	0.004	2.40	0.00400	0.768	0.00244	0.00358	0.00758
Chlorpyrifos	0.083	0.041	0.0830	0.0410	0.0266	0.0250	0.0367	0.0777
Chromium (trivalent)	1022	132.9	7170	933	2295	569	836	1769
Chromium (hexavalent)	15.7	10.6	15.7	10.6	5.02	6.47	7.38	15.6
Copper	27.80	17.41	118	73.8	37.7	45.0	55.4	117
Cyanide (free)	45.8	10.7	45.8	10.7	14.7	6.53	9.59	20.2
4,4'-DDT	1.1	0.001	1.10	0.00100	0.352	0.000610	0.000896	0.00189
Demeton	N/A	0.1	N/A	0.100	N/A	0.0610	0.0896	0.189
Diazinon	0.17	0.17	0.170	0.170	0.0544	0.104	0.0799	0.169
Dicofol [Kelthane]	59.3	19.8	59.3	19.8	19.0	12.1	17.7	37.5
Dieldrin	0.24	0.002	0.240	0.00200	0.0768	0.00122	0.00179	0.00379
Diuron	210	70	210	70.0	67.2	42.7	62.7	132
Endosulfan I (*alpha*)	0.22	0.056	0.220	0.0560	0.0704	0.0342	0.0502	0.106
Endosulfan II (*beta*)	0.22	0.056	0.220	0.0560	0.0704	0.0342	0.0502	0.106
Endosulfan sulfate	0.22	0.056	0.220	0.0560	0.0704	0.0342	0.0502	0.106
Endrin	0.086	0.002	0.0860	0.00200	0.0275	0.00122	0.00179	0.00379
Guthion [Azinphos Methyl]	N/A	0.01	N/A	0.0100	N/A	0.00610	0.00896	0.0189
Heptachlor	0.52	0.004	0.520	0.00400	0.166	0.00244	0.00358	0.00758
Hexachlorocyclohexane (*gamma*) [Lindane]	1.126	0.08	1.13	0.0800	0.360	0.0488	0.0717	0.151
Lead	139.0	5.42	684	26.6	219	16.3	23.8	50.5
Malathion	N/A	0.01	N/A	0.0100	N/A	0.00610	0.00896	0.0189
Mercury	2.4	1.3	2.40	1.30	0.768	0.793	1.12	2.38
Methoxychlor	N/A	0.03	N/A	0.0300	N/A	0.0183	0.0269	0.0569
Mirex	N/A	0.001	N/A	0.00100	N/A	0.000610	0.000896	0.00189
Nickel	856	95.1	3467	385	1110	235	345	730
Nonylphenol	28	6.6	28.0	6.60	8.96	4.03	5.91	12.5
Parathion (ethyl)	0.065	0.013	0.0650	0.0130	0.0208	0.00793	0.0116	0.0246
Pentachlorophenol	13.0	10.00	13.0	10.0	4.17	6.10	6.13	12.9
Phenanthrene	30	30	30.0	30.0	9.60	18.3	14.1	29.8
Polychlorinated Biphenyls [PCBs]	2.0	0.014	2.00	0.0140	0.640	0.00854	0.0125	0.0265
Selenium	20	5	20.0	5.00	6.40	3.05	4.48	9.48
Silver	0.8	N/A	13.4	N/A	4.29	N/A	6.30	13.3
Toxaphene	0.78	0.0002	0.780	0.000200	0.250	0.000122	0.000179	0.000379
Tributyltin [TBT]	0.13	0.024	0.130	0.0240	0.0416	0.0146	0.0215	0.0455
2,4,5 Trichlorophenol	136	64	136	64.0	43.5	39.0	57.3	121
Zinc	214.4	216.1	1321	1331	423	812	621	1314

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	115	107	157	332
Aldrin	1.146E-05	1.147E-05	1.147E-04	0.0000115	0.0000107	0.0000156	0.0000331
Anthracene	1109	1317	13170	1317	1225	1800	3809
Antimony	6	1071	10710	1071	996	1464	3097
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	581	540	794	1680
Benzidine	0.0015	0.107	1.07	0.107	0.0995	0.146	0.309
Benzo(*a*)anthracene	0.024	0.025	0.25	0.0250	0.0233	0.0341	0.0723
Benzo(*a*)pyrene	0.0025	0.0025	0.025	0.00250	0.00233	0.00341	0.00723
Bis(chloromethyl)ether	0.0024	0.2745	2.745	0.275	0.255	0.375	0.793
Bis(2-chloroethyl)ether	0.60	42.83	428.3	42.8	39.8	58.5	123
Bis(2-ethylhexyl) phthalate [Di(2-ethylhexyl) phthalate	6	7.55	75.5	7.55	7.02	10.3	21.8
Bromodichloromethane [Dichlorobromomethane]	10.2	275	2750	275	256	375	795
Bromoform [Tribromomethane]	66.9	1060	10600	1060	986	1449	3065
Cadmium	5	N/A	N/A	N/A	N/A	N/A	N/A
Carbon Tetrachloride	4.5	46	460	46.0	42.8	62.8	133
Chlordane	0.0025	0.0025	0.025	0.00250	0.00233	0.00341	0.00723
Chlorobenzene	100	2737	27370	2737	2545	3741	7916
Chlorodibromomethane [Dibromochloromethane]	7.5	183	1830	183	170	250	529
Chloroform [Trichloromethane]	70	7697	76970	7697	7158	10522	22262
Chromium (hexavalent)	62	502	5020	502	467	686	1451
Chrysene	2.45	2.52	25.2	2.52	2.34	3.44	7.28
Cresols [Methylphenols]	1041	9301	93010	9301	8650	12715	26901
Cyanide (free)	200	N/A	N/A	N/A	N/A	N/A	N/A
4,4'-DDD	0.002	0.002	0.02	0.00200	0.00186	0.00273	0.00578
4,4'-DDE	0.00013	0.00013	0.0013	0.000130	0.000121	0.000177	0.000375
4,4'-DDT	0.0004	0.0004	0.004	0.000400	0.000372	0.000546	0.00115
2,4'-D	70	N/A	N/A	N/A	N/A	N/A	N/A
Danitol [Fenpropathrin]	262	473	4730	473	440	646	1368
1,2-Dibromoethane [Ethylene Dibromide]	0.17	4.24	42.4	4.24	3.94	5.79	12.2
m-Dichlorobenzene [1,3-Dichlorobenzene]	322	595	5950	595	553	813	1720
o-Dichlorobenzene [1,2-Dichlorobenzene]	600	3299	32990	3299	3068	4510	9541
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	2.24	2.08	3.06	6.47
1,2-Dichloroethane	5	364	3640	364	339	497	1052
1,1-Dichloroethylene [1,1-Dichloroethene]	7	55114	551140	55114	51256	75346	159406
Dichloromethane [Methylene Chloride]	5	13333	133330	13333	12400	18227	38563
1,2-Dichloropropane	5	259	2590	259	241	354	749
1,3-Dichloropropene [1,3-Dichloropropylene]	2.8	119	1190	119	111	162	344
Dicofol [Kelthane]	0.30	0.30	3	0.300	0.279	0.410	0.867
Dieldrin	2.0E-05	2.0E-05	2.0E-04	0.0000200	0.0000186	0.0000273	0.0000578
2,4-Dimethylphenol	444	8436	84360	8436	7845	11532	24399
Di-*n*-Butyl Phthalate	88.9	92.4	924	92.4	85.9	126	267
Dioxins/Furans [TCDD Equivalents]	7.80E-08	7.97E-08	7.97E-07	7.97E-08	7.41E-08	1.08E-07	2.30E-07
Endrin	0.02	0.02	0.2	0.0200	0.0186	0.0273	0.0578
Epichlorohydrin	53.5	2013	20130	2013	1872	2751	5822
Ethylbenzene	700	1867	18670	1867	1736	2552	5399
Ethylene Glycol	46744	1.68E+07	1.68E+08	16800000	15624000	22967280	48590640
Fluoride	4000	N/A	N/A	N/A	N/A	N/A	N/A
Heptachlor	8.0E-05	0.0001	0.001	0.000100	0.0000930	0.000136	0.000289
Heptachlor Epoxide	0.00029	0.00029	0.0029	0.000290	0.000270	0.000396	0.000838
Hexachlorobenzene	0.00068	0.00068	0.0068	0.000680	0.000632	0.000929	0.00196
Hexachlorobutadiene	0.21	0.22	2.2	0.220	0.205	0.300	0.636

