



# Administrative Package Cover Page

**This file contains the following documents:**

1. Summary of application (in plain language)
    - English
    - Alternative Language (Spanish)
  2. First Notice (NORI-Notice of Receipt of Application and Intent to Obtain a Permit)
    - English
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  3. Application materials
- 



# Portada de Paquete Administrativo

**Este archivo contiene los siguientes documentos:**

1. Resumen en lenguaje sencillo (PLS, por sus siglas en inglés) de la actividad propuesta
  - Inglés
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2. Primer aviso (NORI, por sus siglas en inglés)
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3. Solicitud original



## TEXAS COMMISSION ON ENVIRONMENTAL QUALITY

### PLAIN LANGUAGE SUMMARY FOR TPDES OR TLAP PERMIT APPLICATIONS

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

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

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

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

#### ENGLISH TEMPLATE FOR TPDES or TLAP NEW/RENEWAL/AMENDMENT APPLICATIONS **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.*

STP Nuclear Operating Company (CN601658669) operates South Texas Project Electric Generating Station (RN102395654), a nuclear powered-steam electric generation facility. The facility is located at 12090 Farm-to-Market Road 521, in Wadsworth, Matagorda County, Texas 77483. This applications is for a renewal of Texas Pollutant Discharge Elimination System (TPDES) Permit No. WQ0001908000, which authorizes the discharge of recirculated cooling water, cooling reservoir blowdown, previously monitored effluents (low volume waste sources; metal cleaning waste; stormwater; treated domestic wastewater; car wash water; air conditioning condensate; and heating, ventilating, and air conditioning [HVAC] cooling tower blowdown), stormwater, uncontaminated groundwater currently authorized under TPDES Construction General Permit TXR150000, and makeup water from the Colorado River at a daily average flow not to exceed 144,000,000 gallons per day via Outfall 001; low volume waste sources and previously monitored effluent (metal cleaning waste) on a flow-variable basis via Outfall 101; low volume waste sources from the oily waste treatment system and



stormwater on a flow-variable basis via Outfall 201; treated domestic wastewater, car wash water, and air conditioning condensate on a continuous and flow-variable basis via Outfall 401; metal cleaning waste on an intermittent and flow-variable basis via Outfall 501; treated domestic wastewater, air conditioning condensate, and HVAC cooling tower blowdown on a continuous and flow-variable basis via Outfall 601; effluent from the Reservoir Relief Wells (relief wells) for the Main Cooling Reservoir (MCR) and demineralized water from Instrumentation on a continuous and flow-variable basis via Outfall 002; effluent from the relief wells for the MCR on a continuous and flow-variable basis via Outfalls 003, 005, and 006; and effluent from the relief wells for the MCR and effluent from the MCR spillway gates on a continuous and flow-variable basis via Outfall 004.

Discharges from the facility are expected to contain total residual chlorine, total suspended solids, oil and grease, biochemical oxygen demand, total iron, total copper, temperature, pH and enterococci since the facility is subject to federal effluent limitation guidelines at 40 CFR Part 423 for discharges of low volume waste, chemical metal cleaning waste, and cooling reservoir blowdown and 30 TAC Chapter 309 for discharges of treated domestic wastewater. The 7,000-acre MCR, which is part of the main recirculating cooling water loop used to facilitate heat dissipation prior to its discharge via Outfall 001. Wastewater is discharged through a diffuser to enhance dilution. There has not been a discharge via Outfall 001 since March 1997. Low volume waste sources are treated by equalization, flotation, skimming, and sedimentation in a gross oil separator; then by dissolved air floatation; then by coagulation in a tricellulator; and then by multimedia filtration in an effluent tank prior to discharge via Outfall 201 into the MCR. Domestic wastewater, car wash water, and air conditioning condensate are treated by screening, activated sludge, sedimentation, and disinfection in two aeration basins, two clarifiers, and primary and secondary chlorine contact chambers prior to discharge via Outfall 401 into the MCR. Metal cleaning waste is treated by equalization, mixing, and aeration in an organic basin and by coagulation, chemical precipitation, and sedimentation in an inorganic basin prior to discharge via Outfall 501. Temporary tanks may also be used for treatment and storage of metal cleaning waste in the future. Currently, Outfall 501 discharges into the waste stream of Outfall 101 prior to the neutralization basins. There has not been a discharge via Outfall 501 since December 1992. Domestic wastewater, air conditioning condensate, and HVAC cooling tower blowdown are treated by screening, activated sludge, sedimentation, and disinfection in two aeration basins, a clarifier, and a chlorine contact chamber prior to discharge via Outfall 601 into the MCR.

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

### AGUAS RESIDUALES INDUSTRIALES /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.*

STP Nuclear Operating Company (CN601658669) opera La Estación de Generación Eléctrica del Proyecto de Texas del Sur (RN102395654), una instalación de generación de electricidad por vapor alimentada por energía nuclear. La instalación está ubicada en 12090 Farm-to-Market Road 521, en Wadsworth, Condado de Matagorda, Texas 77483. Esta solicitud es para una renovación del Permiso No. WQ0001908000 del Sistema de Eliminación de Descargas de Contaminantes de Texas (TPDES) que autoriza la descarga de agua de enfriamiento recirculada, purga del reservorio de enfriamiento, efluentes previamente monitoreados (fuentes de residuos de bajo volume; residuos de limpieza de metales; agua pluviales; aguas residuales domesticas tratadas; agua de lavado de autos; condensado de aire acondicionado; y purga de la torre de enfriamiento de calefacción, ventilación y aire acondicionado [HVAC]), aguas pluviales, agua subterránea no contaminada actualmente autorizada bajo el Permiso General de Construcción TPDES TXR150000, y agua de reposición del rio Colorado con un flujo promedio diario que no exceda los 144,000,000 galones por día a través del Punto de Descarga 001; fuentes de residuos de bajo volume y efluentes previamente monitoreados (residuos de limpieza de metales) en una base de flujo variable a través del Punto de Descarga 101; fuentes de residuos de bajo volume del sistema de tratamiento de residuos aceitosos y aguas pluviales en una base de flujo variable a través del Punto de Descarga 201; aguas residuales domesticas tratadas, agua de lavado de autos y condensado de aire acondicionado en una base continua y de flujo variable a través del Punto de Descarga 401; residuos de limpieza de metales en una base intermitente y de flujo variable a través del Punto de Descarga 501; aguas residuales domesticas tratadas, condensado de aire acondicionado y purga de la torre de enfriamiento HVAC en una base continua y de flujo variable a través del Punto de Descarga 601; efluente de los Pozos de Alivio del Reservorio Principal de Enfriamiento (MCR) y agua desmineralizada de la instrumentación en una base continua y de flujo variable a través del Punto de Descarga 002; efluente de los Pozos de Alivio para el MCR en una base continua y de flujo variable a través de los Puntos de Descarga 003, 005 y 006; y efluente de los Pozos de Alivio para el MCR y efluente de las compuertas del vertedero del MCR en una base continua y de flujo variable a través del Punto de Descarga 004.

Se espera que las descargas de la instalación contengan cloro residual total, solidos suspendidos totales, aceites y grasas, demanda bioquímica de oxígeno, hierro total, cobre total, temperatura, pH y enterococos ya que la instalación está sujeta a las directrices federales de limitación de efluentes en 40 CFR Parte 423 para descargas de residuos de bajo volume, residuos de limpieza de metales químicos y purga del reservorio de enfriamiento y el Capítulo 309 de 30 TAC para descargas de aguas residuales domesticas tratadas. El MCR de 7,000, que es parte de circuito principal de agua de enfriamiento recirculante utilizado para facilitar la disipación del calor antes de su descarga a través del Punto de Descarga 001. Las aguas residuales se descargan a través de un difusor para mejorar la dilución. No ha habido una descarga a través del Punto de Descarga 001 desde marzo de 1997. Las fuentes de residuos de bajo volume. **están** tratado por mediante igualación, flotación, desnatado y sedimentación en un separador de aceite bruto; luego por flotación por aire disuelto; luego

por coagulación en un tricellulator; y luego por filtración multimedia en un tanque de efluentes antes de la descarga a través del Punto de Descarga 201 en el MCR. Las aguas residuales domésticas, el agua de lavado de autos y el condensado de aire acondicionado se tratan mediante cribado, lodos activados, sedimentación y desinfección en dos tanques de aireación, dos clarificadores y cámaras de contacto de cloro primarias y secundarias antes de la descarga a través del Punto de Descarga 401 en el MCR. Los residuos de limpieza de metales se tratan mediante igualación, mezcla y aireación en un tanque orgánico y mediante coagulación, precipitación química y sedimentación en un tanque inorgánico antes de la descarga a través del Punto de Descarga 501. Los tanques temporales también pueden usarse para el tratamiento y almacenamiento de residuos de limpieza de metales en el future. Actualmente, el Punto de Descarga 501 descarga en el flujo de residuos del Punto de Descarga 101 antes de las piscinas de neutralización. No ha habido una descarga a través del Punto de Descarga 501 desde diciembre de 1992. Las aguas residuales domésticas, el condensado de aire acondicionado y la purga de la torre de enfriamiento HVAC se tratan mediante cribado, lodos activados, sedimentación y desinfección en dos tanques de aireación, un clarificador y una cámara de contacto de cloro antes de la descarga a través del Punto de Descarga 601 en el MCR.

# TEXAS COMMISSION ON ENVIRONMENTAL QUALITY



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

**PERMIT NO. WQ0001908000**

**APPLICATION.** STP Nuclear Operating Company, P.O. Box 289, Wadsworth, Texas 77483, which owns a nuclear powered-steam electric generation facility, has applied to the Texas Commission on Environmental Quality (TCEQ) to renew Texas Pollutant Discharge Elimination System (TPDES) Permit No. WQ0001908000 (EPA I.D. No. TX0064947) to authorize the discharge of treated wastewater and stormwater at a volume not to exceed a daily average flow of 144,000,000 gallons per day via Outfall 001; effluent from the Reservoir Relief Wells (relief wells) for the Main Cooling Reservoir (MCR) and demineralized water from Instrumentation on a continuous and flow variable basis via Outfall 002; effluent from the relief wells for the MCR on a continuous and flow variable basis via Outfall 003, 005 and 006; and effluent from the relief wells for the MCR and the MCR spillway gates on a continuous and flow variable basis via Outfall 004. The facility is located at 12090 Farm-to-Market Road 521, near the city of Wadsworth, in Matagorda County, Texas 77483. The discharge route is from the plant site via Outfall 001 directly to the Colorado River Tidal; via Outfall 002 to the Plant Area Drainage Ditch (PADD); thence to the Colorado River Tidal; via Outfall 004 to an unnamed ditch; thence to the Colorado River Tidal; via Outfall 003 to the West Branch of the Colorado River; thence to Matagorda Bay/Powderhorn Lake; via Outfall 005 to East Fork Little Robbins Slough; thence to Robbins Slough; thence to Robbins Lake; thence to Robbins Slough; thence to Crab Lake; thence to Crab Bayou; thence to the Gulf Intracoastal Waterway (GIWW); thence to Matagorda Bay/Powderhorn Lake; and via Outfall 006 to Little Robbins Slough; thence to an unnamed pond; thence to Robbins Slough; thence to an unnamed lake; thence to Robbins Slough; thence to Robbins Lake; thence to Robbins Slough; thence to Crab Lake; thence to Crab Bayou; thence to GIWW; thence to Matagorda Bay/Powderhorn Lake. TCEQ received this application on August 12, 2024. The permit application will be available for viewing and copying at Bay City Public Library, 1100 7th Street, Bay City, in Matagorda 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=-96.052777,28.797222&level=18>

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

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

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

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

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

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

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

The Commission may only grant a request for a contested case hearing on issues the requestor submitted in their timely comments that were not subsequently withdrawn. **If a hearing is granted, the subject of a hearing will be limited to disputed issues of fact or**

**mixed questions of fact and law relating to relevant and material water quality concerns submitted during the comment period.**

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

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

**INFORMATION AVAILABLE ONLINE.** For details about the status of the application, visit the Commissioners' Integrated Database at [www.tceq.texas.gov/goto/cid](http://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](http://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 STP Nuclear Operating Company at the address stated above or by calling Ms. Elizabeth Jones, Staff Environmental Consultant, at 361-972-4507.

Issuance Date: August 29, 2024

# Comisión de Calidad Ambiental del Estado de Texas



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

### PERMISO NO. WQ0001908000

**SOLICITUD.** STP Nuclear Operating Company, P.O. Box 289, Wadsworth, Texas 77483, ha solicitado a la Comisión de Calidad Ambiental del Estado de Texas (TCEQ) para renovar el Permiso No. WQ0001908000 (EPA I.D. No. TX0064947)) del Sistema de Eliminación de Descargas de Contaminantes de Texas (TPDES) para autorizar la descarga de aguas residuales tratadas en un volumen que no sobrepasa un flujo promedio diario de 144,000,000 galones por día a través del Punto de Descarga 001; efluente de los Pozos de Alivio del Reservorio Principal de Enfriamiento (MCR) y agua desmineralizada de la instrumentación en una base continua y de flujo variable a través del Punto de Descarga 002; efluente de los Pozos de Alivio para el MCR en una base continua y de flujo variable a través de los Puntos de Descarga 003, 005 y 006; y efluente de los Pozos de Alivio para el MCR y las compuertas del aliviadero del MCR de manera continua y con flujo variable a través del Punto de Descarga 004. La planta está ubicada 12090 Farm-to-Market Road 521 en el Condado de Matagorda, Texas. La ruta de descarga es del sitio de la planta a través del Punto de Descarga 001 directamente al Estuario del Rio Colorado; a través del Punto de Descarga 002 hasta el Canal de Drenaje del Área de la Planta (PADD, por sus siglas en inglés); y luego al Punto de Descarga del Rio Colorado; a través del Punto de Descarga 004 hasta una zanja sin nombre; luego al Punto de Descarga 003 hasta la Rama Oeste del Rio Colorado; luego a la Bahía de Matagorda/Lago Powderhorn; a través del Punto de Descarga 005 hasta el Ramal Este del Arroyo Little Robbins; luego al Arroyo Robbins; luego al Lago Robbins; luego al Arroyo Robbins; luego al Lago Crab; luego al Arroyo Crab; luego a la Via Navegable Intracostera del Golfo (GIWW, por sus siglas en inglés); luego a la Bahía de Matagorda/Lago Powderhorn; y a través del Punto de Descarga 006 hasta el Arroyo Little Robbins; luego a un estanque sin nombre; luego al Arroyo Robbins; luego a un lago sin nombre; luego al Arroyo Robbins; luego al Lago Robbins; luego al Arroyo Robbins; luego al Lago Crab; luego al Arroyo Crab; luego a la GIWW; luego a la Bahía de Matagorda/Lago Powderhorn. La TCEQ recibió esta solicitud el 12 de agosto de 2024. La solicitud para el permiso estará disponible para leerla y copiarla en la Biblioteca Publica de Bay City, 1100 7th Street, Bay City, en el condado de Matagorda, Texas antes de la fecha de publicación de este aviso en el periódico. Este enlace a un mapa electrónico de la ubicación general del sitio o de la instalación es proporcionado como una cortesía y no es parte de



la solicitud o del aviso. Para la ubicación exacta, consulte la solicitud.

<https://gisweb.tceq.texas.gov/LocationMapper/?marker=-96.052777,28.797222&level=18>

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

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

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

**PARA SOLICITAR UNA AUDIENCIA DE CASO IMPUGNADO, USTED DEBE INCLUIR EN SU SOLICITUD LOS SIGUIENTES DATOS:** su nombre, dirección, y número de teléfono; el nombre del solicitante y número del permiso; la ubicación y distancia de su propiedad/actividad con respecto a la instalación; una descripción específica de la forma cómo usted sería afectado adversamente por el sitio de una manera no común al público en general; una lista de todas las cuestiones de hecho en disputa que usted presente durante el período de comentarios; y la declaración "[Yo/nosotros] solicito/solicitamos una audiencia de caso impugnado". Si presenta la petición para una audiencia de caso impugnado de parte de un

**grupo o asociación, debe identificar una persona que representa al grupo para recibir correspondencia en el futuro; identificar el nombre y la dirección de un miembro del grupo que sería afectado adversamente por la planta o la actividad propuesta; proveer la información indicada anteriormente con respecto a la ubicación del miembro afectado y su distancia de la planta o actividad propuesta; explicar cómo y porqué el miembro sería afectado; y explicar cómo los intereses que el grupo desea proteger son pertinentes al propósito del grupo.**

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

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

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

También se puede obtener información adicional del STP Nuclear Operating Company a la dirección indicada arriba o llamando a Elizabeth Jones al 361-972-4507.

Fecha de emission: 29 de agosto de 2024

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



## TEXAS COMMISSION ON ENVIRONMENTAL QUALITY

*Protecting Texas by Reducing and Preventing Pollution*

August 12, 2024

Dear Applicant:

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

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

ER Account Number: ER102934  
Application Reference Number: 658077  
Authorization Number: WQ0001908000  
Site Name: South Texas Project Electric Generating Station  
Regulated Entity: RN102395654 - South Texas Project Electric Generating Station  
Customer(s): CN601658669 - Stp Nuclear Operating Company

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

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

Sincerely,  
Applications Review and Processing Team  
Water Quality Division

**Texas Commission on Environmental Quality**  
Update Domestic or Industrial Individual Permit  
WQ0001908000

### Site Information (Regulated Entity)

What is the name of the site to be authorized?	SOUTH TEXAS PROJECT ELECTRIC GENERATING STATION
Does the site have a physical address?	Yes
<b>Physical Address</b>	
Number and Street	12090 FM 521
City	WADSWORTH
State	TX
ZIP	77483
County	MATAGORDA
Latitude (N) (##.#####)	28.797222
Longitude (W) (-###.#####)	-96.052777
Primary SIC Code	4911
Secondary SIC Code	
Primary NAICS Code	221119
Secondary NAICS Code	
<b>Regulated Entity Site Information</b>	
What is the Regulated Entity's Number (RN)?	RN102395654
What is the name of the Regulated Entity (RE)?	SOUTH TEXAS PROJECT ELECTRIC GENERATING STATION
Does the RE site have a physical address?	No
<b>Physical Address</b>	
Because there is no physical address, describe how to locate this site:	FM 521 8MI W OF WADSWORTH, TX
City	BAY CITY
State	TX
ZIP	77483
County	MATAGORDA
Latitude (N) (##.#####)	28.795
Longitude (W) (-###.#####)	-96.0481
Facility NAICS Code	
What is the primary business of this entity?	ELECTRIC GENERATING STATION

### STP Nuc-Customer (Applicant) Information (Owner)

How is this applicant associated with this site?	Owner
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What is the applicant's Customer Number (CN)?	CN601658669
Type of Customer	Other
<b>Full legal name of the applicant:</b>	
Legal Name	STP Nuclear Operating Company
Texas SOS Filing Number	145955301
Federal Tax ID	760517597
State Franchise Tax ID	17605175979
State Sales Tax ID	
Local Tax ID	
DUNS Number	
Number of Employees	501+
Independently Owned and Operated?	
I certify that the full legal name of the entity applying for this permit has been provided and is legally authorized to do business in Texas.	Yes
<b>Responsible Authority Contact</b>	
Organization Name	STP Nuclear Operating Company
Prefix	MR
First	Andrew
Middle	
Last	Richards
Suffix	JR
Credentials	
Title	Manager Regulatory Affairs
<b>Responsible Authority Mailing Address</b>	
Enter new address or copy one from list:	
Address Type	Domestic
Mailing Address (include Suite or Bldg. here, if applicable)	PO BOX 289
Routing (such as Mail Code, Dept., or Attn:)	
City	WADSWORTH
State	TX
ZIP	77483
Phone (###-###-####)	3619727666
Extension	
Alternate Phone (###-###-####)	
Fax (###-###-####)	
E-mail	amrichards@stpegs.com

## Billing Contact

**Responsible contact for receiving billing statements:**

Select the permittee that is responsible for payment of the annual fee.

Organization Name

CN601658669, STP Nuclear  
Operating Company

STP NUCLEAR OPERATING  
COMPANY

Prefix

First

Elizabeth

Middle

Last

Jones

Suffix

Credentials

Title

Staff Environmental Consultant

Enter new address or copy one from list:

**Mailing Address**

Address Type

Domestic

Mailing Address (include Suite or Bldg. here, if applicable)

PO BOX 289

Routing (such as Mail Code, Dept., or Attn:)

City

WADSWORTH

State

TX

ZIP

77483

Phone (###-###-####)

3619724507

Extension

Alternate Phone (###-###-####)

Fax (###-###-####)

E-mail

evjones@stpegs.com

## Application Contact

**Person TCEQ should contact for questions about this application:**

Same as another contact?

Billing Contact

Organization Name

STP NUCLEAR OPERATING  
COMPANY

Prefix

First

Elizabeth

Middle

Last

Jones

Suffix

Credentials

Title

Staff Environmental Consultant

Enter new address or copy one from list:

**Mailing Address**

Address Type

Domestic



Mailing Address (include Suite or Bldg. here, if applicable)	PO BOX 289
Routing (such as Mail Code, Dept., or Attn:)	
City	WADSWORTH
State	TX
ZIP	77483
Phone (###-###-####)	3619724507
Extension	
Alternate Phone (###-###-####)	
Fax (###-###-####)	
E-mail	evjones@stpegs.com

## Technical Contact

### Person TCEQ should contact for questions about this application:

Same as another contact?

Organization Name	STP NUCLEAR OPERATING COMPANY
Prefix	MR
First	Robert
Middle	
Last	Nies
Suffix	III
Credentials	
Title	Staff Environmental Consultant

Enter new address or copy one from list:

### Mailing Address

Address Type	Domestic
Mailing Address (include Suite or Bldg. here, if applicable)	PO BOX 289
Routing (such as Mail Code, Dept., or Attn:)	
City	WADSWORTH
State	TX
ZIP	77483
Phone (###-###-####)	3619728328
Extension	
Alternate Phone (###-###-####)	
Fax (###-###-####)	
E-mail	renies@stpegs.com

## DMR Contact

### Person responsible for submitting Discharge Monitoring Report

**Forms:**

Same as another contact?

Organization Name

Prefix

First

Middle

Last

Suffix

Credentials

Title

Enter new address or copy one from list:

**Mailing Address:**

Address Type

Mailing Address (include Suite or Bldg. here, if applicable)

Routing (such as Mail Code, Dept., or Attn:)

City

State

ZIP

Phone (###-###-####)

Extension

Alternate Phone (###-###-####)

Fax (###-###-####)

E-mail

Technical Contact

STP NUCLEAR OPERATING  
COMPANY

MR

Robert

Nies

III

Staff Environmental Consultant

Domestic

PO BOX 289

WADSWORTH

TX

77483

3619728328

renies@stpegs.com

**Section 1# Permit Contact****Permit Contact#: 1****Person TCEQ should contact throughout the permit term.**

1) Same as another contact?

2) Organization Name

3) Prefix

4) First

5) Middle

6) Last

7) Suffix

8) Credentials

9) Title

**Mailing Address**

Billing Contact

STP NUCLEAR OPERATING  
COMPANY

Elizabeth

Jones

Staff Environmental Consultant

10) Enter new address or copy one from list	
11) Address Type	Domestic
11.1) Mailing Address (include Suite or Bldg. here, if applicable)	PO BOX 289
11.2) Routing (such as Mail Code, Dept., or Attn:)	
11.3) City	WADSWORTH
11.4) State	TX
11.5) ZIP	77483
12) Phone (###-###-####)	3619724507
13) Extension	
14) Alternate Phone (###-###-####)	
15) Fax (###-###-####)	
16) E-mail	evjones@stpegs.com

## Section 2# Permit Contact

### Permit Contact#: 2

**Person TCEQ should contact throughout the permit term.**

1) Same as another contact?	Technical Contact
2) Organization Name	STP NUCLEAR OPERATING COMPANY
3) Prefix	MR
4) First	Robert
5) Middle	
6) Last	Nies
7) Suffix	III
8) Credentials	
9) Title	Staff Environmental Consultant

### Mailing Address

10) Enter new address or copy one from list	
11) Address Type	Domestic
11.1) Mailing Address (include Suite or Bldg. here, if applicable)	PO BOX 289
11.2) Routing (such as Mail Code, Dept., or Attn:)	
11.3) City	WADSWORTH
11.4) State	TX
11.5) ZIP	77483
12) Phone (###-###-####)	3619728328
13) Extension	
14) Alternate Phone (###-###-####)	
15) Fax (###-###-####)	
16) E-mail	renies@stpegs.com

## Owner Information

### Owner of Treatment Facility

1) Prefix	
2) First and Last Name	
3) Organization Name	STP Nuclear Operating Company
4) Mailing Address	PO Box 289
5) City	Wadsworth
6) State	TX
7) Zip Code	77483
8) Phone (###-###-####)	3619724507
9) Extension	
10) Email	evjones@stpegs.com
11) What is ownership of the treatment facility?	Private

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

12) Prefix	
13) First and Last Name	
14) Organization Name	STP Nuclear Operating Company
15) Mailing Address	PO Box 289
16) City	Wadsworth
17) State	TX
18) Zip Code	77483
19) Phone (###-###-####)	3619724507
20) Extension	
21) Email	evjones@stpegs.com
22) Is the landowner the same person as the facility owner or co-applicant?	Yes

## General Information Renewal-Amendment

1) Current authorization expiration date:	02/21/2025
2) Current Facility operational status:	Active
3) Is the facility located on or does the treated effluent cross American Indian Land?	No
4) What is the application type that you are seeking?	Renewal without changes
5) Current Authorization type:	Industrial Wastewater
5.1) What is your EPA facility classification?	Major
5.1.1) Select the applicable fee	Renewal - \$2,015
6) What is the classification for your authorization?	TPDES
6.1) What is the EPA Identification Number?	TX0064947

6.2) Is the wastewater treatment facility location in the existing permit accurate?	Yes
6.3) Are the point(s) of discharge and the discharge route(s) in the existing permit correct?	Yes
6.4) City nearest the outfall(s):	Bay City
6.5) County where the outfalls are located:	MATAGORDA
6.6) Is or will the treated wastewater discharge to a city, county, or state highway right-of-way, or a flood control district drainage ditch?	No
6.7) Is the daily average discharge at your facility of 5 MGD or more?	No
7) Did any person formerly employed by the TCEQ represent your company and get paid for service regarding this application?	No

## Public Notice Information

### Individual Publishing the Notices

1) Prefix	MS
2) First and Last Name	Elizabeth Jones
3) Credential	
4) Title	Staff Environmental Consultant
5) Organization Name	STP Nuclear Operating Company
6) Mailing Address	PO BOX 289
7) Address Line 2	
8) City	WADSWORTH
9) State	TX
10) Zip Code	77483
11) Phone (###-###-####)	3619724507
12) Extension	
13) Fax (###-###-####)	
14) Email	evjones@stpegs.com

### Contact person to be listed in the Notices

15) Prefix	MS
16) First and Last Name	Elizabeth Jones
17) Credential	
18) Title	Staff Environmental Consultant
19) Organization Name	STP Nuclear Operating Company
20) Phone (###-###-####)	3619724507
21) Fax (###-###-####)	
22) Email	evjones@stpegs.com

### Bilingual Notice Requirements

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

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

No

23.2) Do the students at these schools attend a bilingual education program at another location?

No

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

Yes

23.4) Which language is required by the bilingual program?

Spanish

## Section 1# Public Viewing Information

### County#: 1

1) County

MATAGORDA

2) Public building name

Bay City Public Library - Bay City Branch

3) Location within the building

4) Physical Address of Building

1100 7th Street Bay City, TX 77414

5) City

Bay City

6) Contact Name

7) Phone (###-###-####)

9792456931

8) Extension

9) Is the location open to the public?

Yes

## Plain Language

1) Plain Language

[File Properties]

File Name

LANG\_STP Plain Language Summary  
20972.docx

Hash

7632B20593489F56EE800D6DD8E455167274DFDD300616C6DA51F2721DD2D557

MIME-Type

application/vnd.openxmlformats-  
officedocument.wordprocessingml.document

## Supplemental Permit Information Form

1) Supplemental Permit Information Form (SPIF)

[File Properties]

File Name

SPIF\_STP SPIF 20971.pdf

Hash

EEFAFE42EA4D188D9B2A9C4439C61245E69EB6A305ADE834F676FE77E6BCD695

MIME-Type

application/pdf

## Industrial Attachments

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

[File Properties]

File Name	MAP_STP USGS Figure.pdf
Hash	9ACD228305612C8BDE5B23CFF6F9A6BC795E80AED7F02FC60364424A32C41ABB
MIME-Type	application/pdf

2) I confirm that all required sections of Technical Report 1.0 are complete and will be included in the Technical Attachment.	Yes
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2.1) I confirm that Worksheet 2.0 (Pollutant Analyses Requirements) is complete and included in the Technical Attachment.	Yes
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2.2) I confirm that Worksheet 4.0 (Receiving Waters) is complete and included in the Technical Attachment.	Yes
--	-----

2.3) Are you planning to include Worksheet 4.1 (Waterbody Physical Characteristics) in the Technical Attachment?	No
--	----

2.4) Are you planning to include Worksheet 6.0 (Industrial Waste Contribution) in the Technical Attachment?	No
---	----

2.5) Are you planning to include Worksheet 7.0 (Stormwater Discharges Associated with Industrial Activities) to the Technical Attachment?	No
---	----

2.6) Are you planning to include Worksheet 8.0 (Aquaculture) in the Technical Attachment?	No
---	----

2.7) Are you planning to include Worksheet 9.0 (Class V Injection Well Inventory/Authorization) in the Technical Attachment?	No
--	----

2.8) Are you planning to include Worksheet 10.0 (Quarries in the John Graves Scenic Riverway) in the Technical Attachment?	No
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2.9) Are you planning to include Worksheet 11.0 (Cooling Water System Information) in the Technical Attachment?	Yes
---	-----

2.10) Are you planning to include Worksheet 11.1 (Impingement Mortality) in the Technical Attachment?	Yes
---	-----

2.11) Are you planning to include Worksheet 11.2 (Source Water Biological Data) in the Technical Attachment?	Yes
--	-----

2.12) Are you planning to include Worksheet 11.3 (Entrainment) in the Technical Attachment?	Yes
---	-----

2.13) Technical Attachment

[File Properties]

File Name	TECH_STP 10055_Tech Report.pdf
Hash	04D5E970AA2AC0CA83C1F51AAA3605EF914C49302A661E18D59E01545963EF77
MIME-Type	application/pdf

3) Flow Diagram



## [File Properties]

File Name	FLDIA_STP Flow Schematic with Water Balance.pdf
Hash	6F334D2A62557E4F04BF62FCEFD96FCB33BA37670D2843D8344E46AC386706C4
MIME-Type	application/pdf

## 4) Site Drawing

## [File Properties]

File Name	SITEDR_STP Facility Map.pdf
Hash	C69C416614D4A4B93AE3B1F32FD5C615DC1D6B10B1DAF65DEF579039EABA5984
MIME-Type	application/pdf

## 5) Design Calculations

## [File Properties]

File Name	DES_CAL_STP Design Calculations.pdf
Hash	DCC2B1B627C086E6F534CE5C02BE1B6650D484A26A9DC89D179FACDB96F80228
MIME-Type	application/pdf

## 6) Solids Management Plan

## 7) Water Balance

## [File Properties]

File Name	WB_STP Flow Schematic with Water Balance.pdf
Hash	6F334D2A62557E4F04BF62FCEFD96FCB33BA37670D2843D8344E46AC386706C4
MIME-Type	application/pdf

## 8) Other Attachments

## [File Properties]

File Name	OTHER_STP_Tech Report Attachments A-E.pdf
Hash	1110772EE6DDFD2CC4075C8D446995FD77C3C6173C718B5809419ACC3034B876
MIME-Type	application/pdf

## [File Properties]

File Name	OTHER_STP_Tech Report Attachment F_316 Supporting Information.pdf
Hash	873BC0D17CBE397990F2F6AD0839BE195DD1ACAC21F10A54F002761D482C5829
MIME-Type	application/pdf

## [File Properties]

File Name	OTHER_STP_Tech Report Attachment G_Other Requirements.pdf
Hash	982ED9B24EBF9AF5BE758FE7E5438E998AF06088FED2728F9E7D165E96F95FAF
MIME-Type	application/pdf

## Certification

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

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

1. I am Andrew Richards JR, the owner of the STEERS account ER101963.
2. I have the authority to sign this data on behalf of the applicant named above.
3. I have personally examined the foregoing and am familiar with its content and the content of any attachments, and based upon my personal knowledge and/or inquiry of any individual responsible for information contained herein, that this information is true, accurate, and complete.
4. I further certify that I have not violated any term in my TCEQ STEERS participation agreement and that I have no reason to believe that the confidentiality or use of my password has been compromised at any time.
5. I understand that use of my password constitutes an electronic signature legally equivalent to my written signature.
6. I also understand that the attestations of fact contained herein pertain to the implementation, oversight and enforcement of a state and/or federal environmental program and must be true and complete to the best of my knowledge.
7. I am aware that criminal penalties may be imposed for statements or omissions that I know or have reason to believe are untrue or misleading.
8. I am knowingly and intentionally signing Update Domestic or Industrial Individual Permit WQ0001908000.
9. My signature indicates that I am in agreement with the information on this form, and authorize its submittal to the TCEQ.

OWNER Signature: Andrew Richards JR OWNER

Customer Number:	CN601658669
Legal Name:	STP Nuclear Operating Company
Account Number:	ER101963
Signature IP Address:	23.91.194.151
Signature Date:	2024-08-12
Signature Hash:	170A46E9054C6FB2BBC3596FFD87830DDDF3C3F3A32D18FB33C575AC148728C6
Form Hash Code at time of Signature:	46A155F96CB2B09D4CAC6ED775CBA181A9C4C4AFC27477F5C9F29D4341DDBB6F

## Fee Payment

Transaction by:	The application fee payment transaction was made by ER102934/Elizabeth V Jones
Paid by:	The application fee was paid by ELIZABETH JONES
Fee Amount:	\$2000.00
Paid Date:	The application fee was paid on 2024-08-12

Transaction/Voucher number:

The transaction number is 582EA000621221  
and the voucher number is 716875

## Submission

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Reference Number:

The application reference number is 658077

Submitted by:

The application was submitted by  
ER102934/Elizabeth V Jones

Submitted Timestamp:

The application was submitted on 2024-08-12 at  
16:45:04 CDT

Submitted From:

The application was submitted from IP address  
99.147.197.60

Confirmation Number:

The confirmation number is 556722

Steers Version:

The STEERS version is 6.80

Permit Number:

The permit number is WQ0001908000

## Additional Information

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Application Creator: This account was created by Amanda Ragatz



## TEXAS COMMISSION ON ENVIRONMENTAL QUALITY

### PLAIN LANGUAGE SUMMARY FOR TPDES OR TLAP PERMIT APPLICATIONS

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

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

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

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

#### ENGLISH TEMPLATE FOR TPDES or TLAP NEW/RENEWAL/AMENDMENT APPLICATIONS **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.*

STP Nuclear Operating Company (CN601658669) operates South Texas Project Electric Generating Station (RN102395654), a nuclear powered-steam electric generation facility. The facility is located at 12090 Farm-to-Market Road 521, in Wadsworth, Matagorda County, Texas 77483. This applications is for a renewal of Texas Pollutant Discharge Elimination System (TPDES) Permit No. WQ0001908000, which authorizes the discharge of recirculated cooling water, cooling reservoir blowdown, previously monitored effluents (low volume waste sources; metal cleaning waste; stormwater; treated domestic wastewater; car wash water; air conditioning condensate; and heating, ventilating, and air conditioning [HVAC] cooling tower blowdown), stormwater, uncontaminated groundwater currently authorized under TPDES Construction General Permit TXR150000, and makeup water from the Colorado River at a daily average flow not to exceed 144,000,000 gallons per day via Outfall 001; low volume waste sources and previously monitored effluent (metal cleaning waste) on a flow-variable basis via Outfall 101; low volume waste sources from the oily waste treatment system and

stormwater on a flow-variable basis via Outfall 201; treated domestic wastewater, car wash water, and air conditioning condensate on a continuous and flow-variable basis via Outfall 401; metal cleaning waste on an intermittent and flow-variable basis via Outfall 501; treated domestic wastewater, air conditioning condensate, and HVAC cooling tower blowdown on a continuous and flow-variable basis via Outfall 601; effluent from the Reservoir Relief Wells (relief wells) for the Main Cooling Reservoir (MCR) and demineralized water from Instrumentation on a continuous and flow-variable basis via Outfall 002; effluent from the relief wells for the MCR on a continuous and flow-variable basis via Outfalls 003, 005, and 006; and effluent from the relief wells for the MCR and effluent from the MCR spillway gates on a continuous and flow-variable basis via Outfall 004.

Discharges from the facility are expected to contain total residual chlorine, total suspended solids, oil and grease, biochemical oxygen demand, total iron, total copper, temperature, pH and enterococci since the facility is subject to federal effluent limitation guidelines at 40 CFR Part 423 for discharges of low volume waste, chemical metal cleaning waste, and cooling reservoir blowdown and 30 TAC Chapter 309 for discharges of treated domestic wastewater. The 7,000-acre MCR, which is part of the main recirculating cooling water loop used to facilitate heat dissipation prior to its discharge via Outfall 001. Wastewater is discharged through a diffuser to enhance dilution. There has not been a discharge via Outfall 001 since March 1997. Low volume waste sources are treated by equalization, flotation, skimming, and sedimentation in a gross oil separator; then by dissolved air floatation; then by coagulation in a tricellulator; and then by multimedia filtration in an effluent tank prior to discharge via Outfall 201 into the MCR. Domestic wastewater, car wash water, and air conditioning condensate are treated by screening, activated sludge, sedimentation, and disinfection in two aeration basins, two clarifiers, and primary and secondary chlorine contact chambers prior to discharge via Outfall 401 into the MCR. Metal cleaning waste is treated by equalization, mixing, and aeration in an organic basin and by coagulation, chemical precipitation, and sedimentation in an inorganic basin prior to discharge via Outfall 501. Temporary tanks may also be used for treatment and storage of metal cleaning waste in the future. Currently, Outfall 501 discharges into the waste stream of Outfall 101 prior to the neutralization basins. There has not been a discharge via Outfall 501 since December 1992. Domestic wastewater, air conditioning condensate, and HVAC cooling tower blowdown are treated by screening, activated sludge, sedimentation, and disinfection in two aeration basins, a clarifier, and a chlorine contact chamber prior to discharge via Outfall 601 into the MCR.