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)*
Hexachlorocyclohexane (*alpha*)	0.0078	0.0084	0.084	0.00840	0.00781	0.0114	0.0242
Hexachlorocyclohexane (*beta*)	0.15	0.26	2.6	0.260	0.242	0.355	0.751
Hexachlorocyclohexane (*gamma*) [Lindane]	0.2	0.341	3.41	0.341	0.317	0.466	0.986
Hexachlorocyclopentadiene	10.7	11.6	116	11.6	10.8	15.8	33.5
Hexachloroethane	1.84	2.33	23.3	2.33	2.17	3.18	6.73
Hexachlorophene	2.05	2.90	29	2.90	2.70	3.96	8.38
4,4'-Isopropylidenediphenol [Bisphenol A]	1092	15982	159820	15982	14863	21848	46224
Lead	1.15	3.83	38.3	18.8	17.5	25.7	54.4
Mercury	0.0122	0.0122	0.122	0.0122	0.0113	0.0166	0.0352
Methoxychlor	2.92	3.0	30	3.00	2.79	4.10	8.67
Methyl Ethyl Ketone	13865	9.92E+05	9.92E+06	992000	922560	1356163	2869161
Methyl *tert*-butyl ether [MTBE]	15	10482	104820	10482	9748	14329	30317
Nickel	332	1140	11400	4619	4295	6314	13358
Nitrate-Nitrogen (as Total Nitrogen)	10000	N/A	N/A	N/A	N/A	N/A	N/A
Nitrobenzene	45.7	1873	18730	1873	1742	2560	5417
N-Nitrosodiethylamine	0.0037	2.1	21	2.10	1.95	2.87	6.07
N-Nitroso-di-*n*-Butylamine	0.119	4.2	42	4.20	3.91	5.74	12.1
Pentachlorobenzene	0.348	0.355	3.55	0.355	0.330	0.485	1.02
Pentachlorophenol	0.22	0.29	2.9	0.290	0.270	0.396	0.838
Polychlorinated Biphenyls [PCBs]	6.4E-04	6.4E-04	6.40E-03	0.000640	0.000595	0.000874	0.00185
Pyridine	23	947	9470	947	881	1294	2739
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	0.240	0.223	0.328	0.694
1,1,2,2-Tetrachloroethane	1.64	26.35	263.5	26.4	24.5	36.0	76.2
Tetrachloroethylene [Tetrachloroethylene]	5	280	2800	280	260	382	809
Thallium	0.12	0.23	2.3	0.230	0.214	0.314	0.665
Toluene	1000	N/A	N/A	N/A	N/A	N/A	N/A
Toxaphene	0.011	0.011	0.11	0.0110	0.0102	0.0150	0.0318
2,4,5-TP [Silvex]	50	369	3690	369	343	504	1067
1,1,1-Trichloroethane	200	784354	7843540	784354	729449	1072290	2268587
1,1,2-Trichloroethane	5	166	1660	166	154	226	480
Trichloroethylene [Trichloroethene]	5	71.9	719	71.9	66.9	98.2	207
2,4,5-Trichlorophenol	1039	1867	18670	1867	1736	2552	5399
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	16.5	15.3	22.5	47.7

Aquatic Life *Parameter*	*70% of Daily Avg. (µg/L)*	*85% of Daily Avg. (µg/L)*
Aldrin	0.987	1.19
Aluminum	326	396
Arsenic	159	193
Cadmium	1.25	1.52
Carbaryl	0.658	0.799
Chlordane	0.00251	0.00304
Chlorpyrifos	0.0257	0.0312
Chromium (trivalent)	585	710
Chromium (hexavalent)	5.16	6.27
Copper	38.7	47.1
Cyanide (free)	6.71	8.15
4,4'-DDT	0.000627	0.000762
Demeton	0.0627	0.0762
Diazinon	0.0559	0.0679
Dicofol [Kelthane]	12.4	15.0
Dieldrin	0.00125	0.00152
Diuron	43.9	53.3
Endosulfan I (*alpha*)	0.0351	0.0426
Endosulfan II (*beta*)	0.0351	0.0426
Endosulfan sulfate	0.0351	0.0426
Endrin	0.00125	0.00152
Guthion [Azinphos Methyl]	0.00627	0.00762
Heptachlor	0.00251	0.00304
Hexachlorocyclohexane (*gamma*) [Lindane]	0.0502	0.0609
Lead	16.7	20.3
Malathion	0.00627	0.00762
Mercury	0.790	0.959
Methoxychlor	0.0188	0.0228
Mirex	0.000627	0.000762
Nickel	241	293
Nonylphenol	4.14	5.03
Parathion (ethyl)	0.00815	0.00990
Pentachlorophenol	4.29	5.21
Phenanthrene	9.87	11.9
Polychlorinated Biphenyls [PCBs]	0.00878	0.0106
Selenium	3.13	3.81
Silver	4.41	5.35
Toxaphene	0.000125	0.000152
Tributyltin [TBT]	0.0150	0.0182
2,4,5 Trichlorophenol	40.1	48.7
Zinc	434	528