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

### AGUAS RESIDUALES INDUSTRIALES /AGUAS PLUVIALES

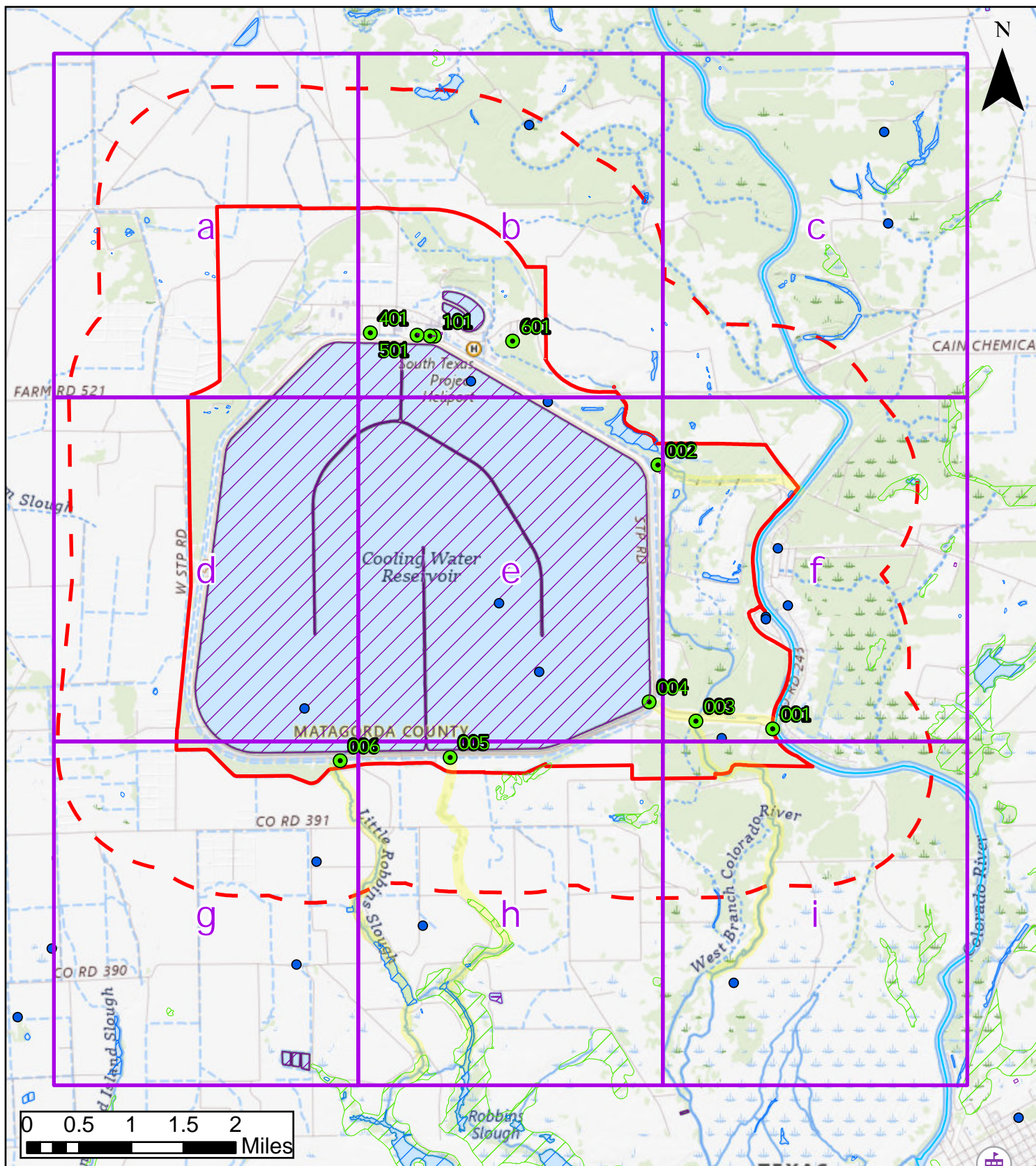
*El siguiente resumen se proporciona para esta solicitud de permiso de calidad del agua pendiente que está siendo revisada por la Comisión de Calidad Ambiental de Texas según lo requerido por el Capítulo 39 del Código Administrativo de Texas 30. La información proporcionada en este resumen puede cambiar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

STP Nuclear Operating Company (CN601658669) opera La Estación de Generación Eléctrica del Proyecto de Texas del Sur (RN102395654), una instalación de generación de electricidad por vapor alimentada por energía nuclear. La instalación está ubicada en 12090 Farm-to-Market Road 521, en Wadsworth, Condado de Matagorda, Texas 77483. Esta solicitud es para una renovación del Permiso No. WQ0001908000 del Sistema de Eliminación de Descargas de Contaminantes de Texas (TPDES) que autoriza la descarga de agua de enfriamiento recirculada, purga del reservorio de enfriamiento, efluentes previamente monitoreados (fuentes de residuos de bajo volume; residuos de limpieza de metales; agua pluviales; aguas residuales domesticas tratadas; agua de lavado de autos; condensado de aire acondicionado; y purga de la torre de enfriamiento de calefacción, ventilación y aire acondicionado [HVAC]), aguas pluviales, agua subterránea no contaminada actualmente autorizada bajo el Permiso General de Construcción TPDES TXR150000, y agua de reposición del rio Colorado con un flujo promedio diario que no exceda los 144,000,000 galones por día a través del Punto de Descarga 001; fuentes de residuos de bajo volume y efluentes previamente monitoreados (residuos de limpieza de metales) en una base de flujo variable a través del Punto de Descarga 101; fuentes de residuos de bajo volume del sistema de tratamiento de residuos aceitosos y aguas pluviales en una base de flujo variable a través del Punto de Descarga 201; aguas residuales domesticas tratadas, agua de lavado de autos y condensado de aire acondicionado en una base continua y de flujo variable a través del Punto de Descarga 401; residuos de limpieza de metales en una base intermitente y de flujo variable a través del Punto de Descarga 501; aguas residuales domesticas tratadas, condensado de aire acondicionado y purga de la torre de enfriamiento HVAC en una base continua y de flujo variable a través del Punto de Descarga 601; efluente de los Pozos de Alivio del Reservorio Principal de Enfriamiento (MCR) y agua desmineralizada de la instrumentación en una base continua y de flujo variable a través del Punto de Descarga 002; efluente de los Pozos de Alivio para el MCR en una base continua y de flujo variable a través de los Puntos de Descarga 003, 005 y 006; y efluente de los Pozos de Alivio para el MCR y efluente de las compuertas del vertedero del MCR en una base continua y de flujo variable a través del Punto de Descarga 004.

Se espera que las descargas de la instalación contengan cloro residual total, solidos suspendidos totales, aceites y grasas, demanda bioquímica de oxígeno, hierro total, cobre total, temperatura, pH y enterococos ya que la instalación está sujeta a las directrices federales de limitación de efluentes en 40 CFR Parte 423 para descargas de residuos de bajo volume, residuos de limpieza de metales químicos y purga del reservorio de enfriamiento y el Capítulo 309 de 30 TAC para descargas de aguas residuales domesticas tratadas. El MCR de 7,000, que es parte de circuito principal de agua de enfriamiento recirculante utilizado para facilitar la disipación del calor antes de su descarga a través del Punto de Descarga 001. Las aguas residuales se descargan a través de un difusor para mejorar la dilución. No ha habido una descarga a través del Punto de Descarga 001 desde marzo de 1997. Las fuentes de residuos de bajo volume. **están** tratado por mediante igualación, flotación, desnatado y sedimentación en un separador de aceite bruto; luego por flotación por aire disuelto; luego

por coagulación en un tricellulator; y luego por filtración multimedia en un tanque de efluentes antes de la descarga a través del Punto de Descarga 201 en el MCR. Las aguas residuales domésticas, el agua de lavado de autos y el condensado de aire acondicionado se tratan mediante cribado, lodos activados, sedimentación y desinfección en dos tanques de aireación, dos clarificadores y cámaras de contacto de cloro primarias y secundarias antes de la descarga a través del Punto de Descarga 401 en el MCR. Los residuos de limpieza de metales se tratan mediante igualación, mezcla y aireación en un tanque orgánico y mediante coagulación, precipitación química y sedimentación en un tanque inorgánico antes de la descarga a través del Punto de Descarga 501. Los tanques temporales también pueden usarse para el tratamiento y almacenamiento de residuos de limpieza de metales en el future. Actualmente, el Punto de Descarga 501 descarga en el flujo de residuos del Punto de Descarga 101 antes de las piscinas de neutralización. No ha habido una descarga a través del Punto de Descarga 501 desde diciembre de 1992. Las aguas residuales domésticas, el condensado de aire acondicionado y la purga de la torre de enfriamiento HVAC se tratan mediante cribado, lodos activados, sedimentación y desinfección en dos tanques de aireación, un clarificador y una cámara de contacto de cloro antes de la descarga a través del Punto de Descarga 601 en el MCR.





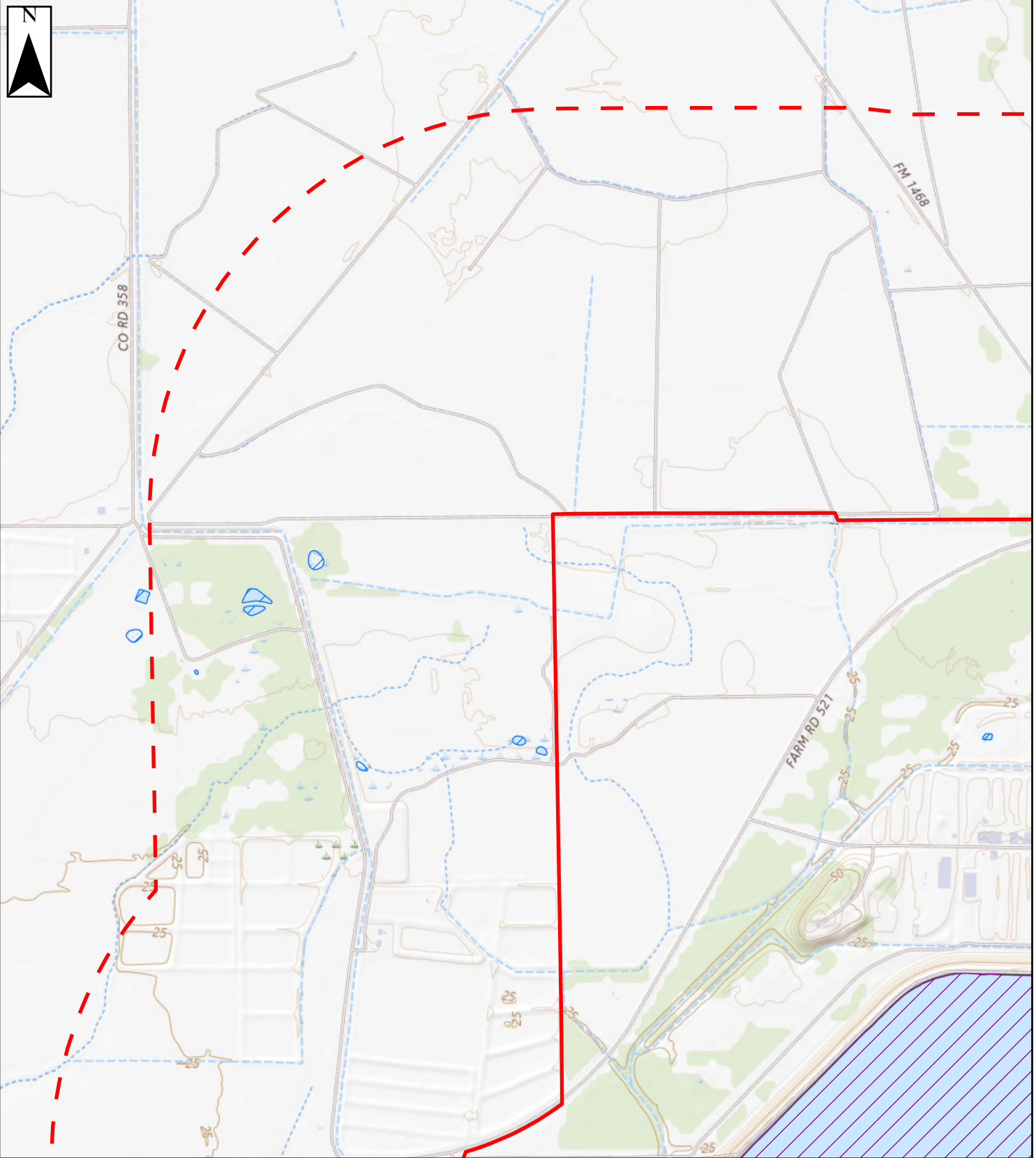
## Legend

- |                     |                 |
|---------------------|-----------------|
| Property Boundary   | Lake/Pond       |
| One-mile buffer     | Reservoir       |
| Outfall             | Swamp/Marsh     |
| Discharge route     | TWDB Water Well |
| TCEQ Stream Segment | School          |

USGS Figure 1 Overview  
 Blessing SE, Wadsworth, Palacios NE, and  
 Matagorda 1: 24,000 USGS Quadrangles  
 TPDES Permit Renewal  
 STP Nuclear Operating Company  
 Matagorda County, Texas

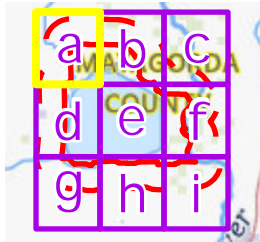






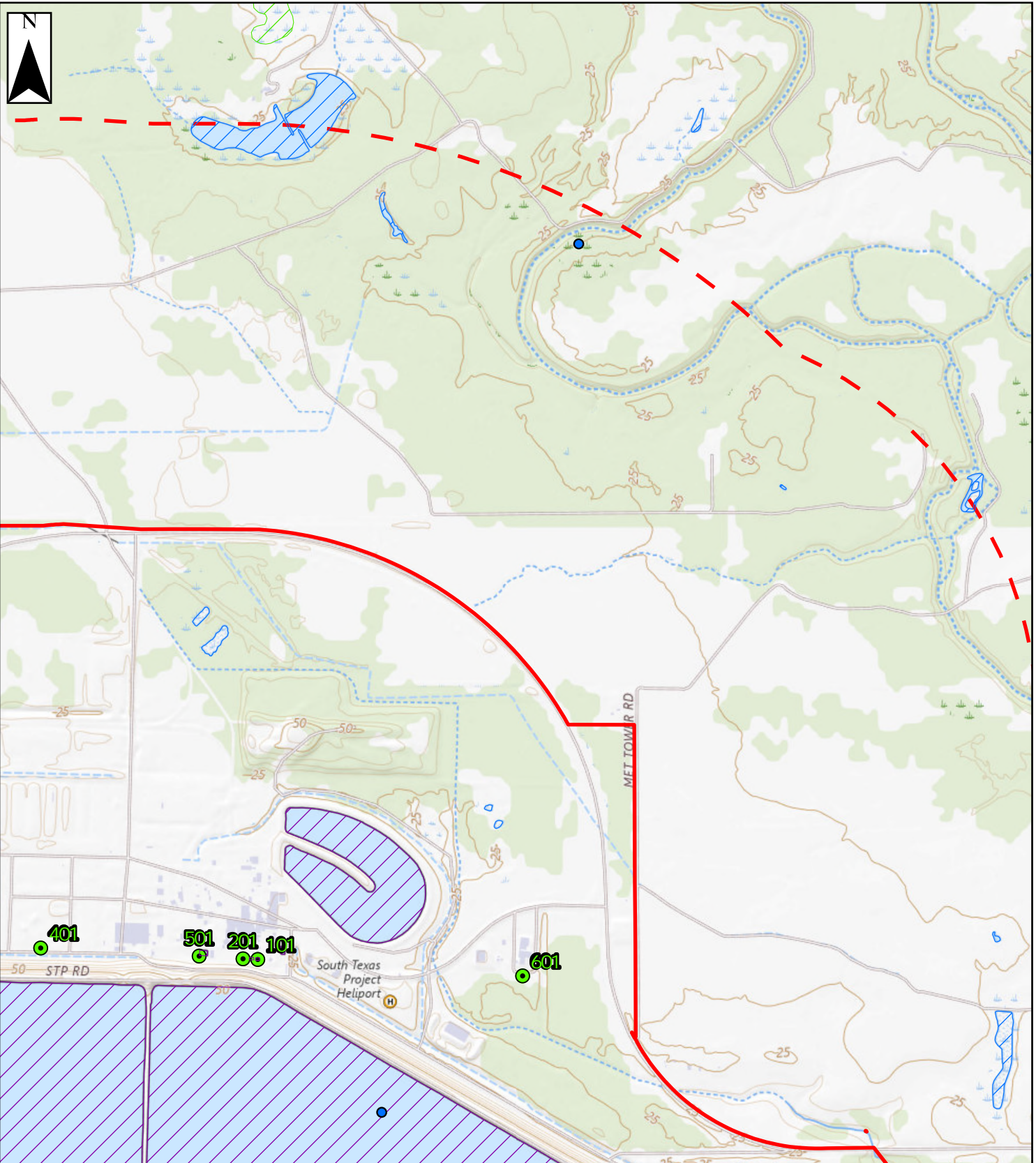
## Legend

- Property Boundary
- One-mile buffer
- TCEQ Stream Segment
- Lake/Pond
- Reservoir



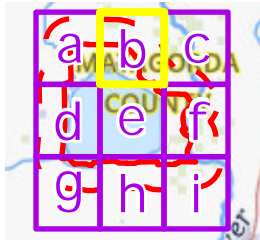
USGS Figure 1a  
 Blessing SE, Wadsworth, Palacios NE, and  
 Matagorda 1: 24,000 USGS Quadrangles  
 TPDES Permit Renewal  
 STP Nuclear Operating Company  
 Matagorda County, Texas