Human Health *Parameter*	*70% of Daily Avg. (µg/L)*	*85% of Daily Avg. (µg/L)*
Acrylonitrile	110	133
Aldrin	0.0000109	0.0000133
Anthracene	1260	1530
Antimony	1024	1244
Arsenic	N/A	N/A
Barium	N/A	N/A
Benzene	555	675
Benzidine	0.102	0.124
Benzo(*a*)anthracene	0.0239	0.0290
Benzo(*a*)pyrene	0.00239	0.00290
Bis(chloromethyl)ether	0.262	0.318
Bis(2-chloroethyl)ether	40.9	49.7
Bis(2-ethylhexyl) phthalate [Di(2-ethylhexyl) phthalate]	7.22	8.77
Bromodichloromethane [Dichlorobromomethane]	263	319
Bromoform [Tribromomethane]	1014	1231
Cadmium	N/A	N/A
Carbon Tetrachloride	44.0	53.4
Chlordane	0.00239	0.00290
Chlorobenzene	2619	3180
Chlorodibromomethane [Dibromochloromethane]	175	212
Chloroform [Trichloromethane]	7365	8944
Chromium (hexavalent)	480	583
Chrysene	2.41	2.92
Cresols [Methylphenols]	8900	10808
Cyanide (free)	N/A	N/A
4,4'-DDD	0.00191	0.00232
4,4'-DDE	0.000124	0.000151
4,4'-DDT	0.000382	0.000464
2,4'-D	N/A	N/A
Danitol [Fenpropathrin]	452	549
1,2-Dibromoethane [Ethylene Dibromide]	4.05	4.92
m-Dichlorobenzene [1,3-Dichlorobenzene]	569	691
o-Dichlorobenzene [1,2-Dichlorobenzene]	3157	3833
p-Dichlorobenzene [1,4-Dichlorobenzene]	N/A	N/A
3,3'-Dichlorobenzidine	2.14	2.60
1,2-Dichloroethane	348	422
1,1-Dichloroethylene [1,1-Dichloroethene]	52742	64044
Dichloromethane [Methylene Chloride]	12759	15493
1,2-Dichloropropane	247	300
1,3-Dichloropropene [1,3-Dichloropropylene]	113	138
Dicofol [Kelthane]	0.287	0.348
Dieldrin	0.0000191	0.0000232
2,4-Dimethylphenol	8072	9802
Di-*n*-Butyl Phthalate	88.4	107
Dioxins/Furans [TCDD Equivalents]	7.62E-08	9.26E-08
Endrin	0.0191	0.0232
Epichlorohydrin	1926	2339
Ethylbenzene	1786	2169
Ethylene Glycol	16077096	19522188
Fluoride	N/A	N/A
Heptachlor	0.0000956	0.000116
Heptachlor Epoxide	0.000277	0.000336
Hexachlorobenzene	0.000650	0.000790
Hexachlorobutadiene	0.210	0.255

Human Health *Parameter*	*70% of Daily Avg. (µg/L)*	*85% of Daily Avg. (µg/L)*
Hexachlorocyclohexane (*alpha*)	0.00803	0.00976
Hexachlorocyclohexane (*beta*)	0.248	0.302
Hexachlorocyclohexane (*gamma*) [Lindane]	0.326	0.396
Hexachlorocyclopentadiene	11.1	13.4
Hexachloroethane	2.22	2.70
Hexachlorophene	2.77	3.36
4,4'-Isopropylidenediphenol [Bisphenol A]	15294	18571
Lead	18.0	21.8
Mercury	0.0116	0.0141
Methoxychlor	2.87	3.48
Methyl Ethyl Ketone	949314	1152738
Methyl *tert*-butyl ether [MTBE]	10030	12180
Nickel	4419	5366
Nitrate-Nitrogen (as Total Nitrogen)	N/A	N/A
Nitrobenzene	1792	2176
N-Nitrosodiethylamine	2.00	2.44
N-Nitroso-di-*n*-Butylamine	4.01	4.88
Pentachlorobenzene	0.339	0.412
Pentachlorophenol	0.277	0.336
Polychlorinated Biphenyls [PCBs]	0.000612	0.000743
Pyridine	906	1100
Selenium	N/A	N/A
1,2,4,5-Tetrachlorobenzene	0.229	0.278
1,1,2,2-Tetrachloroethane	25.2	30.6
Tetrachloroethylene [Tetrachloroethylene]	267	325
Thallium	0.220	0.267
Toluene	N/A	N/A
Toxaphene	0.0105	0.0127
2,4,5-TP [Silvex]	353	428
1,1,1-Trichloroethane	750603	911446
1,1,2-Trichloroethane	158	192
Trichloroethylene [Trichloroethene]	68.8	83.5
2,4,5-Trichlorophenol	1786	2169
TTHM [Sum of Total Trihalomethanes]	N/A	N/A
Vinyl Chloride	15.7	19.1

FACT SHEET AND EXECUTIVE DIRECTOR'S PRELIMINARY DECISION

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:	City Public Service of San Antonio
TPDES Permit No:	WQ0001514000
Outfall No:	002
Prepared by:	Thomas Starr
Date:	July 10, 2025