### Legend

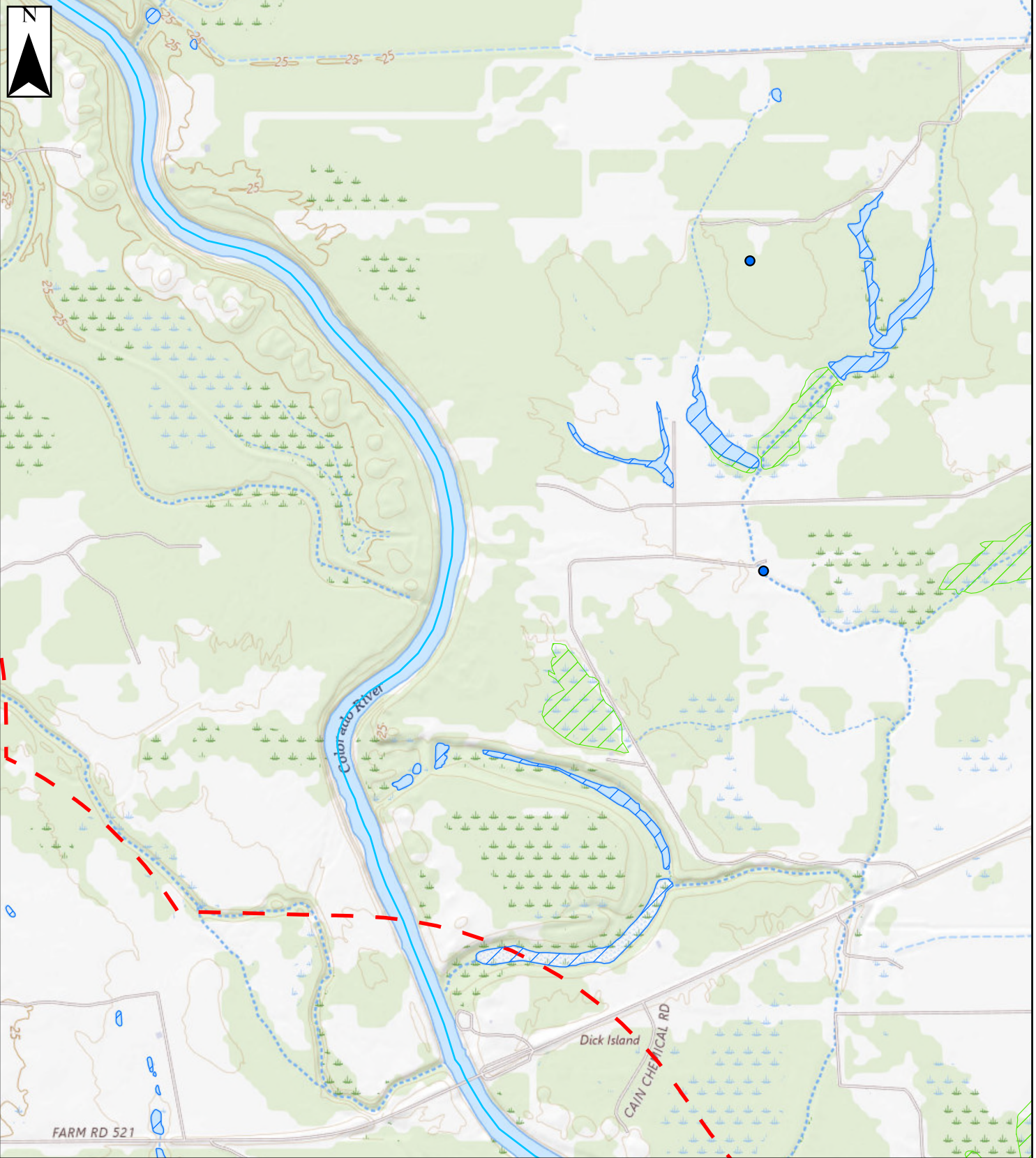
- ▬ Property Boundary
- - - One-mile buffer
- Outfall
- TCEQ Stream Segment
- ▨ Lake/Pond
- ▨ Reservoir
- ▨ Swamp/Marsh
- TWDB Water Well



USGS Figure 1b  
 Blessing SE, Wadsworth, Palacios NE, and  
 Matagorda 1: 24,000 USGS Quadrangles  
 TPDES Permit Renewal  
 STP Nuclear Operating Company  
 Matagorda County, Texas

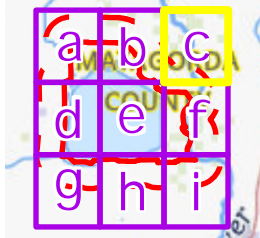






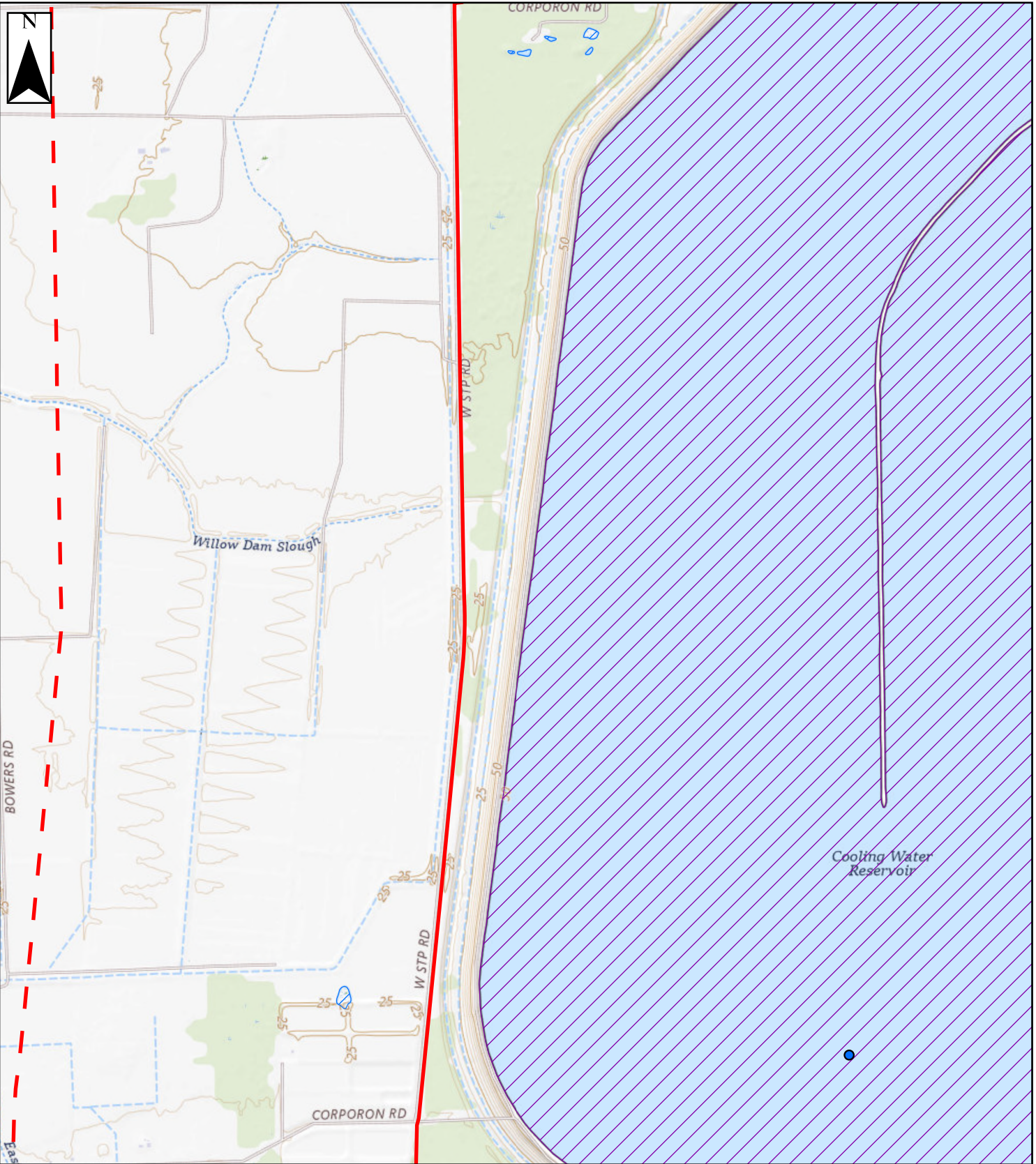
## Legend

- One-mile buffer
- TCEQ Stream Segment
- Lake/Pond
- Swamp/Marsh
- TWDB Water Well



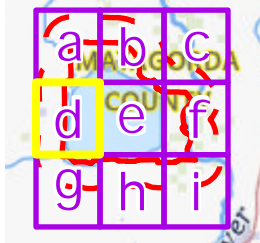
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 Blessing SE, Wadsworth, Palacios NE, and  
 Matagorda 1: 24,000 USGS Quadrangles  
 TPDES Permit Renewal  
 STP Nuclear Operating Company  
 Matagorda County, Texas





## Legend

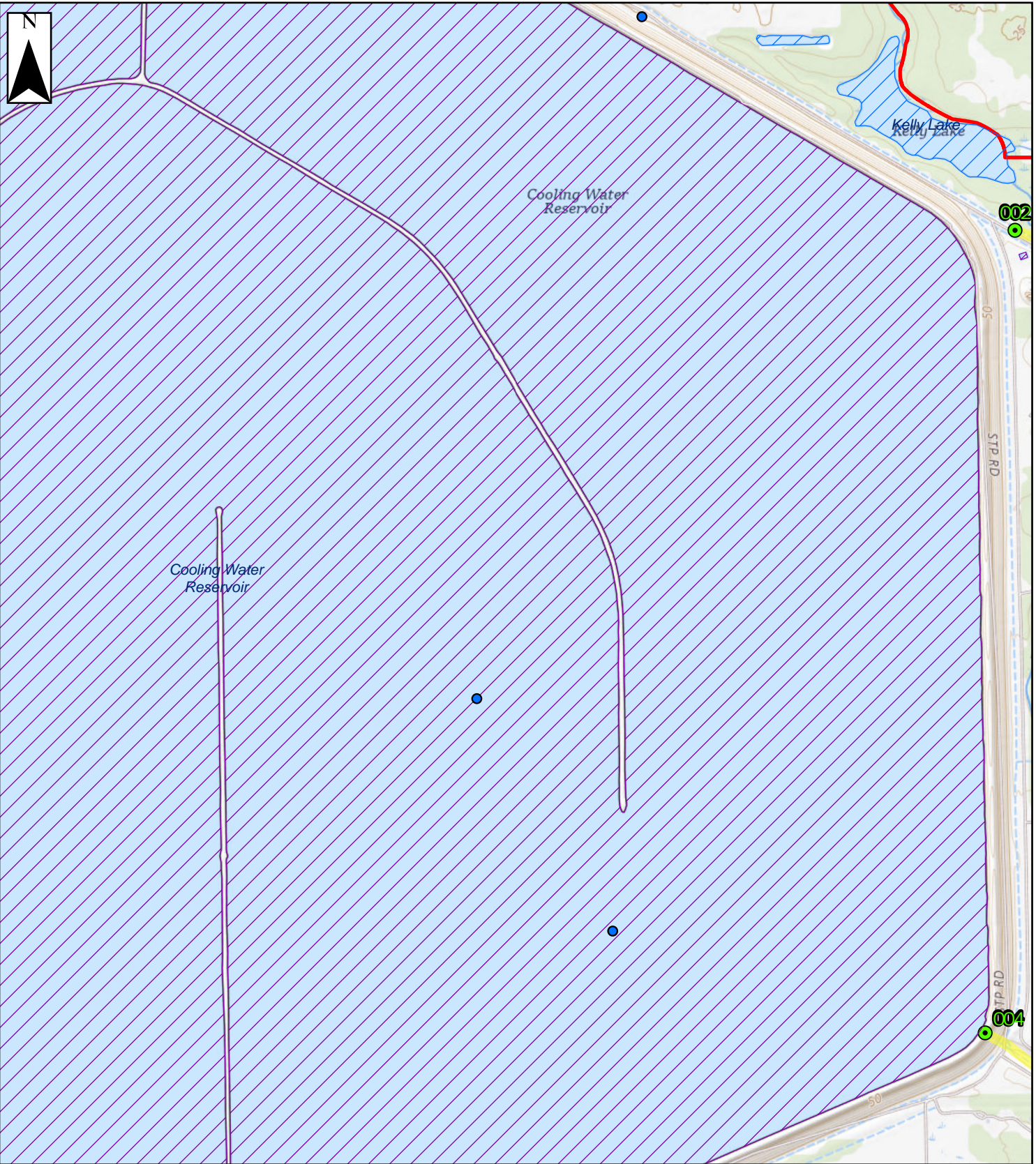
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- ▬ One-mile buffer
- ▬ TCEQ Stream Segment
- ▬ Lake/Pond
- ▬ Reservoir
- TWDB Water Well



USGS Figure 1d  
 Blessing SE, Wadsworth, Palacios NE, and  
 Matagorda 1: 24,000 USGS Quadrangles  
 TPDES Permit Renewal  
 STP Nuclear Operating Company  
 Matagorda County, Texas

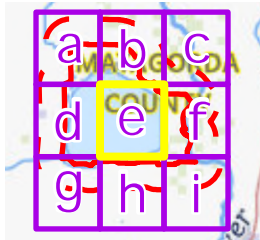






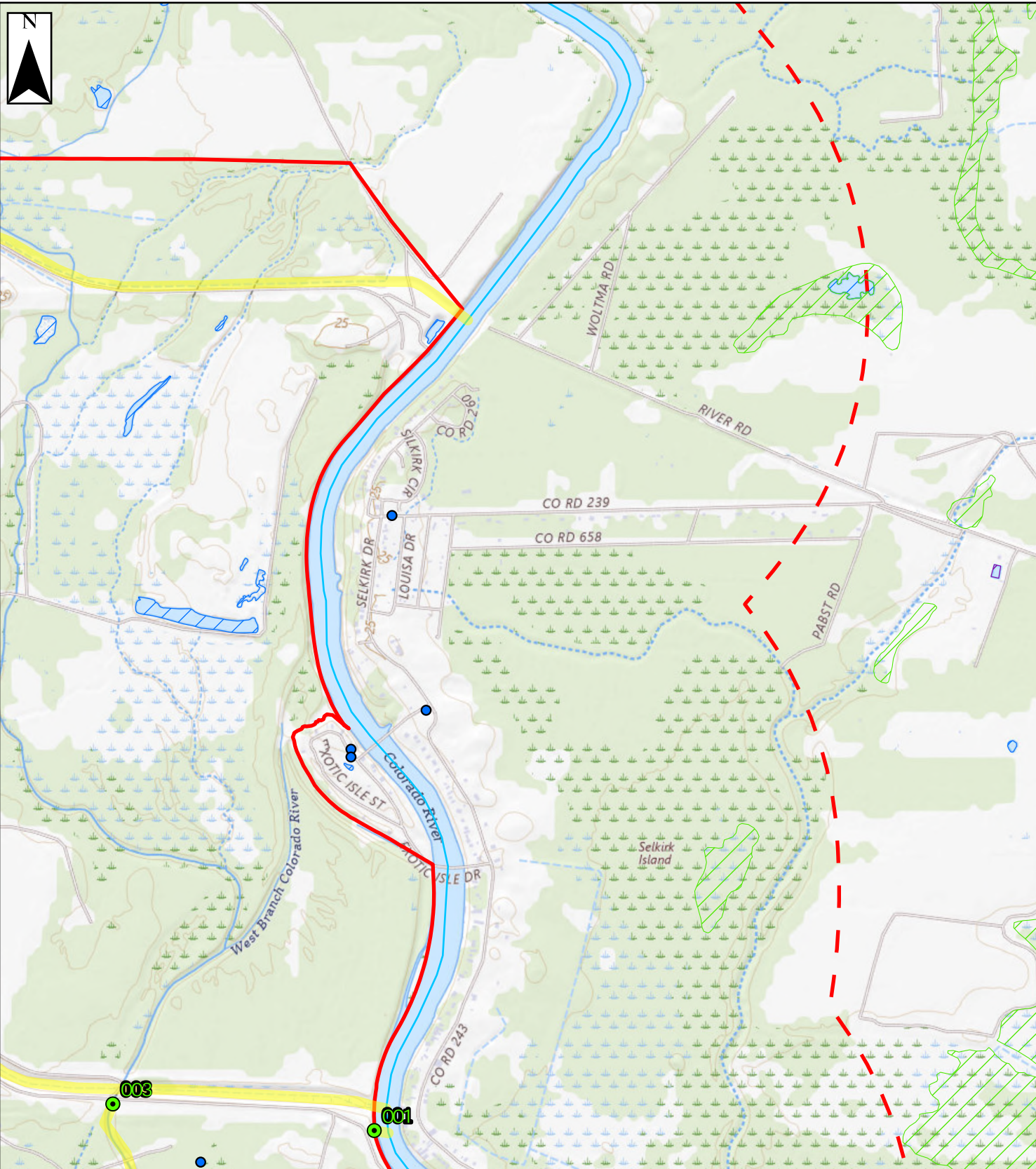
### Legend

- ▬ Property Boundary
- - - One-mile buffer
- Outfall
- ▬ Discharge route
- ▬ TCEQ Stream Segment
- ▨ Lake/Pond
- ▨ Reservoir
- TWDB Water Well



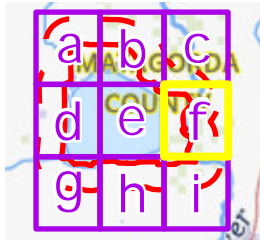
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 Blessing SE, Wadsworth, Palacios NE, and  
 Matagorda 1: 24,000 USGS Quadrangles  
 TPDES Permit Renewal  
 STP Nuclear Operating Company  
 Matagorda County, Texas





### Legend

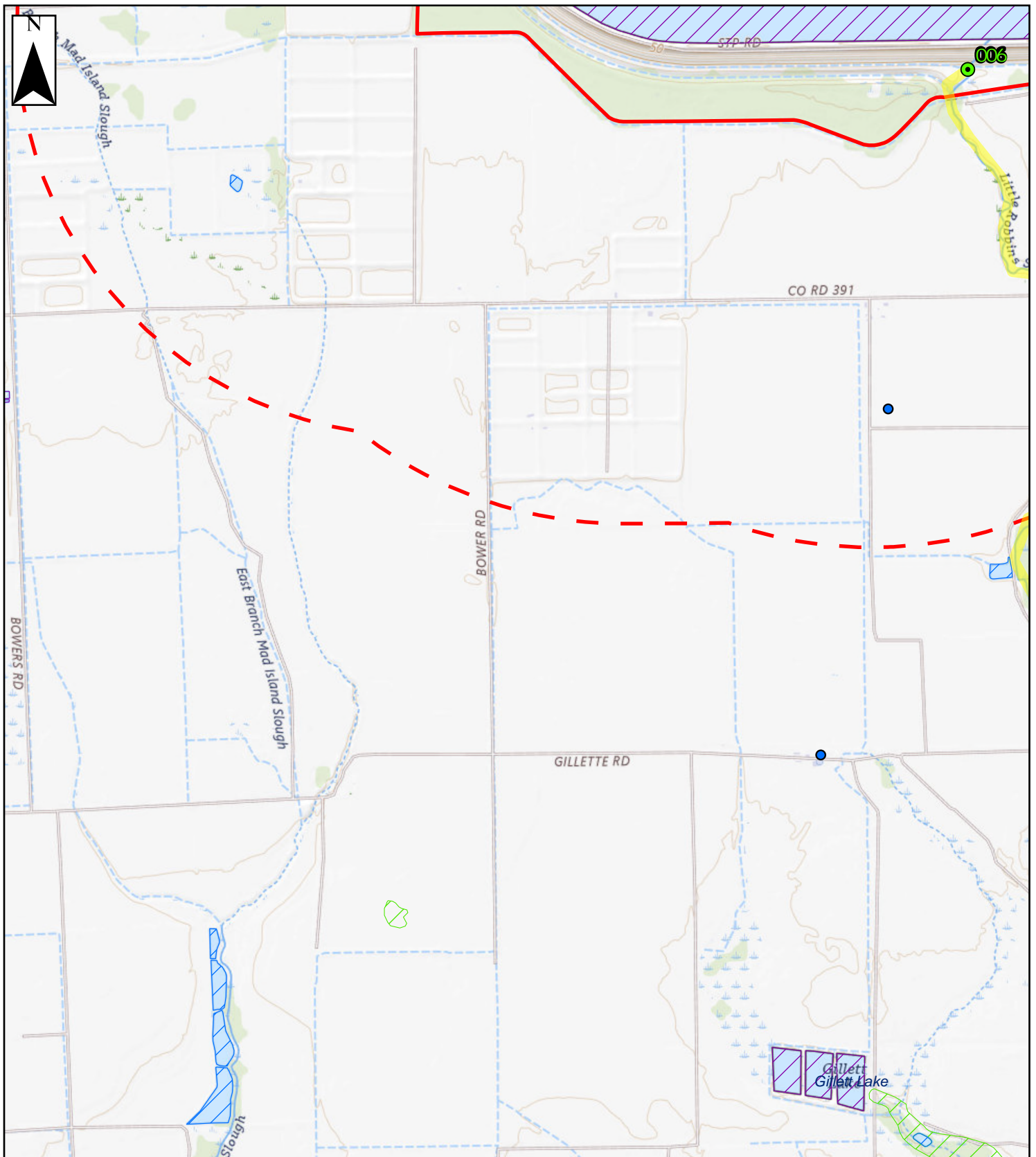
- Property Boundary
- - - One-mile buffer
- Outfall
- Discharge route
- TCEQ Stream Segment
- Lake/Pond
- Reservoir
- Swamp/Marsh
- TWDB Water Well