DISCHARGE INFORMATION

Receiving Waterbody:	Calaveras Lake
Segment No.:	1911
TSS (mg/L):	4
pH (Standard Units):	7.4
Hardness (mg/L as $CaCO_3$):	204
Chloride (mg/L):	59
Effluent Flow for Aquatic Life (MGD):	10
% Effluent for Chronic Aquatic Life (Mixing Zone):	15
% Effluent for Acute Aquatic Life (ZID):	60
Effluent Flow for Human Health (MGD):	10
% Effluent for Human Health:	8
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	173978.75	0.590		1.00	Assumed
Cadmium	6.55	-0.92	991071.09	0.201		1.00	Assumed
Chromium (total)	6.34	-0.27	1504678.80	0.142		1.00	Assumed
Chromium (trivalent)	6.34	-0.27	1504678.80	0.142		1.00	Assumed
Chromium (hexavalent)	N/A	N/A	N/A	1.00	Assumed	1.00	Assumed
Copper	6.45	-0.90	809367.96	0.236		1.00	Assumed
Lead	6.31	-0.53	979282.98	0.203		1.00	Assumed
Mercury	N/A	N/A	N/A	1.00	Assumed	1.00	Assumed
Nickel	6.34	-0.76	762841.67	0.247		1.00	Assumed
Selenium	N/A	N/A	N/A	1.00	Assumed	1.00	Assumed
Silver	6.38	-1.03	575278.59	0.303		1.00	Assumed
Zinc	6.52	-0.68	1290028.21	0.162		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	5.00	N/A	1.60	N/A	2.35	4.97
Aluminum	991	N/A	1652	N/A	529	N/A	776	1643
Arsenic	340	150	961	1696	308	1035	452	956
Cadmium	17.16	0.403	142	13.4	45.4	8.15	11.9	25.3
Carbaryl	2.0	N/A	3.33	N/A	1.07	N/A	1.56	3.31
Chlordane	2.4	0.004	4.00	0.0267	1.28	0.0163	0.0239	0.0505
Chlorpyrifos	0.083	0.041	0.138	0.273	0.0443	0.167	0.0650	0.137
Chromium (trivalent)	1022	132.9	11951	6218	3824	3793	5575	11796
Chromium (hexavalent)	15.7	10.6	26.2	70.7	8.37	43.1	12.3	26.0
Copper	27.80	17.41	196	492	62.8	300	92.3	195
Cyanide (free)	45.8	10.7	76.3	71.3	24.4	43.5	35.9	75.9
4,4'-DDT	1.1	0.001	1.83	0.00667	0.587	0.00407	0.00597	0.0126
Demeton	N/A	0.1	N/A	0.667	N/A	0.407	0.597	1.26
Diazinon	0.17	0.17	0.283	1.13	0.0907	0.691	0.133	0.281
Dicofol [Kelthane]	59.3	19.8	98.8	132	31.6	80.5	46.4	98.3
Dieldrin	0.24	0.002	0.400	0.0133	0.128	0.00813	0.0119	0.0252
Diuron	210	70	350	467	112	285	164	348
Endosulfan I (*alpha*)	0.22	0.056	0.367	0.373	0.117	0.228	0.172	0.364
Endosulfan II (*beta*)	0.22	0.056	0.367	0.373	0.117	0.228	0.172	0.364
Endosulfan sulfate	0.22	0.056	0.367	0.373	0.117	0.228	0.172	0.364
Endrin	0.086	0.002	0.143	0.0133	0.0459	0.00813	0.0119	0.0252
Guthion [Azinphos Methyl]	N/A	0.01	N/A	0.0667	N/A	0.0407	0.0597	0.126
Heptachlor	0.52	0.004	0.867	0.0267	0.277	0.0163	0.0239	0.0505
Hexachlorocyclohexane (*gamma*) [Lindane]	1.126	0.08	1.88	0.533	0.601	0.325	0.478	1.01
Lead	139.0	5.42	1139	178	365	108	159	336
Malathion	N/A	0.01	N/A	0.0667	N/A	0.0407	0.0597	0.126
Mercury	2.4	1.3	4.00	8.67	1.28	5.29	1.88	3.98
Methoxychlor	N/A	0.03	N/A	0.200	N/A	0.122	0.179	0.379
Mirex	N/A	0.001	N/A	0.00667	N/A	0.00407	0.00597	0.0126
Nickel	856	95.1	5779	2568	1849	1566	2302	4870
Nonylphenol	28	6.6	46.7	44.0	14.9	26.8	21.9	46.4
Parathion (ethyl)	0.065	0.013	0.108	0.0867	0.0347	0.0529	0.0509	0.107
Pentachlorophenol	13.0	10.00	21.7	66.7	6.95	40.7	10.2	21.6
Phenanthrene	30	30	50.0	200	16.0	122	23.5	49.7
Polychlorinated Biphenyls [PCBs]	2.0	0.014	3.33	0.0933	1.07	0.0569	0.0836	0.177
Selenium	20	5	33.3	33.3	10.7	20.3	15.6	33.1
Silver	0.8	N/A	22.3	N/A	7.15	N/A	10.5	22.2
Toxaphene	0.78	0.0002	1.30	0.00133	0.416	0.000813	0.00119	0.00252
Tributyltin [TBT]	0.13	0.024	0.217	0.160	0.0693	0.0976	0.101	0.215
2,4,5 Trichlorophenol	136	64	227	427	72.5	260	106	225
Zinc	214.4	216.1	2201	8876	704	5415	1035	2190

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	1438	1337	1965	4157
Aldrin	1.146E-05	1.147E-05	1.147E-04	0.000143	0.000133	0.000196	0.000414
Anthracene	1109	1317	13170	16463	15310	22505	47614
Antimony	6	1071	10710	13388	12450	18302	38720
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	7263	6754	9928	21005
Benzidine	0.0015	0.107	1.07	1.34	1.24	1.82	3.86
Benzo(*a*)anthracene	0.024	0.025	0.25	0.313	0.291	0.427	0.903
Benzo(*a*)pyrene	0.0025	0.0025	0.025	0.0313	0.0291	0.0427	0.0903
Bis(chloromethyl)ether	0.0024	0.2745	2.745	3.43	3.19	4.69	9.92
Bis(2-chloroethyl)ether	0.60	42.83	428.3	535	498	731	1548
Bis(2-ethylhexyl) phthalate [Di(2-ethylhexyl) phthalate	6	7.55	75.5	94.4	87.8	129	272
Bromodichloromethane [Dichlorobromomethane]	10.2	275	2750	3438	3197	4699	9942
Bromoform [Tribromomethane]	66.9	1060	10600	13250	12323	18114	38322
Cadmium	5	N/A	N/A	N/A	N/A	N/A	N/A
Carbon Tetrachloride	4.5	46	460	575	535	786	1663
Chlordane	0.0025	0.0025	0.025	0.0313	0.0291	0.0427	0.0903
Chlorobenzene	100	2737	27370	34213	31818	46771	98952
Chlorodibromomethane [Dibromochloromethane]	7.5	183	1830	2288	2127	3127	6616
Chloroform [Trichloromethane]	70	7697	76970	96213	89478	131532	278275
Chromium (hexavalent)	62	502	5020	6275	5836	8578	18149
Chrysene	2.45	2.52	25.2	31.5	29.3	43.0	91.1
Cresols [Methylphenols]	1041	9301	93010	116263	108124	158942	336266
Cyanide (free)	200	N/A	N/A	N/A	N/A	N/A	N/A
4,4'-DDD	0.002	0.002	0.02	0.0250	0.0233	0.0341	0.0723
4,4'-DDE	0.00013	0.00013	0.0013	0.00163	0.00151	0.00222	0.00469
4,4'-DDT	0.0004	0.0004	0.004	0.00500	0.00465	0.00683	0.0144
2,4'-D	70	N/A	N/A	N/A	N/A	N/A	N/A
Danitol [Fenpropathrin]	262	473	4730	5913	5499	8082	17100
1,2-Dibromoethane [Ethylene Dibromide]	0.17	4.24	42.4	53.0	49.3	72.4	153
m-Dichlorobenzene [1,3-Dichlorobenzene]	322	595	5950	7438	6917	10167	21511
o-Dichlorobenzene [1,2-Dichlorobenzene]	600	3299	32990	41238	38351	56375	119271
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	28.0	26.0	38.2	80.9
1,2-Dichloroethane	5	364	3640	4550	4232	6220	13159
1,1-Dichloroethylene [1,1-Dichloroethene]	7	55114	551140	688925	640700	941829	1992577
Dichloromethane [Methylene Chloride]	5	13333	133330	166663	154996	227844	482037
1,2-Dichloropropane	5	259	2590	3238	3011	4425	9363
1,3-Dichloropropene [1,3-Dichloropropylene]	2.8	119	1190	1488	1383	2033	4302
Dicofol [Kelthane]	0.30	0.30	3	3.75	3.49	5.12	10.8
Dieldrin	2.0E-05	2.0E-05	2.0E-04	0.000250	0.000233	0.000341	0.000723
2,4-Dimethylphenol	444	8436	84360	105450	98069	144160	304993
Di-*n*-Butyl Phthalate	88.9	92.4	924	1155	1074	1579	3340
Dioxins/Furans [TCDD Equivalents]	7.80E-08	7.97E-08	7.97E-07	9.96E-07	9.27E-07	0.0000014	0.0000029
Endrin	0.02	0.02	0.2	0.250	0.233	0.341	0.723
Epichlorohydrin	53.5	2013	20130	25163	23401	34399	72777
Ethylbenzene	700	1867	18670	23338	21704	31904	67499
Ethylene Glycol	46744	1.68E+07	1.68E+08	210000000	195300000	287091000	607383000
Fluoride	4000	N/A	N/A	N/A	N/A	N/A	N/A
Heptachlor	8.0E-05	0.0001	0.001	0.00125	0.00116	0.00170	0.00361
Heptachlor Epoxide	0.00029	0.00029	0.0029	0.00363	0.00337	0.00495	0.0104
Hexachlorobenzene	0.00068	0.00068	0.0068	0.00850	0.00791	0.0116	0.0245
Hexachlorobutadiene	0.21	0.22	2.2	2.75	2.56	3.75	7.95

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)*
Hexachlorocyclohexane (*alpha*)	0.0078	0.0084	0.084	0.105	0.0977	0.143	0.303
Hexachlorocyclohexane (*beta*)	0.15	0.26	2.6	3.25	3.02	4.44	9.39
Hexachlorocyclohexane (*gamma*) [Lindane]	0.2	0.341	3.41	4.26	3.96	5.82	12.3
Hexachlorocyclopentadiene	10.7	11.6	116	145	135	198	419
Hexachloroethane	1.84	2.33	23.3	29.1	27.1	39.8	84.2
Hexachlorophene	2.05	2.90	29	36.3	33.7	49.5	104
4,4'-Isopropylidenediphenol [Bisphenol A]	1092	15982	159820	199775	185791	273112	577809
Lead	1.15	3.83	38.3	235	219	321	680
Mercury	0.0122	0.0122	0.122	0.153	0.142	0.208	0.441
Methoxychlor	2.92	3.0	30	37.5	34.9	51.2	108
Methyl Ethyl Ketone	13865	9.92E+05	9.92E+06	12400000	11532000	16952040	35864520
Methyl *tert*-butyl ether [MTBE]	15	10482	104820	131025	121853	179124	378963
Nickel	332	1140	11400	57732	53691	78925	166978
Nitrate-Nitrogen (as Total Nitrogen)	10000	N/A	N/A	N/A	N/A	N/A	N/A
Nitrobenzene	45.7	1873	18730	23413	21774	32007	67715
N-Nitrosodiethylamine	0.0037	2.1	21	26.3	24.4	35.8	75.9
N-Nitroso-di-*n*-Butylamine	0.119	4.2	42	52.5	48.8	71.7	151
Pentachlorobenzene	0.348	0.355	3.55	4.44	4.13	6.06	12.8
Pentachlorophenol	0.22	0.29	2.9	3.63	3.37	4.95	10.4
Polychlorinated Biphenyls [PCBs]	6.4E-04	6.4E-04	6.40E-03	0.00800	0.00744	0.0109	0.0231
Pyridine	23	947	9470	11838	11009	16183	34237
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	3.00	2.79	4.10	8.67
1,1,2,2-Tetrachloroethane	1.64	26.35	263.5	329	306	450	952
Tetrachloroethylene [Tetrachloroethylene]	5	280	2800	3500	3255	4784	10123
Thallium	0.12	0.23	2.3	2.88	2.67	3.93	8.31
Toluene	1000	N/A	N/A	N/A	N/A	N/A	N/A
Toxaphene	0.011	0.011	0.11	0.138	0.128	0.187	0.397
2,4,5-TP [Silvex]	50	369	3690	4613	4290	6305	13340
1,1,1-Trichloroethane	200	784354	7843540	9804425	9118115	13403629	28357338
1,1,2-Trichloroethane	5	166	1660	2075	1930	2836	6001
Trichloroethylene [Trichloroethene]	5	71.9	719	899	836	1228	2599
2,4,5-Trichlorophenol	1039	1867	18670	23338	21704	31904	67499
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	206	192	281	596