USGS Figure 1f  
 Blessing SE, Wadsworth, Palacios NE, and  
 Matagorda 1: 24,000 USGS Quadrangles  
 TPDES Permit Renewal  
 STP Nuclear Operating Company  
 Matagorda County, Texas

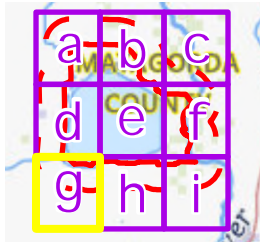






### Legend

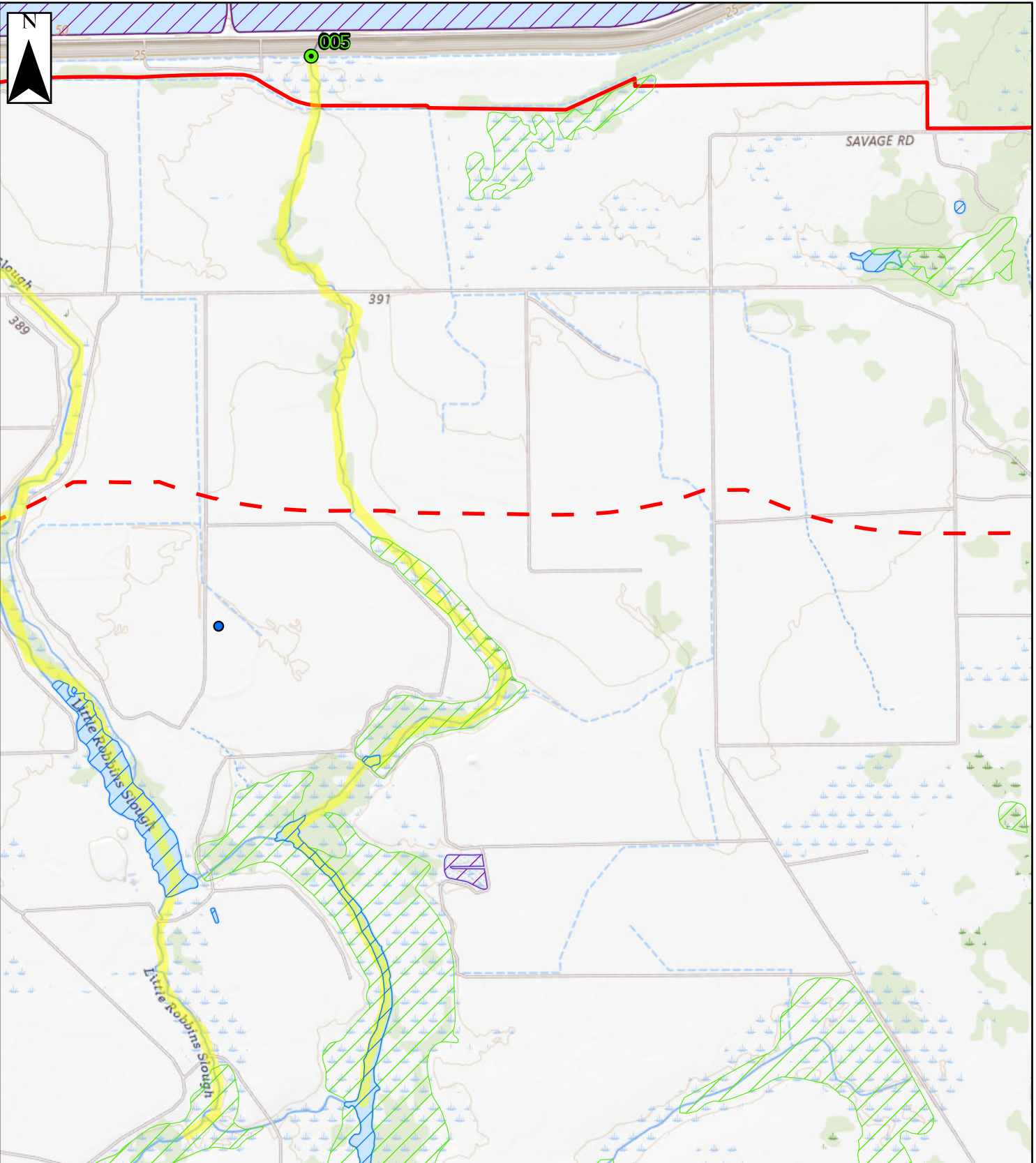
- ▬ Property Boundary
- - - One-mile buffer
- Outfall
- ▬ Discharge route
- ▬ TCEQ Stream Segment
- ▬ Lake/Pond
- ▬ Reservoir
- ▬ Swamp/Marsh
- TWDB Water Well



USGS Figure 1g  
 Blessing SE, Wadsworth, Palacios NE, and  
 Matagorda 1: 24,000 USGS Quadrangles  
 TPDES Permit Renewal  
 STP Nuclear Operating Company  
 Matagorda County, Texas

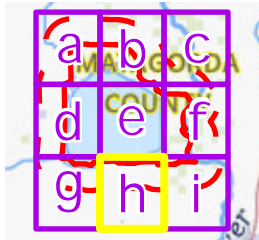






### Legend

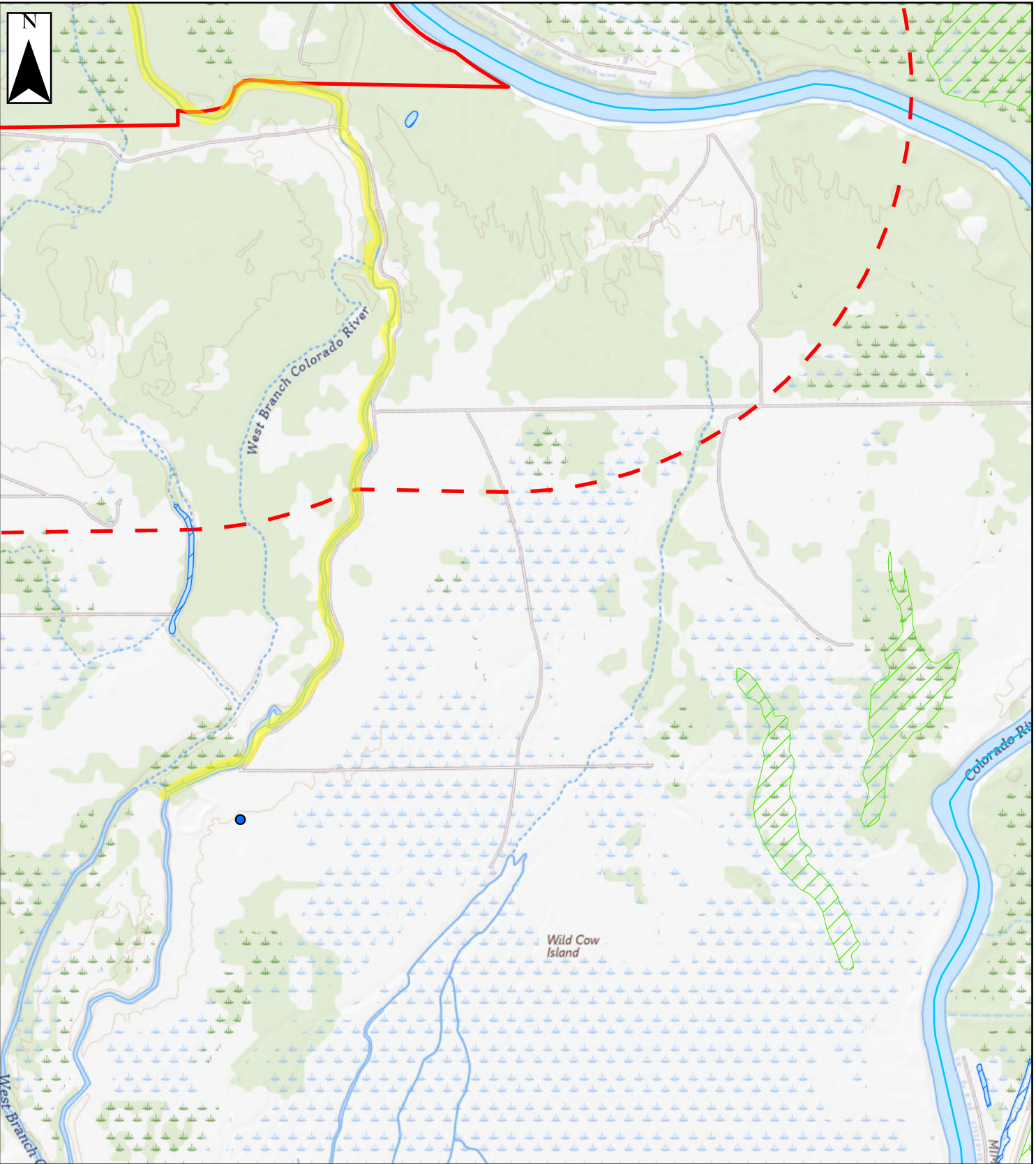
- ▬ Property Boundary
- - - One-mile buffer
- Outfall
- ▬ Discharge route
- ▬ TCEQ Stream Segment
- ▬ Lake/Pond
- ▬ Reservoir
- ▬ Swamp/Marsh
- TWDB Water Well



USGS Figure 1h  
 Blessing SE, Wadsworth, Palacios NE, and  
 Matagorda 1: 24,000 USGS Quadrangles  
 TPDES Permit Renewal  
 STP Nuclear Operating Company  
 Matagorda County, Texas

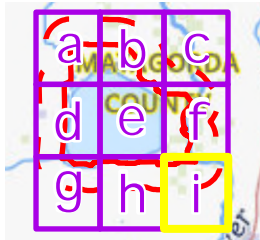






### Legend

- ▬ Property Boundary
- - - One-mile buffer
- ▬ Discharge route
- ▬ TCEQ Stream Segment
- ▭ Lake/Pond
- ▭ Swamp/Marsh
- TWDB Water Well



USGS Figure 1i  
 Blessing SE, Wadsworth, Palacios NE, and  
 Matagorda 1: 24,000 USGS Quadrangles  
 TPDES Permit Renewal  
 STP Nuclear Operating Company  
 Matagorda County, Texas

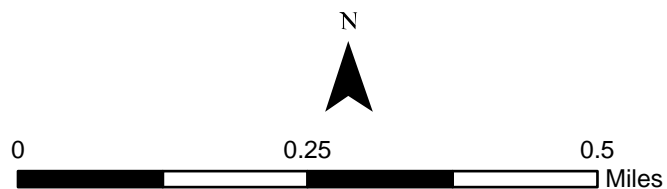






### Legend

- South Texas Project
- Unit
- ▲ External Outfall
- ▲ Internal Outfall



### STP Facility Map

TPDES Permit Renewal  
STP Nuclear Operating Company  
Matagorda County, Texas



# 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](mailto:WQ-ARPTeam@tceq.texas.gov) or by phone at (512) 239-4671.

The following applies to all applications:

1. Permittee: STP Nuclear Operating Company

Permit No. WQ0001908000EPA ID No. TX 0064947

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

12090 Farm-to-Market Road 521, Wadsworth, Texas 77483

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: Elizabeth Jones

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

Title: Staff Environmental Consultant

Mailing Address: PO Box 289

City, State, Zip Code: Wadsworth, TX 77483

Phone No.: 361-972-4507 Ext.: N/A Fax No.: N/A

E-mail Address: evjones@stpegs.com

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

N/A

4. Provide a description of the effluent discharge route. The discharge route must follow the flow of effluent from the point of discharge to the nearest major watercourse (from the point of discharge to a classified segment as defined in 30 TAC Chapter 307). If known, please identify the classified segment number.

Via Outfall 001 directly to the Colorado River Tidal in Segment No. 1401 of the Colorado River Basin; via Outfall 002 to the Plant Area Drainage Ditch (PADD), thence to the Colorado River Tidal in Segment No. 1401 of the Colorado River Basin; via Outfall 003 to the West Branch of the Colorado River, thence to Matagorda Bay/Powderhorn Lake in Segment No. 2451 of the Bays and Estuaries; via Outfall 004 to an unnamed ditch, thence to the Colorado River Tidal in Segment No. 1401 of the Colorado River Basin; via Outfall 005 to East Fork Little Robbins Slough, thence to Robbins Slough, thence to Robbins Lake, thence to Robbins Slough, thence to Crab Lake, thence to Crab Bayou, thence to the Gulf Intracoastal Waterway (GIWW), thence to Matagorda Bay/Powderhorn Lake in Segment No. 2451 of the Bays and Estuaries; and via Outfall 006 to Little Robbins Slough, thence to an unnamed pond, thence to Robbins Slough, thence to an unnamed lake, thence to Robbins Slough, thence to Robbins Lake, thence to Robbins Slough, thence to Crab Lake, thence to Crab Bayou, thence to the GIWW, thence to Matagorda Bay/Powderhorn Lake in Segment No. 2451 of the Bays and Estuaries.

5. Please provide a separate 7.5-minute USGS quadrangle map with the project boundaries plotted and a general location map showing the project area. Please highlight the discharge route from the point of discharge for a distance of one mile downstream. (This map is required in addition to the map in the administrative report).

Provide original photographs of any structures 50 years or older on the property.

Does your project involve any of the following? Check all that apply.

☐ Proposed access roads, utility lines, construction easements



- ☐ Visual effects that could damage or detract from a historic property's integrity
- ☐ Vibration effects during construction or as a result of project design
- ☐ Additional phases of development that are planned for the future
- ☐ Sealing caves, fractures, sinkholes, other karst features
- ☐ Disturbance of vegetation or wetlands

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

N/A

2. Describe existing disturbances, vegetation, and land use:

N/A

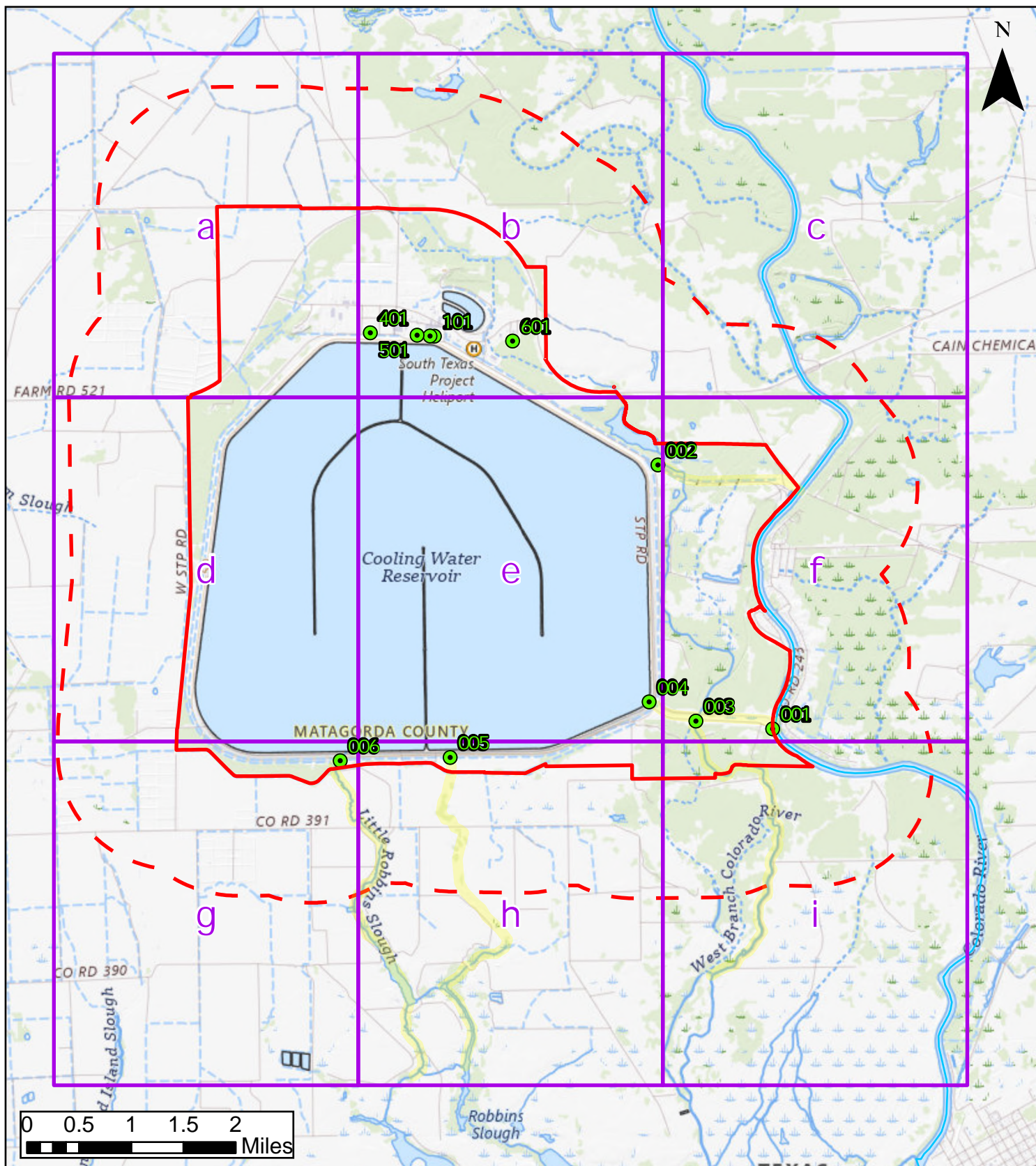
THE FOLLOWING ITEMS APPLY ONLY TO APPLICATIONS FOR NEW TPDES PERMITS AND MAJOR AMENDMENTS TO TPDES PERMITS

3. List construction dates of all buildings and structures on the property:

N/A

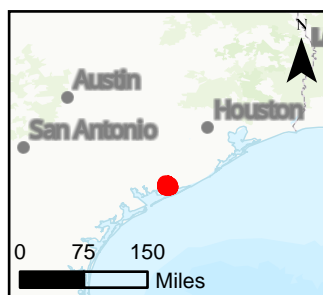
4. Provide a brief history of the property, and name of the architect/builder, if known.

N/A



## Legend

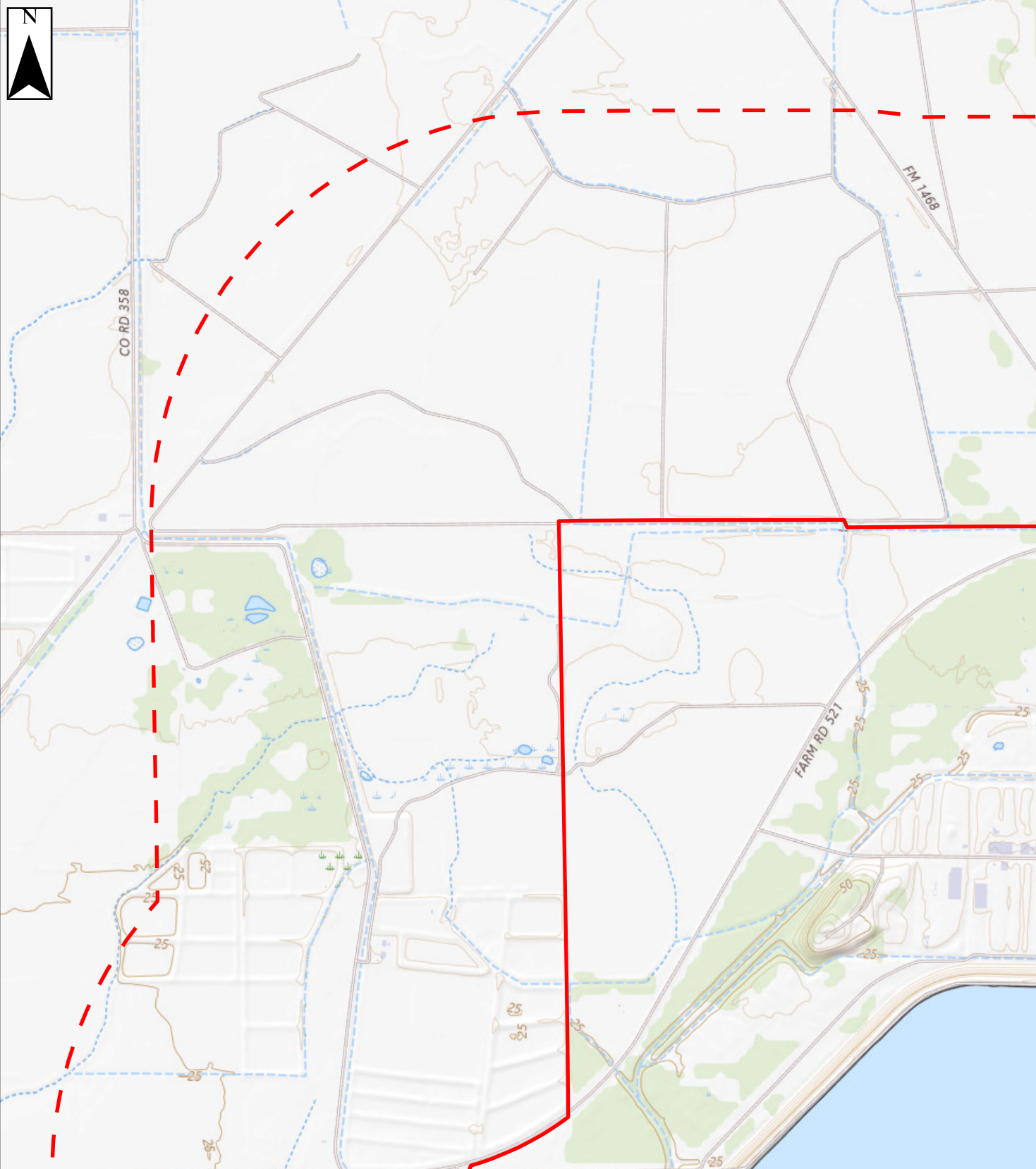
- ▬ Property Boundary
- - - One-mile buffer
- Outfall
- ▬ Discharge route
- ▬ TCEQ Stream Segment






SPIF Figure 1 Overview  
 Blessing SE, Wadsworth, Palacios NE, and  
 Matagorda 1: 24,000 USGS Quadrangles  
 TPDES Permit Renewal  
 STP Nuclear Operating Company  
 Matagorda County, Texas

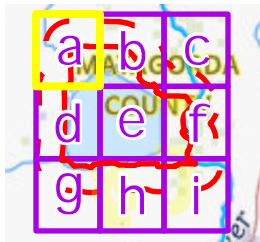






## Legend

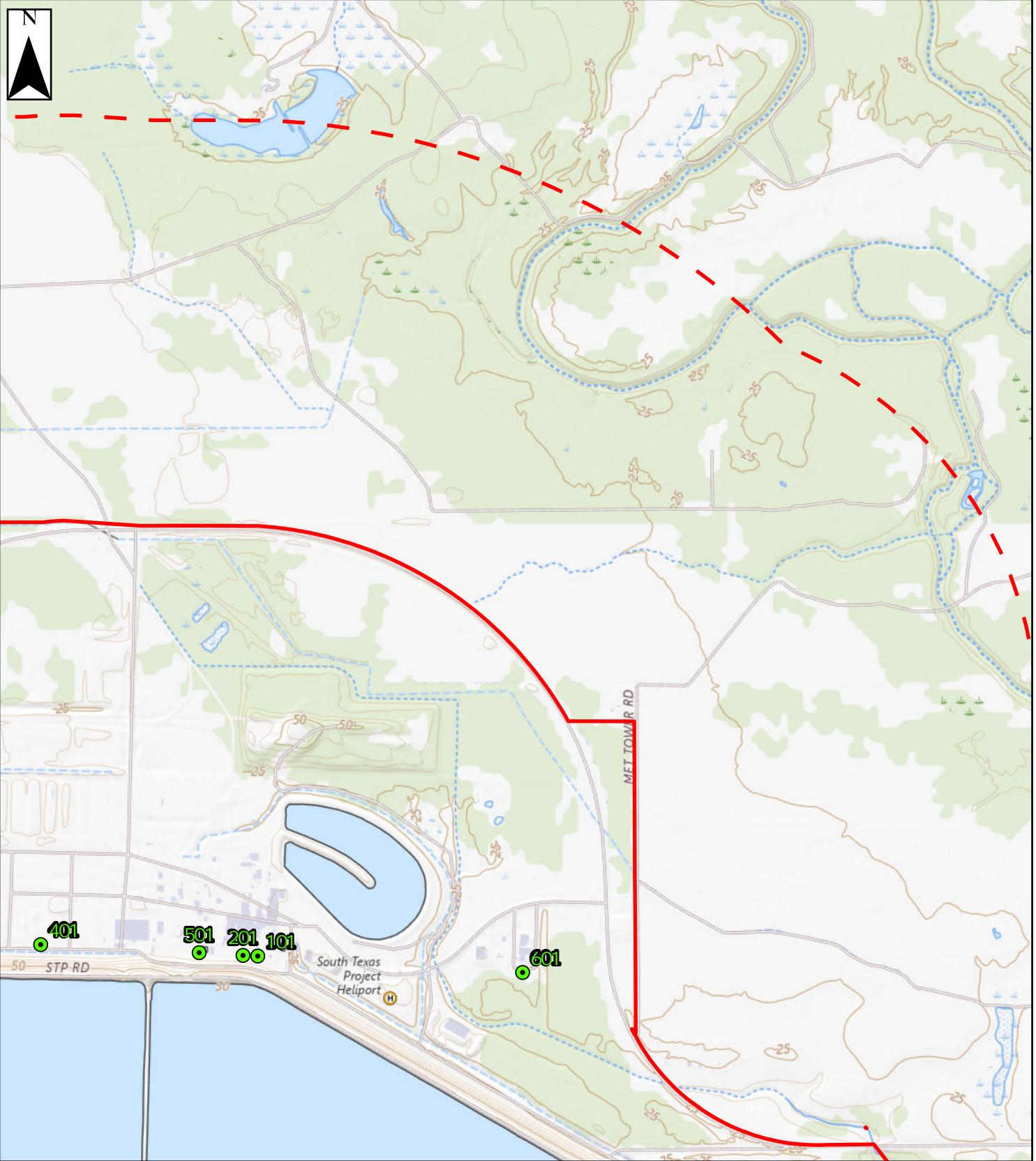
-  Property Boundary
-  One-mile buffer
-  TCEQ Stream Segment



SPIF Figure 1a  
 Blessing SE, Wadsworth, Palacios NE, and  
 Matagorda 1: 24,000 USGS Quadrangles  
 TPDES Permit Renewal  
 STP Nuclear Operating Company  
 Matagorda County, Texas

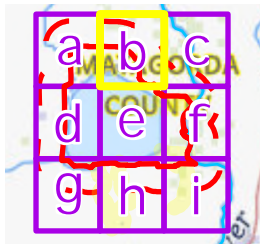






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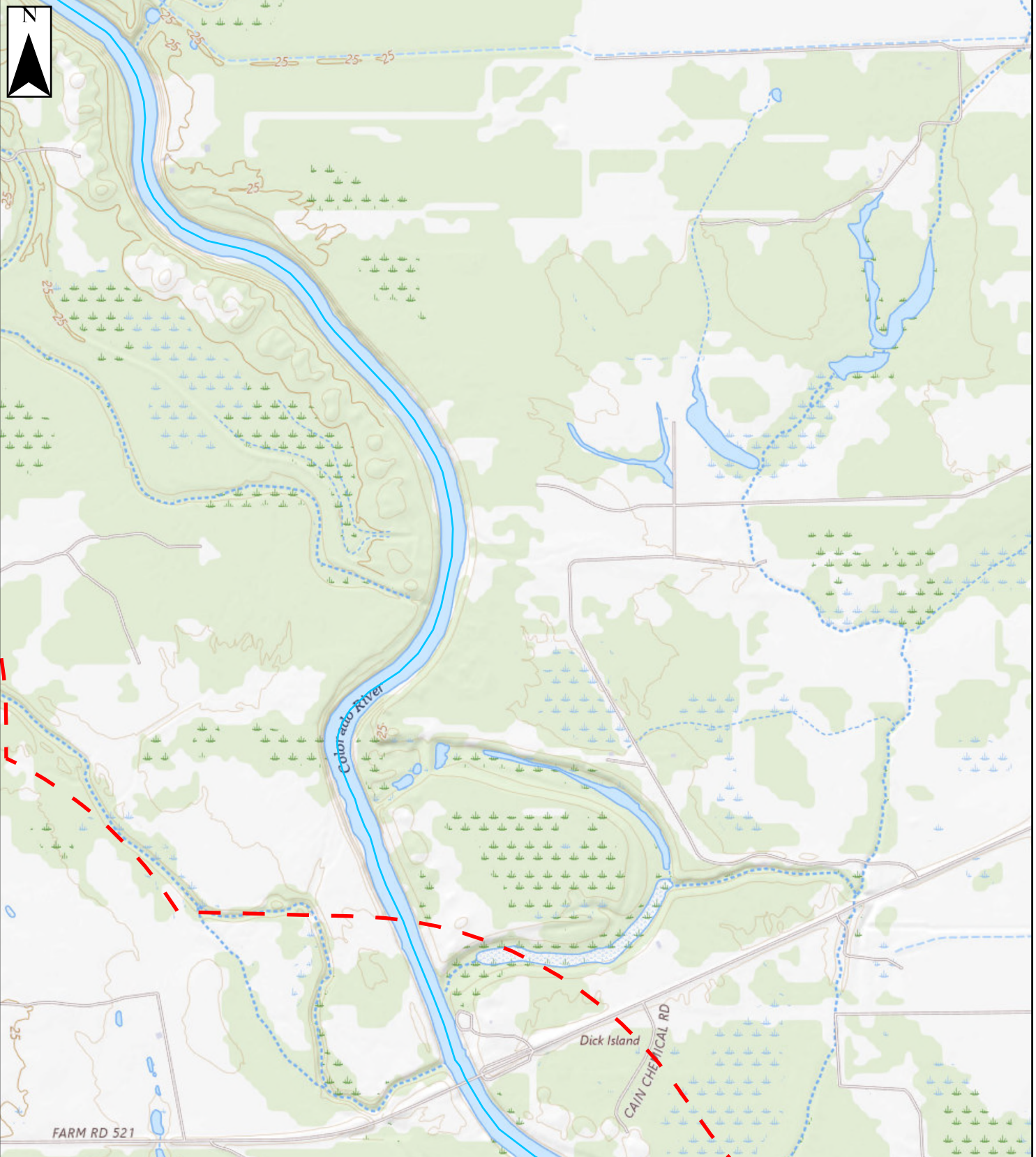
- ▬ Property Boundary
- - - One-mile buffer
- Outfall
- - - TCEQ Stream Segment






SPIF Figure 1b  
 Blessing SE, Wadsworth, Palacios NE, and  
 Matagorda 1: 24,000 USGS Quadrangles  
 TPDES Permit Renewal  
 STP Nuclear Operating Company  
 Matagorda County, Texas

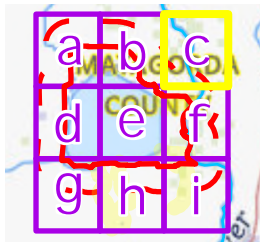






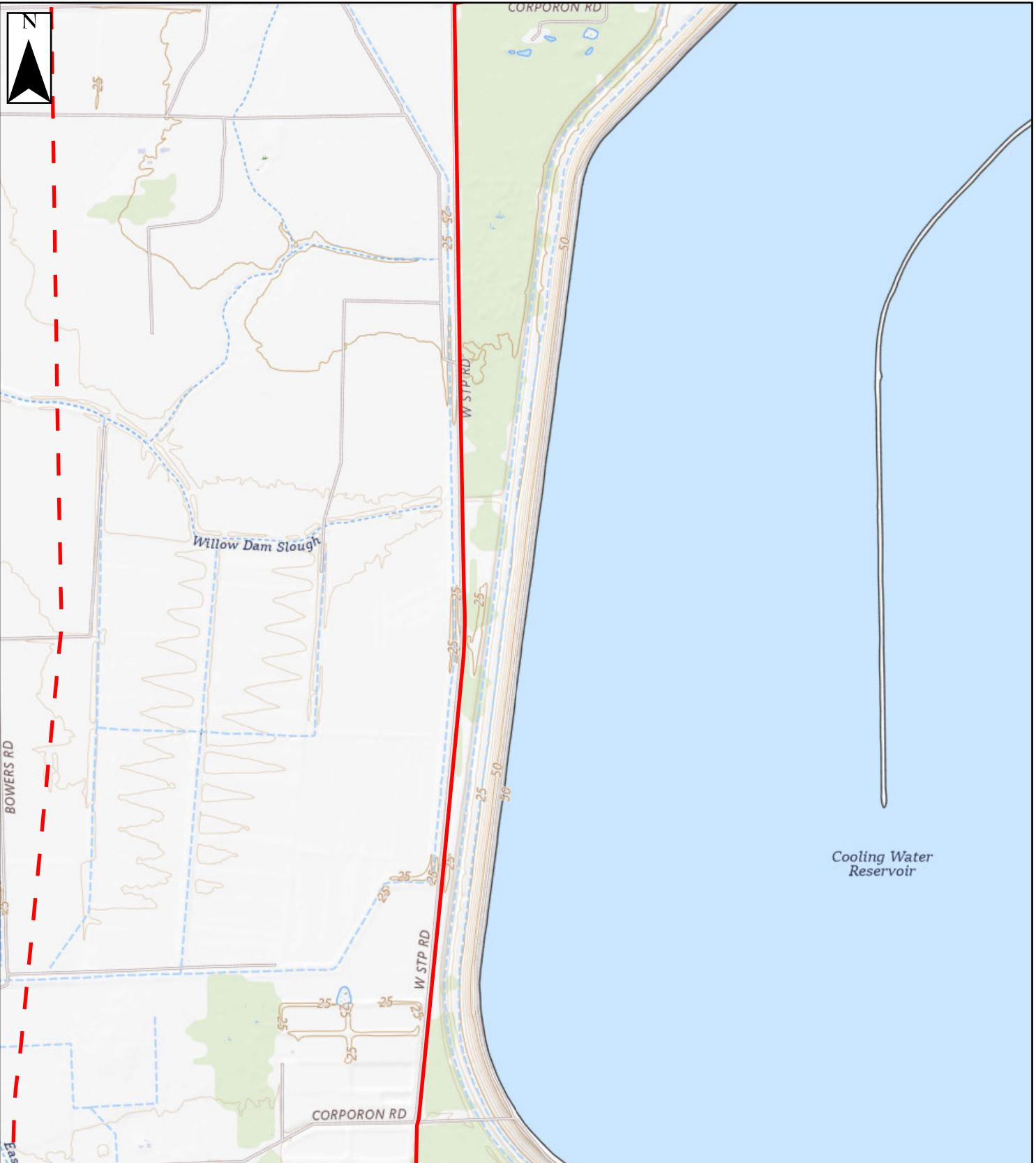
## Legend

-  Property Boundary
-  One-mile buffer
-  TCEQ Stream Segment



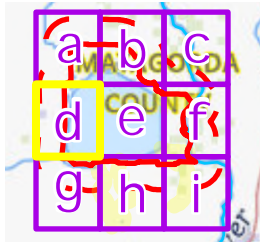
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 Blessing SE, Wadsworth, Palacios NE, and  
 Matagorda 1: 24,000 USGS Quadrangles  
 TPDES Permit Renewal  
 STP Nuclear Operating Company  
 Matagorda County, Texas





## Legend

- ▬ Property Boundary
- - - One-mile buffer
- TCEQ Stream Segment



## SPIF Figure 1d

Blessing SE, Wadsworth, Palacios NE, and  
Matagorda 1: 24,000 USGS Quadrangles  
TPDES Permit Renewal  
STP Nuclear Operating Company  
Matagorda County, Texas