Aquatic Life *Parameter*	*70% of Daily Avg. (µg/L)*	*85% of Daily Avg. (µg/L)*
Aldrin	1.64	1.99
Aluminum	543	660
Arsenic	316	384
Cadmium	8.38	10.1
Carbaryl	1.09	1.33
Chlordane	0.0167	0.0203
Chlorpyrifos	0.0455	0.0553
Chromium (trivalent)	3903	4739
Chromium (hexavalent)	8.61	10.4
Copper	64.6	78.5
Cyanide (free)	25.1	30.5
4,4'-DDT	0.00418	0.00508
Demeton	0.418	0.508
Diazinon	0.0932	0.113
Dicofol [Kelthane]	32.5	39.5
Dieldrin	0.00836	0.0101
Diuron	115	139
Endosulfan I (*alpha*)	0.120	0.146
Endosulfan II (*beta*)	0.120	0.146
Endosulfan sulfate	0.120	0.146
Endrin	0.00836	0.0101
Guthion [Azinphos Methyl]	0.0418	0.0508
Heptachlor	0.0167	0.0203
Hexachlorocyclohexane (*gamma*) [Lindane]	0.334	0.406
Lead	111	135
Malathion	0.0418	0.0508
Mercury	1.31	1.59
Methoxychlor	0.125	0.152
Mirex	0.00418	0.00508
Nickel	1611	1956
Nonylphenol	15.3	18.6
Parathion (ethyl)	0.0356	0.0433
Pentachlorophenol	7.15	8.68
Phenanthrene	16.4	19.9
Polychlorinated Biphenyls [PCBs]	0.0585	0.0711
Selenium	10.9	13.3
Silver	7.35	8.92
Toxaphene	0.000836	0.00101
Tributyltin [TBT]	0.0713	0.0866
2,4,5 Trichlorophenol	74.6	90.6
Zinc	724	880

Human Health *Parameter*	*70% of Daily Avg. (µg/L)*	*85% of Daily Avg. (µg/L)*
Acrylonitrile	1375	1670
Aldrin	0.000137	0.000166
Anthracene	15754	19130
Antimony	12811	15556
Arsenic	N/A	N/A
Barium	N/A	N/A
Benzene	6949	8439
Benzidine	1.27	1.55
Benzo(*a*)anthracene	0.299	0.363
Benzo(*a*)pyrene	0.0299	0.0363
Bis(chloromethyl)ether	3.28	3.98
Bis(2-chloroethyl)ether	512	622
Bis(2-ethylhexyl) phthalate [Di(2-ethylhexyl) phthalate]	90.3	109
Bromodichloromethane [Dichlorobromomethane]	3289	3994
Bromoform [Tribromomethane]	12679	15396
Cadmium	N/A	N/A
Carbon Tetrachloride	550	668
Chlordane	0.0299	0.0363
Chlorobenzene	32740	39756
Chlorodibromomethane [Dibromochloromethane]	2189	2658
Chloroform [Trichloromethane]	92072	111802
Chromium (hexavalent)	6004	7291
Chrysene	30.1	36.6
Cresols [Methylphenols]	111259	135101
Cyanide (free)	N/A	N/A
4,4'-DDD	0.0239	0.0290
4,4'-DDE	0.00155	0.00188
4,4'-DDT	0.00478	0.00581
2,4'-D	N/A	N/A
Danitol [Fenpropathrin]	5658	6870
1,2-Dibromoethane [Ethylene Dibromide]	50.7	61.5
m-Dichlorobenzene [1,3-Dichlorobenzene]	7117	8642
o-Dichlorobenzene [1,2-Dichlorobenzene]	39463	47919
p-Dichlorobenzene [1,4-Dichlorobenzene]	N/A	N/A
3,3'-Dichlorobenzidine	26.7	32.5
1,2-Dichloroethane	4354	5287
1,1-Dichloroethylene [1,1-Dichloroethene]	659280	800554
Dichloromethane [Methylene Chloride]	159491	193667
1,2-Dichloropropane	3098	3762
1,3-Dichloropropene [1,3-Dichloropropylene]	1423	1728
Dicofol [Kelthane]	3.58	4.35
Dieldrin	0.000239	0.000290
2,4-Dimethylphenol	100912	122536
Di-*n*-Butyl Phthalate	1105	1342
Dioxins/Furans [TCDD Equivalents]	9.53E-07	0.0000012
Endrin	0.239	0.290
Epichlorohydrin	24079	29239
Ethylbenzene	22333	27118
Ethylene Glycol	200963700	244027350
Fluoride	N/A	N/A
Heptachlor	0.00119	0.00145
Heptachlor Epoxide	0.00346	0.00421
Hexachlorobenzene	0.00813	0.00987
Hexachlorobutadiene	2.63	3.19

Human Health *Parameter*	*70% of Daily Avg. (µg/L)*	*85% of Daily Avg. (µg/L)*
Hexachlorocyclohexane (*alpha*)	0.100	0.122
Hexachlorocyclohexane (*beta*)	3.11	3.77
Hexachlorocyclohexane (*gamma*) [Lindane]	4.07	4.95
Hexachlorocyclopentadiene	138	168
Hexachloroethane	27.8	33.8
Hexachlorophene	34.6	42.1
4,4'-Isopropylidenediphenol [Bisphenol A]	191178	232145
Lead	225	273
Mercury	0.145	0.177
Methoxychlor	35.8	43.5
Methyl Ethyl Ketone	11866428	14409234
Methyl *tert*-butyl ether [MTBE]	125386	152255
Nickel	55247	67086
Nitrate-Nitrogen (as Total Nitrogen)	N/A	N/A
Nitrobenzene	22405	27206
N-Nitrosodiethylamine	25.1	30.5
N-Nitroso-di-*n*-Butylamine	50.2	61.0
Pentachlorobenzene	4.24	5.15
Pentachlorophenol	3.46	4.21
Polychlorinated Biphenyls [PCBs]	0.00765	0.00929
Pyridine	11328	13755
Selenium	N/A	N/A
1,2,4,5-Tetrachlorobenzene	2.87	3.48
1,1,2,2-Tetrachloroethane	315	382
Tetrachloroethylene [Tetrachloroethylene]	3349	4067
Thallium	2.75	3.34
Toluene	N/A	N/A
Toxaphene	0.131	0.159
2,4,5-TP [Silvex]	4414	5359
1,1,1-Trichloroethane	9382540	11393085
1,1,2-Trichloroethane	1985	2411
Trichloroethylene [Trichloroethene]	860	1044
2,4,5-Trichlorophenol	22333	27118
TTHM [Sum of Total Trihalomethanes]	N/A	N/A
Vinyl Chloride	197	239

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:	**City Public Service of San Antonio**
Permit Number, Outfall:	**WQ0001514000, 002**
Segment Number:	**1911**