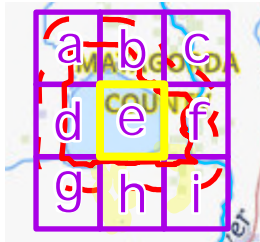






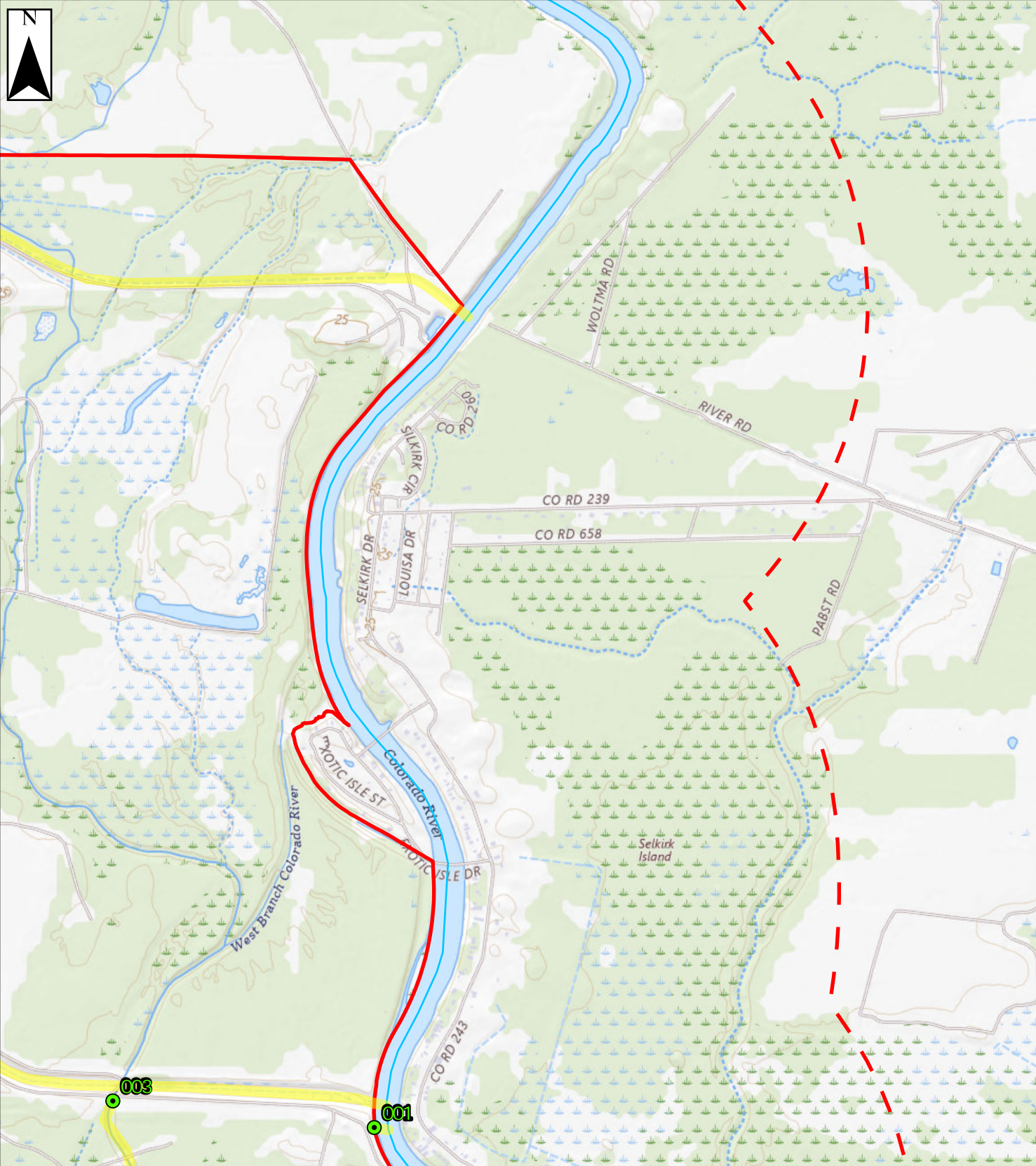
## Legend

- ▬ Property Boundary
- - - One-mile buffer
- Outfall
- ▬ Discharge route
- ▬ TCEQ Stream Segment



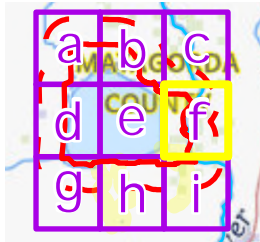
SPIF Figure 1e  
 Blessing SE, Wadsworth, Palacios NE, and  
 Matagorda 1: 24,000 USGS Quadrangles  
 TPDES Permit Renewal  
 STP Nuclear Operating Company  
 Matagorda County, Texas





## Legend

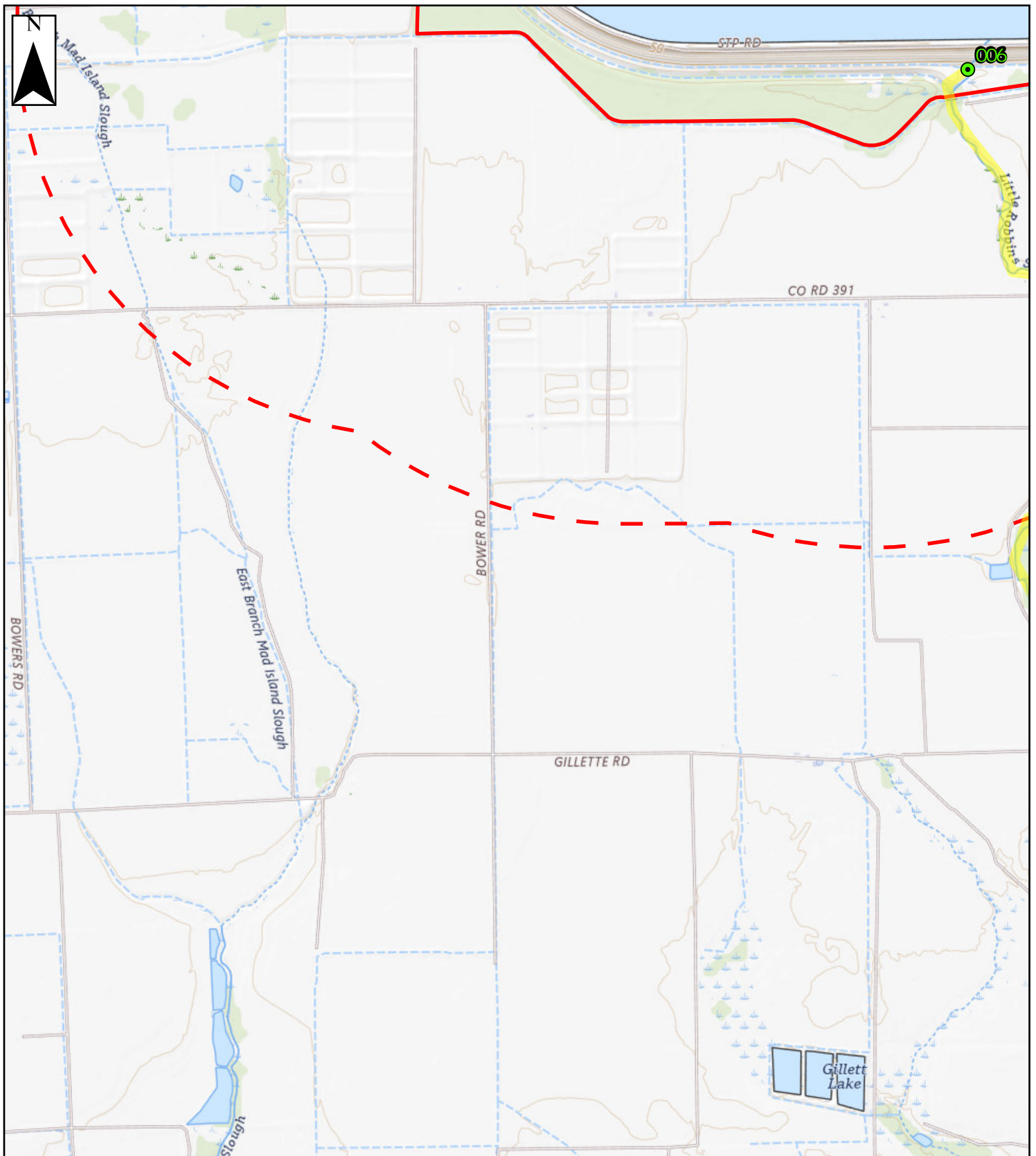
- Property Boundary
- - - One-mile buffer
- Outfall
- Discharge route
- TCEQ Stream Segment



SPIF Figure 1f  
 Blessing SE, Wadsworth, Palacios NE, and  
 Matagorda 1: 24,000 USGS Quadrangles  
 TPDES Permit Renewal  
 STP Nuclear Operating Company  
 Matagorda County, Texas

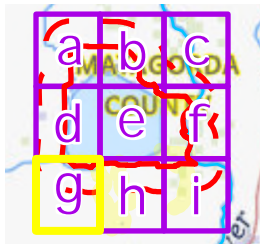






## Legend

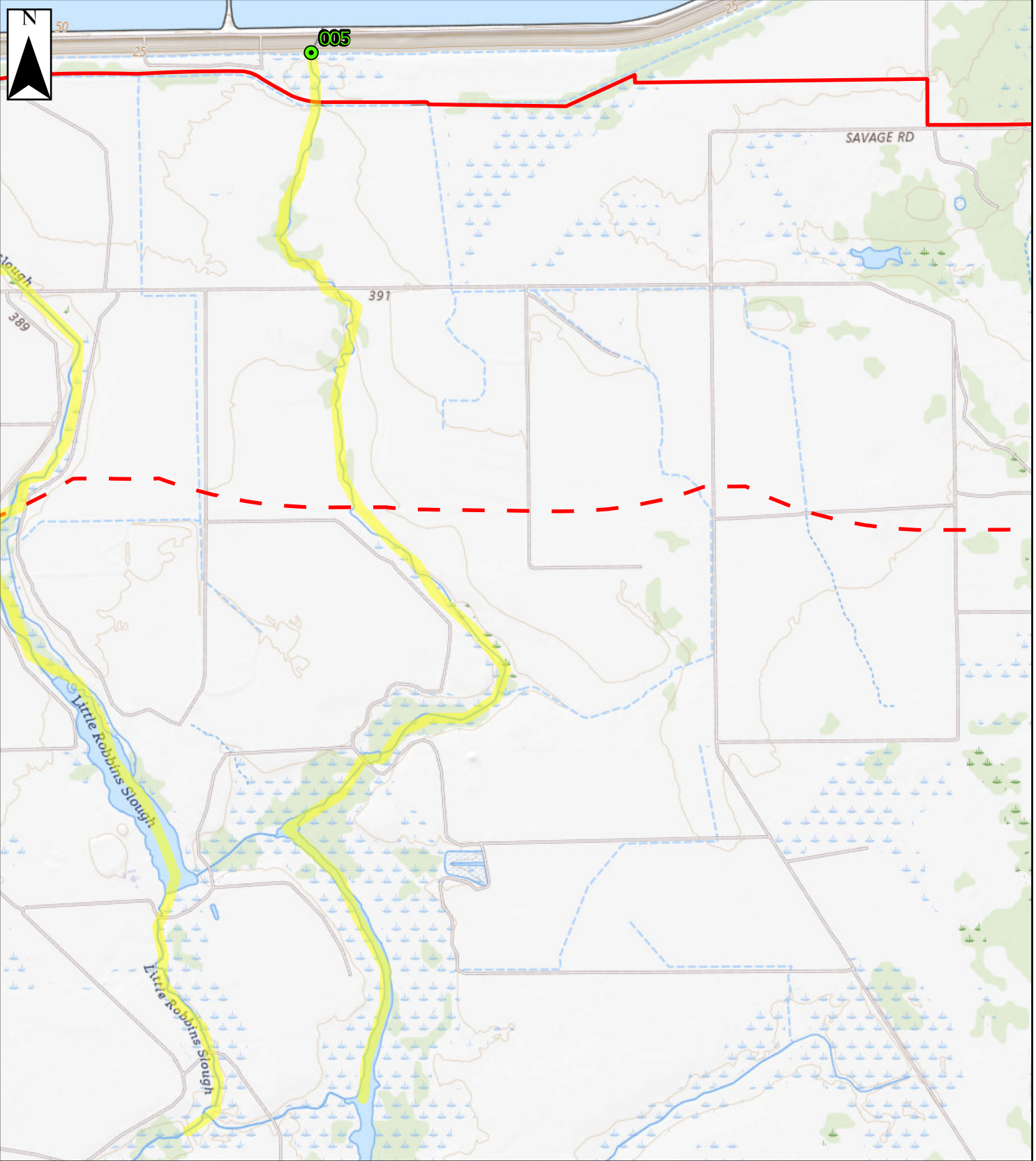
- Property Boundary
- One-mile buffer
- Outfall
- Discharge route
- TCEQ Stream Segment



## SPIF Figure 1g

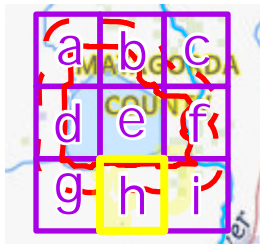
Blessing SE, Wadsworth, Palacios NE, and  
Matagorda 1: 24,000 USGS Quadrangles  
TPDES Permit Renewal  
STP Nuclear Operating Company  
Matagorda County, Texas





## Legend

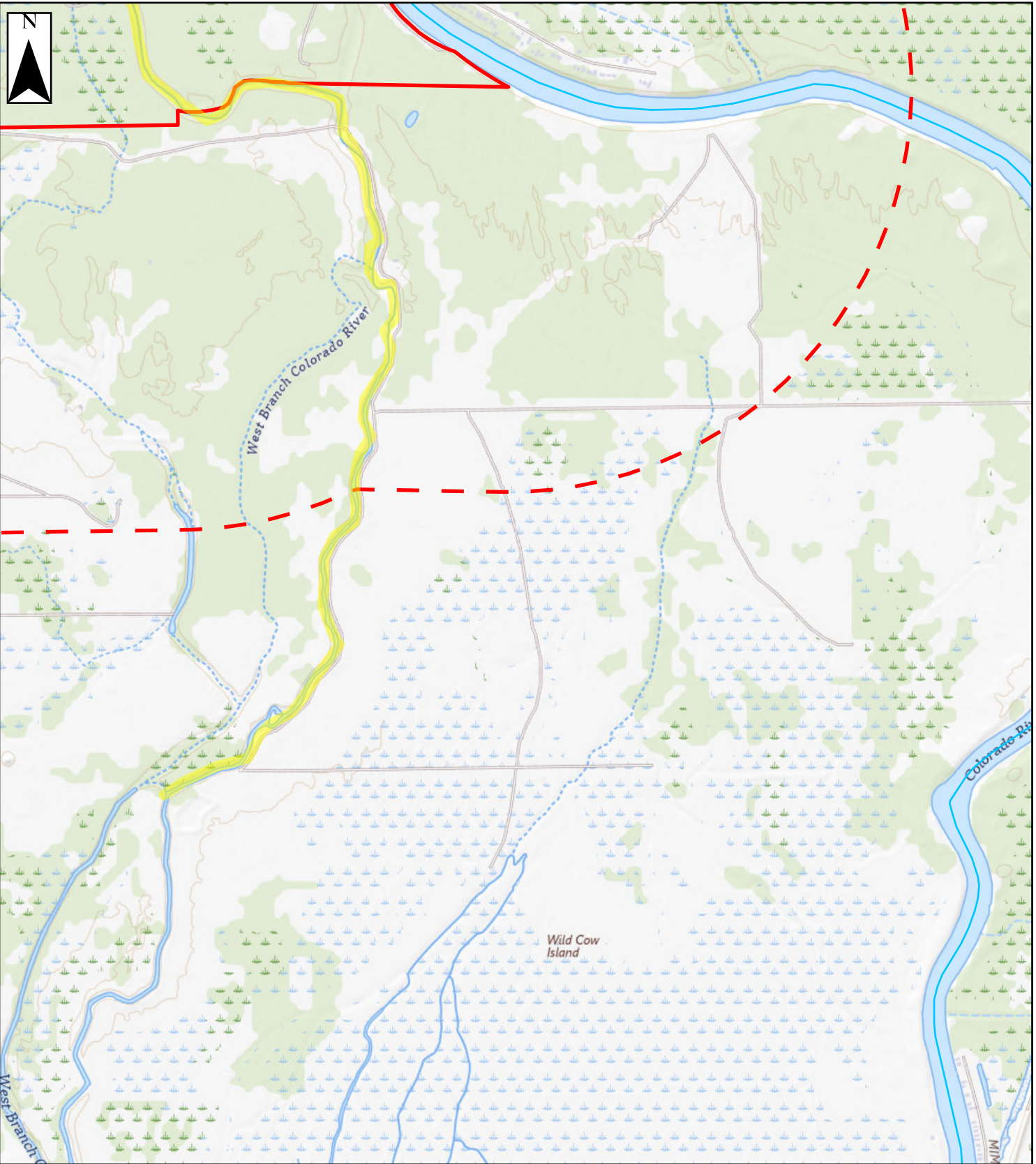
- ▬ Property Boundary
- - - One-mile buffer
- Outfall
- ▬ Discharge route
- ▬ TCEQ Stream Segment







SPIF Figure 1h  
 Blessing SE, Wadsworth, Palacios NE, and  
 Matagorda 1: 24,000 USGS Quadrangles  
 TPDES Permit Renewal  
 STP Nuclear Operating Company  
 Matagorda County, Texas

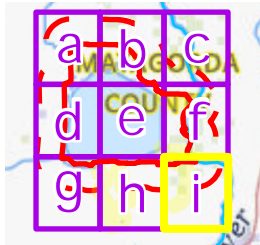






## Legend

-  Property Boundary
-  One-mile buffer
-  Discharge route
-  TCEQ Stream Segment



SPIF Figure 1i  
 Blessing SE, Wadsworth, Palacios NE, and  
 Matagorda 1: 24,000 USGS Quadrangles  
 TPDES Permit Renewal  
 STP Nuclear Operating Company  
 Matagorda County, Texas







# 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](https://www.tceq.texas.gov/permitting/wastewater/industrial/TPDES_industrial_wastewater_steps.html)<sup>1</sup> 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).

South Texas Project Electric Generating Station (STPEGS) is a nuclear fueled, steam-electric generating facility. Electricity is generated from steam driven turbines.