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	**474**	mg/L	2010 IP, Appendix D
CA - chloride - ambient segment concentration	**59**	mg/L	2010 IP, Appendix D
CA - sulfate - ambient segment concentration	**55**	mg/L	2010 IP, Appendix D
CC - TDS - segment criterion	**750**	mg/L	2014 TSWQS, Appendix A
CC - chloride - segment criterion	**150**	mg/L	2014 TSWQS, Appendix A
CC - sulfate - segment criterion	**150**	mg/L	2014 TSWQS, Appendix A
CE - TDS - average effluent concentration	**893**	mg/L	Permit application
CE - chloride - average effluent concentration	**372**	mg/L	Permit application
CE - sulfate - average effluent concentration	**199**	mg/L	Permit application

Screening Equation

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

Permit Limit Calculations

TDS

Calculate the WLA	WLA= [CC - (1-EF)(CA)]/EF			3924.00	
Calculate the LTA	LTA = WLA * 0.93			3649.32	
Calculate the daily average	Daily Avg. = LTA * 1.47			**5364.50**	
Calculate the daily maximum	Daily Max. = LTA * 3.11			**11349.39**	
Calculate 70% of the daily average	70% of Daily Avg. =			3755.15	
Calculate 85% of the daily average	85% of Daily Avg. =			4559.83	
No permit limitations needed if:	**893**	≤	**3755.15**		
Reporting needed if:	**893**	>	**3755.15**	**but ≤**	**4559.83**
Permit limits may be needed if:	**893**	>	**4559.83**		

No permit limitations needed for TDS

Chloride

Calculate the WLA	WLA= [CC - (1-EF)(CA)]/EF	1196.50
Calculate the LTA	LTA = WLA * 0.93	1112.75
Calculate the daily average	Daily Avg. = LTA * 1.47	**1635.74**
Calculate the daily maximum	Daily Max. = LTA * 3.11	**3460.64**
Calculate 70% of the daily average	70% of Daily Avg. =	1145.01
Calculate 85% of the daily average	85% of Daily Avg. =	1390.37

No permit limitations needed if:	**372**	**≤**	**1145.01**		
Reporting needed if:	**372**	**>**	**1145.01**	**but ≤**	**1390.37**
Permit limits may be needed if:	**372**	**>**	**1390.37**		

No permit limitations needed for chloride

Sulfate

Calculate the WLA	WLA= [CC - (1-EF)(CA)]/EF	1242.50
Calculate the LTA	LTA = WLA * 0.93	1155.53
Calculate the daily average	Daily Avg. = LTA * 1.47	**1698.62**
Calculate the daily maximum	Daily Max. = LTA * 3.11	**3593.68**
Calculate 70% of the daily average	70% of Daily Avg. =	1189.04
Calculate 85% of the daily average	85% of Daily Avg. =	1443.83

No permit limitations needed if:	**199**	**≤**	**1189.04**		
Reporting needed if:	**199**	**>**	**1189.04**	**but ≤**	**1443.83**
Permit limits may be needed if:	**199**	**>**	**1443.83**		

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	1,440 MG		1,800 MGD		---	---	---	---	**1,1440 MGD**		**1,800 MGD**	
	Temperature	---	---	---	---	---		---		**110 °F**		**115 °F**	
	Free Available Chlorine (FAC)	401	0.2	1,001	0.5	---	---	---	---	**400**	**0.2**	**1,001**	**0.5**
	FAC	**N/A**	0.2	**N/A**	**0.25**	---	---	---	---	400	**0.2**	1001	0.5
	Total Residual Chlorine (TRC)	N/A	N/A	N/A	0.2	---	---	---	---	**N/A**	**N/A**	**N/A**	**0.2**
	TRC	N/A	N/A	**N/A**	**0.1**	---	---	---	---	N/A	**N/A**	400	0.2
	COD	N/A	N/A	N/A	Report	---	---	---	---	N/A	**N/A**	N/A	**Report**
	Oil and Grease	N/A	15	N/A	20	---	---	---	---	N/A	**15**	N/A	**20**
	pH	6.0 SU, minimum		10.0 SU		---	---	---	---	**6.0 SU, minimum**		**10.0 SU**	
101 & 102	Flow	Report, MGD		Report, MGD		---		---		**Report, MGD**		**Report, MGD**	
	TSS	---	30	---	100	---	---	---	---	**---**	**30**	**---**	**100**
	Oil and Grease	---	15	---	20	---	---	---	---	**---**	**15**	**---**	**20**

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*
104	Flow	Report, MGD		Report, MGD		---		---		**Report, MGD**		**Report, MGD**	
	COD	---	N/A	---	200	---		---		**---**	**N/A**	**---**	**200**
	TSS	---	N/A	---	50	---	---	---	---	**---**	**N/A**	**---**	**50**
	Oil and Grease	---	15	---	20	---	---	---	---	**---**	**15**	**---**	**20**
108	Flow	Report, MGD		Report, MGD		---		---		**Report, MGD**		**Report, MGD**	
	TSS	---	30	---	100	---	---	---	---	**---**	**30**	**---**	**100**
	Oil and Grease	---	15	---	20	---	---	---	---	**---**	**15**	**---**	**20**
	pH	6.0 SU, minimum		10.0 SU		---		---		**6.0 SU, minimum**		**10.0 SU**	
110	Flow	0.04 MGD		0.08 MGD		---		---		**0.04 MGD**		**0.08 MGD**	

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*
110	Biochemical Oxygen Demand, 5-day	6.6	20	N/A	45	6.6	20	---	---	**6.6**	**20**	**N/A**	**45**
	TSS	6.6	20	N/A	45	---	---	---	---	**6.6**	**20**	**N/A**	**45**
110	Chlorine Residual	N/A	1.0 minimum	N/A	N/A	---	---	---	---	**N/A**	**1.0 minimum**	**N/A**	**N/A**
	E. coli	---	---	---	---	126 CFU/100 mL		399 CFU/100 mL		**126 CFU/100 mL**		**399 CFU/100 mL**	
	pH	6.0 SU, minimum		9.0 SU		---	---	---	---	**6.0 SU, minimum**		**9.0 SU**	
111	Flow	Report, MGD		Report, MGD		---	---	---	---	**Report, MGD**		**Report, MGD**	
	TSS	---	30	---	100	---	---	---	---	**---**	**30**	**---**	**100**
	COD	---	N/A	---	200	---	---	---	---	**---**	**N/A**	**---**	**200**
	Oil and Grease	---	N/A	---	15	---	---	---	---	**---**	**N/A**	**---**	**15**
	pH	6.0 SU, minimum		10.0 SU		---	---	---	---	**6.0 SU, minimum**		**10.0 SU**	
112	Flow	Report, MGD		Report, MGD		---	---	---	---	**Report, MGD**		**Report, MGD**	
	TSS	---	30	---	100	---	---	---	---	**---**	**30**	**---**	**100**
	Oil and Grease	---	15	---	20	---	---	---	---	**---**	**15**	**---**	**20**
	pH	6.0 SU, minimum		10.0 SU		---	---	---	---	**6.0 SU, minimum**		**10.0 SU**	
002	Flow	Report, MGD		Report, MGD		---	---	---	---	**Report, MGD**		**Report, MGD**	
	TSS	---	30	---	100	---	---	---	---	**---**	**30**	**---**	**100**
	COD	---	N/A	---	200	---	---	---	---	**---**	**N/A**	**---**	**200**
	Oil and Grease	---	15	---	20	---	---	---	---	**---**	**15**	**---**	**20**
	pH	6.0 SU, minimum		9.0 SU		---	---	---	---	**6.0 SU, minimum**		**10.0 SU**	
006	Flow	Report, MGD		Report, MGD		---	---	---	---	**Report, MGD**		**Report, MGD**	
	TSS	---	30	---	100	---	---	---	---	**---**	**30**	**---**	**100**
	COD	---	N/A	---	200	---	---	---	---	**---**	**N/A**	**---**	**200**
	Oil and Grease	---	15	---	20	---	---	---	---	**---**	**15**	**---**	**20**
	pH	6.0 SU, minimum		9.0 SU		---	---	---	---	**6.0 SU, minimum**		**9.0 SU**	
007	Flow	1,440 MGD		1,800 MGD		---	---	---	---	**1,440 MGD**		**1,800 MGD**	
	Temperature	---	---	---	---	90 °F		---		**110 °F**		**115 °F**	
	FAC	401	0.2	1,001	0.5	---	---	---	---	**400**	**0.2**	**1,001**	**0.5**
	FAC	**N/A**	0.2	**N/A**	**0.25**	---	---	---	---	400	**0.2**	1001	0.5
	Total Residual Chlorine	N/A	N/A	**N/A**	**0.1**	---	---	---	---	N/A	**N/A**	400	0.2
	COD	N/A	N/A	N/A	Report	---	---	---	---	N/A	**N/A**	N/A	**Report**
	Oil and Grease	N/A	15	N/A	20	---	---	---	---	N/A	**15**	N/A	**20**
	pH	6.0 SU, minimum		10.0 SU		---	---	---	---	**6.0 SU, minimum**		**10.0 SU**	
712	Flow	Report, MGD		Report, MGD		**---**	**---**	**---**	**---**	**Report, MGD**		**Report, MGD**	

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*
	TSS	---	30	---	50	**---**	**---**	**---**	**---**	**---**	**30**	**---**	**50**
	COD	---	N/A	---	200	**---**	**---**	**---**	**---**	**---**	**N/A**	**---**	**200**
	Oil and Grease	---	15	---	20	**---**	**---**	**---**	**---**	**---**	**15**	**---**	**20**
	pH	6.0 SU, minimum		10.0 SU		**---**	**---**	**---**	**---**	**6.0 SU, minimum**		**10.0 SU**	
713	Flow	Report, MGD		Report, MGD		**---**	**---**	**---**	**---**	**Report, MGD**		**Report, MGD**	
	TSS	---	30	---	50	**---**	**---**	**---**	**---**	**---**	**30**	**---**	**50**
	Oil and Grease	---	N/A	---	15	**---**	**---**	**---**	**---**	**---**	**N/A**		**15**
	Selenium, Total	---	N/A	---	0.2	**---**	**---**	**---**	**---**	**---**	**N/A**	**---**	**0.2**
	pH	6.0 SU, minimum		9.0 SU		**---**	**---**	**---**	**---**	**6.0 SU, minimum**		**9.0 SU**	
714	Flow	Report, MGD		Report, MGD		**---**	**---**	**---**	**---**	**Report, MGD**		**Report, MGD**	
	TSS	---	30	---	100	**---**	**---**	**---**	**---**	**---**	**30**	**---**	**100**
	Oil and Grease	---	15	---	20	**---**	**---**	**---**	**---**	**---**	**15**	**---**	**20**
	Total Arsenic	---	N/A	---	0.005	**---**	**---**	**---**	**---**	**---**	**N/A**	**---**	**0.005**
	Total Mercury	---	1.0×10^{-8}	---	2.3×10^{-8}	**---**	**---**	**---**	**---**	**---**	**1.0×10^{-8}**	**---**	**2.3×10^{-8}**
	Total Selenium	---	N/A	---	0.01	**---**	**---**	**---**	**---**	**---**	**N/A**	**---**	**0.01**
	Nitrate/Nitrite as N	---	1.2	---	2.0	**---**	**---**	**---**	**---**	**---**	**1.2**	**---**	**2.0**
	Bromide	---	N/A	---	0.2	**---**	**---**	**---**	**---**	**---**	**N/A**	**---**	**0.2**
	TDS	---	149	---	306	**---**	**---**	**---**	**---**	**---**	**149**	**---**	**306**
	pH	6.0 SU, minimum		10.0 SU		**---**	**---**	**---**	**---**	**6.0 SU, minimum**		**10.0 SU**	
014	Flow	Report, MGD		Report, MGD		---	---	---	---	**Report, MGD**		**Report, MGD**	
	COD	---	N/A	---	200	---	---	---	---	**---**	**N/A**	**---**	**200**
	Oil and Grease	---	N/A	---	15	---	---	---	---	**---**	**N/A**	**---**	**15**
	pH	6.0 SU, minimum		9.0 SU		---	---	---	---	**6.0 SU, minimum**		**9.0 SU**	
015, 016 & 017	Flow	Report, MGD		Report, MGD		---	---	---	---	**Report, MGD**		**Report, MGD**	
	COD	---	N/A	---	200	---	---	---	---	**---**	**N/A**	**---**	**200**
	Oil and Grease	---	N/A	---	20	---	---	---	---	**---**	**N/A**	**---**	**20**
	pH	6.0 SU, minimum		9.0 SU		---	---	---	---	**6.0 SU, minimum**		**9.0 SU**	
018	Flow	Report		Report		---	---	---	---	**Report, MGD**		**Report, MGD**	
	COD	---	N/A	---	200	---	---	---	---	**---**	**N/A**	**---**	**200**
	Oil and Grease	---	N/A	---	20	---	---	---	---	**---**	**N/A**	**---**	**20**
	pH	6.0 SU, minimum		9.0 SU		---	---	---	---	**6.0 SU, minimum**		**9.0 SU**	