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

See Attachment A – Wastewater Generating Processes

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<sup>1</sup>

[https://www.tceq.texas.gov/permitting/wastewater/industrial/TPDES\\_industrial\\_wastewater\\_steps.html](https://www.tceq.texas.gov/permitting/wastewater/industrial/TPDES_industrial_wastewater_steps.html)

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

**Materials List**

Raw Materials	Intermediate Products	Final Products
Nuclear Fuel (7440-61-1)	Steam	Electricity

**Attachment:** N/A

- 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:** STP Facility Map

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

☐ Yes      ☒ No

If **yes**, provide background discussion: N/A

- 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: FIRM 48321Co425F, eff. 1/15/2021

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: N/A

**Attachment:** N/A

- 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: N/A

If **no**, provide an approximate date of application submittal to the USACE: N/A

## 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.

See Attachment B – Treatment Processes

- 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:** STP Flow Schematic with Water Balance

## 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 #1	Pond #2	Pond #3	Pond #4
Use Designation: (T) (D) (C) or (E)	T	T	T	T
Associated Outfall Number	501	501	101	001
Liner Type (C) (I) (S) or (A)	Reinforce concrete	Reinforce concrete	Reinforce concrete	Soil and concrete
Alt. Liner Attachment Reference	N/A	N/A	N/A	N/A
Leak Detection System, Y/N	N	N	N	N
Groundwater Monitoring Wells, Y/N	N	N	N	N
Groundwater Monitoring Data Attachment	N/A	N/A	N/A	N/A
Pond Bottom Located Above The Seasonal High-Water Table, Y/N	Y	Y	Y	N
Length (ft)	100	25	136	N/A
Width (ft)	80	25	42	N/A
Max Depth From Water Surface (ft), Not Including Freeboard	17.5	13.3	16	49
Freeboard (ft)	>2	>2	>2	>2.5
Surface Area (acres)	0.18	0.01	0.13	7,000
Storage Capacity (gallons)	1,000,000	50,000	600,000	6.6e10
40 CFR Part 257, Subpart D, Y/N	N	N	N	N
Date of Construction	1983	1983	1983	1979

**Attachment:** N/A

**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 #5	Pond #6	Pond #	Pond #
Use Designation: (T) (D) (C) or (E)	C	C		
Associated Outfall Number	None	None		
Liner Type (C) (I) (S) or (A)	None	Soil and concrete		
Alt. Liner Attachment Reference	N/A	N/A		
Leak Detection System, Y/N	N	N		
Groundwater Monitoring Wells, Y/N	N	N		
Groundwater Monitoring Data Attachment	N/A	N/A		
Pond Bottom Located Above The Seasonal High-Water Table, Y/N	Y	Y		
Length (ft)	150	2,000		
Width (ft)	70	1,000		
Max Depth From Water Surface (ft), Not Including Freeboard	4	8		
Freeboard (ft)	>2	>2		
Surface Area (acres)	0.24	47		
Storage Capacity (gallons)	314,160	1,3e8		
40 CFR Part 257, Subpart D, Y/N	N	N		
Date of Construction	1976	1980		

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:** N/A

**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:** N/A

- 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:** N/A

- 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:** N/A

## 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/or 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	28.74612	-96.00043
002	28.77817	-96.01632
003	28.74707	-96.01106

**Outfall Location Description**

Outfall No.	Location Description
001	At a point in the blowdown line prior to entering the Colorado River
002	Prior to entering the plant drainage ditch
003	At the discharge of flowing relieve wells prior to mixing with the West Branch of Colorado River

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

Outfall No.	Description of sampling point
	N/A

**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	144	200			
002	N/A	N/A			
003	N/A	N/A			

**Outfall Discharge - Method and Measurement**

Outfall No.	Pumped Discharge? Y/N	Gravity Discharge? Y/N	Type of Flow Measurement Device Used
001	N	Y	Estimate
002	N	Y	Estimate
003	N	Y	Estimate

**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	**No discharge since March 4, 1997**		
002	Y	N	N	N/A	N/A	N/A
003	Y	N	N	N/A	N/A	N/A

**Outfall Wastestream Contributions**

**Outfall No. 001** \*There has been no discharge from this Outfall 001 since March 4, 1997; Volume reflects 144 MGD daily average flow and 200 MGD daily maximum flow.

Contributing Wastestream	Volume (MGD)	Percent (%) of Total Flow
Recirculated cooling water	142/198*	>99
Cooling reservoir blowdown	<0.4	<1
Previously monitored effluent	<0.4	<1
Stormwater	<0.4	<1
Makeup water from the Colorado River	<0.4	<1
Uncontaminated groundwater	<0.4	<1

**Outfall No. 002**

Contributing Wastestream	Volume (MGD)	Percent (%) of Total Flow
Reservoir relief well effluent (wells 1-125)	Intermittent	>99
Demineralized water from instrumentation	Intermittent	<1

**Outfall No. 003**

Contributing Wastestream	Volume (MGD)	Percent (%) of Total Flow
Reservoir relief well effluent (wells 138-195)	Intermittent	100

**Attachment:** N/A



**Outfall Longitude and Latitude**

Outfall No.	Latitude (Decimal Degrees)	Longitude (Decimal Degrees)
004	28.7494	-96.01755
005	28.74265	-96.0451
006	28.74226	-96.06033

**Outfall Location Description**

Outfall No.	Location Description
004	At a point in the MCR Spillway Channel after commingling of spillway gate leakage and relief well water, and prior to mixing with other waters
005	At the discharge of flowing relief wells, prior to mixing with the East Fork Little Robbins Slough
006	At the discharge of flowing relief wells, prior to mixing with Little Robbins Slough

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

Outfall No.	Description of sampling point
	N/A

**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)
004	N/A	N/A			
005	N/A	N/A			
006	N/A	N/A			

**Outfall Discharge - Method and Measurement**

Outfall No.	Pumped Discharge? Y/N	Gravity Discharge? Y/N	Type of Flow Measurement Device Used
004	N	Y	Estimate
005	N	Y	Estimate
006	N	Y	Estimate

**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)
004	Y	N	N	N/A	N/A	N/A

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)
005	Y	N	N	N/A	N/A	N/A
006	Y	N	N	N/A	N/A	N/A

#### Outfall Wastestream Contributions

##### Outfall No. 004

Contributing Wastestream	Volume (MGD)	Percent (%) of Total Flow
Reservoir relief well effluent (wells 196-268)	Intermittent	>94
Spillway leakage	Intermittent	<6

##### Outfall No. 005

Contributing Wastestream	Volume (MGD)	Percent (%) of Total Flow
Reservoir relief well effluent (wells 269-483)	Intermittent	100

##### Outfall No. 006

Contributing Wastestream	Volume (MGD)	Percent (%) of Total Flow
Reservoir relief well effluent (wells 483-670)	Intermittent	100

**Outfall Longitude and Latitude**

Outfall No.	Latitude (Decimal Degrees)	Longitude (Decimal Degrees)
101	28.7938	-96.04728
201	28.79383	-96.04788
401	28.79421	-96.05615

**Outfall Location Description**

Outfall No.	Location Description
101	Where low volume waste sources commingled with previously monitored effluents are discharged from the neutralization basins prior to mixing with other waste stream
201	Where low volume waste sources are discharged from the oily waste treatment system prior to mixing with any other waste stream
401	At discharge from the sewage treatment plant (West Sanitary Waste Treatment System) prior to mixing with any other waste stream

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

Outfall No.	Description of sampling point
	N/A

**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)
101	N/A	N/A			
201	N/A	N/A			
401	N/A	N/A			

**Outfall Discharge - Method and Measurement**

Outfall No.	Pumped Discharge? Y/N	Gravity Discharge? Y/N	Type of Flow Measurement Device Used
101	Y	N	Estimate
201	Y	N	Estimate (verified using totalizer)
401	Y	N	Estimate (verified using totalizer)

**Outfall Discharge – Flow Characteristics**

<b>Outfall No.</b>	<b>Intermittent Discharge? Y/N</b>	<b>Continuous Discharge? Y/N</b>	<b>Seasonal Discharge? Y/N</b>	<b>Discharge Duration (hrs/day)</b>	<b>Discharge Duration (days/mo)</b>	<b>Discharge Duration (mo/yr)</b>
101	Y	N	N	N/A	N/A	N/A
201	Y	N	N	N/A	N/A	N/A
401	Y	N	N	N/A	N/A	N/A

**Outfall Wastestream Contributions****Outfall No. 101**

<b>Contributing Wastestream</b>	<b>Volume (MGD)</b>	<b>Percent (%) of Total Flow</b>
Low volume waste sources comingled with previously monitored effluents from the metal cleaning waste system discharge	0.333	>99
Stormwater	Variable	<1

**Outfall No. 201**

<b>Contributing Wastestream</b>	<b>Volume (MGD)</b>	<b>Percent (%) of Total Flow</b>
Low volume waste sources from the oily waste treatment system	0.023	>95
Stormwater	Variable	<5

**Outfall No. 401**

<b>Contributing Wastestream</b>	<b>Volume (MGD)</b>	<b>Percent (%) of Total Flow</b>
Treated sanitary sewage comingled with car wash water and air conditioning condensate	0.037	>99
Stormwater	Variable	<1

**Outfall Longitude and Latitude**

Outfall No.	Latitude (Decimal Degrees)	Longitude (Decimal Degrees)
501	28.79393	-96.04967
601	28.79322	-96.03645

**Outfall Location Description**

Outfall No.	Location Description
501	Where metal cleaning wastes are discharged prior to mixing with any other waste stream
601	At discharge from the sewage treatment plant (Training Sanitary Waste Treatment Facility) prior to mixing with any other waste stream

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

Outfall No.	Description of sampling point
	N/A

**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)
501	N/A	N/A			
601	N/A	N/A			

**Outfall Discharge – Method and Measurement**

Outfall No.	Pumped Discharge? Y/N	Gravity Discharge? Y/N	Type of Flow Measurement Device Used
501	Y	N	Estimate
601	Y	N	Estimate (verified using totalizer)

**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)
501	Y	N	N	N/A	N/A	N/A

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)
601	Y	N	N	N/A	N/A	N/A

#### Outfall Wastestream Contributions

##### Outfall No. 501

Contributing Wastestream	Volume (MGD)	Percent (%) of Total Flow
Metal cleaning waste	N/A*	N/A
Stormwater	N/A*	N/A
*There has been no discharge from Outfall 501 since December 1992.		

##### Outfall No. 601

Contributing Wastestream	Volume (MGD)	Percent (%) of Total Flow
Treated sanitary sewage commingled with air conditioning condensate and HVAC cooling tower blowdown	0.028	>99
Stormwater	Variable	<1

##### Outfall No. Click to enter text.

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

## 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:** C – Chemical Summary and SDS

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 (Office Building Cooling Tower/HVAC Cooling Unit)	1	7,200	17,280
Boilers	0	N/A	N/A

## 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 D – Stormwater Management

## 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: [Click to enter text.](#)
- 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.
Blue Ridge Landfill	TXR000084592
Republic Services (formerly Allied Waste)	85812

## 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: N/A



## 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: N/A

Additionally, attach a copy of all tests performed which **have not** been submitted to the TCEQ or EPA. **Attachment:** There has been no discharge via Outfall 001 since 1997. The facility will perform the required testing when discharges occur.

## 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:** N/A

- 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:** N/A

- 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)
Nuclear fuel (CAS no. 7440-61-1)	---*
*There has been no discharge via Outfall 001 since 1997.	

- 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)
N/A	

## Item 12. Cooling Water (Instructions, Page 46)

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

☒ Yes ☐ No

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

- 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

- 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	RMPF	Reservoir		
Owner	STPNOC	STPNOC		
Operator	STPNOC	STPNOC		

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

☐ Yes ☒ No

If **no**, continue. If **yes**, provide the PWS Registration No. and stop here: PWS No. N/A

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

☐ Yes ☒ No

If **no**, continue. If **yes**, provide the Reuse Authorization No. and stop here: N/A

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

☐ Yes ☒ No

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: N/A

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 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

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*: N/A

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:** N/A

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:** N/A

## 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.

N/A

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

☐ Yes      ☒ No

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

N/A

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

☐ Yes      ☒ No

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

N/A

## 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: Andrew Richards

Title: Manager Regulatory Affairs

Signature: \_\_\_\_\_

Date: 7/31/2024

# 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 Generating Station	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.

See attached flow diagrams



## 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
Units 1 and 2	423	N/A	1975

## 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): Outfall 001 has not been discharged since 1997 and therefore could not be sampled. STP will collect the required samples for the application upon the next available discharge via Outfall 001 and submit the results to TCEQ.
- 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:** N/A

### 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-no discharges since 1997

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				

Pollutant	Sample 1 (mg/L)	Sample 2 (mg/L)	Sample 3 (mg/L)	Sample 4 (mg/L)
Oil and grease				
Total residual chlorine				
Total dissolved solids				
Sulfate				
Chloride				
Fluoride				
Total alkalinity (mg/L as CaCO <sub>3</sub> )				
Temperature (°F)				
pH (standard units)				

Table 2 for Outfall No.: **001-no discharges since 1997**

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.: **001-no discharges since 1997**

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

Pollutant	Sample 1 (µg/L)*	Sample 2 (µg/L)*	Sample 3 (µg/L)*	Sample 4 (µg/L)*	MAL (µg/L)*
1,2-Dichloroethane					10
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
Ethylbenzene					10
Fluoride					500
Hexachlorobenzene					5
Hexachlorobutadiene					10
Hexachlorocyclopentadiene					10
Hexachloroethane					20
Methyl ethyl ketone					50
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
Toluene					10
1,1,1-Trichloroethane					10
1,1,2-Trichloroethane					10
Trichloroethene					10

Pollutant	Sample 1 (µg/L)*	Sample 2 (µg/L)*	Sample 3 (µg/L)*	Sample 4 (µg/L)*	MAL (µg/L)*
[Trichloroethylene]					
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.: **001-no discharges since 1997**

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
<i>E. coli</i> (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.: **N/A**

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
Dieldrin					0.02

Pollutant	Sample 1 (µg/L)*	Sample 2 (µg/L)*	Sample 3 (µg/L)*	Sample 4 (µg/L)*	MAL (µg/L)*
Diuron					0.090
Endosulfan I ( <i>alpha</i> )					0.01
Endosulfan II ( <i>beta</i> )					0.02
Endosulfan sulfate					0.1
Endrin					0.02
Guthion [Azinphos methyl]					0.1
Heptachlor					0.01
Heptachlor epoxide					0.01
Hexachlorocyclohexane ( <i>alpha</i> )					0.05
Hexachlorocyclohexane ( <i>beta</i> )					0.05
Hexachlorocyclohexane ( <i>gamma</i> ) [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-no discharges since 1997**

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	<input type="checkbox"/>	<input type="checkbox"/>					400
Color (PCU)	<input type="checkbox"/>	<input type="checkbox"/>					—
Nitrate-Nitrite (as N)	<input type="checkbox"/>	<input type="checkbox"/>					—
Sulfide (as S)	<input type="checkbox"/>	<input type="checkbox"/>					—
Sulfite (as SO <sub>3</sub> )	<input type="checkbox"/>	<input type="checkbox"/>					—
Surfactants	<input type="checkbox"/>	<input type="checkbox"/>					—
Boron, total	<input type="checkbox"/>	<input type="checkbox"/>					20
Cobalt, total	<input type="checkbox"/>	<input type="checkbox"/>					0.3
Iron, total	<input type="checkbox"/>	<input type="checkbox"/>					7
Magnesium, total	<input type="checkbox"/>	<input type="checkbox"/>					20
Manganese, total	<input type="checkbox"/>	<input type="checkbox"/>					0.5
Molybdenum, total	<input type="checkbox"/>	<input type="checkbox"/>					1
Tin, total	<input type="checkbox"/>	<input type="checkbox"/>					5
Titanium, total	<input type="checkbox"/>	<input type="checkbox"/>					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
<input type="checkbox"/> Adhesives and Sealants		<input type="checkbox"/> Yes	<input type="checkbox"/> Yes	<input type="checkbox"/> Yes	No
<input type="checkbox"/> Aluminum Forming	467	<input type="checkbox"/> Yes	<input type="checkbox"/> Yes	<input type="checkbox"/> Yes	No
<input type="checkbox"/> Auto and Other Laundries		<input type="checkbox"/> Yes	<input type="checkbox"/> Yes	<input type="checkbox"/> Yes	<input type="checkbox"/> Yes
<input type="checkbox"/> Battery Manufacturing	461	<input type="checkbox"/> Yes	No	<input type="checkbox"/> Yes	No
<input type="checkbox"/> Coal Mining	434	No	No	No	No
<input type="checkbox"/> Coil Coating	465	<input type="checkbox"/> Yes	<input type="checkbox"/> Yes	<input type="checkbox"/> Yes	No
<input type="checkbox"/> Copper Forming	468	<input type="checkbox"/> Yes	<input type="checkbox"/> Yes	<input type="checkbox"/> Yes	No
<input type="checkbox"/> Electric and Electronic Components	469	<input type="checkbox"/> Yes	<input type="checkbox"/> Yes	<input type="checkbox"/> Yes	<input type="checkbox"/> Yes
<input type="checkbox"/> Electroplating	413	<input type="checkbox"/> Yes	<input type="checkbox"/> Yes	<input type="checkbox"/> Yes	No
<input type="checkbox"/> Explosives Manufacturing	457	No	<input type="checkbox"/> Yes	<input type="checkbox"/> Yes	No
<input type="checkbox"/> Foundries		<input type="checkbox"/> Yes	<input type="checkbox"/> Yes	<input type="checkbox"/> Yes	No
<input type="checkbox"/> Gum and Wood Chemicals - Subparts A,B,C,E	454	<input type="checkbox"/> Yes	<input type="checkbox"/> Yes	No	No
<input type="checkbox"/> Gum and Wood Chemicals - Subparts D,F	454	<input type="checkbox"/> Yes	<input type="checkbox"/> Yes	<input type="checkbox"/> Yes	No
<input type="checkbox"/> Inorganic Chemicals Manufacturing	415	<input type="checkbox"/> Yes	<input type="checkbox"/> Yes	<input type="checkbox"/> Yes	No
<input type="checkbox"/> Iron and Steel Manufacturing	420	<input type="checkbox"/> Yes	<input type="checkbox"/> Yes	<input type="checkbox"/> Yes	No
<input type="checkbox"/> Leather Tanning and Finishing	425	<input type="checkbox"/> Yes	<input type="checkbox"/> Yes	<input type="checkbox"/> Yes	No
<input type="checkbox"/> Mechanical Products Manufacturing		<input type="checkbox"/> Yes	<input type="checkbox"/> Yes	<input type="checkbox"/> Yes	No
<input type="checkbox"/> Nonferrous Metals Manufacturing	421,471	<input type="checkbox"/> Yes	<input type="checkbox"/> Yes	<input type="checkbox"/> Yes	<input type="checkbox"/> Yes
<input type="checkbox"/> Oil and Gas Extraction - Subparts A, D, E, F, G, H	435	<input type="checkbox"/> Yes	<input type="checkbox"/> Yes	<input type="checkbox"/> Yes	No
<input type="checkbox"/> Ore Mining - Subpart B	440	No	<input type="checkbox"/> Yes	No	No
<input type="checkbox"/> Organic Chemicals Manufacturing	414	<input type="checkbox"/> Yes	<input type="checkbox"/> Yes	<input type="checkbox"/> Yes	<input type="checkbox"/> Yes
<input type="checkbox"/> Paint and Ink Formulation	446,447	<input type="checkbox"/> Yes	<input type="checkbox"/> Yes	<input type="checkbox"/> Yes	No
<input type="checkbox"/> Pesticides	455	<input type="checkbox"/> Yes	<input type="checkbox"/> Yes	<input type="checkbox"/> Yes	<input type="checkbox"/> Yes
<input type="checkbox"/> Petroleum Refining	419	<input type="checkbox"/> Yes	No	No	No
<input type="checkbox"/> Pharmaceutical Preparations	439	<input type="checkbox"/> Yes	<input type="checkbox"/> Yes	<input type="checkbox"/> Yes	No
<input type="checkbox"/> Photographic Equipment and Supplies	459	<input type="checkbox"/> Yes	<input type="checkbox"/> Yes	<input type="checkbox"/> Yes	No
<input type="checkbox"/> Plastic and Synthetic Materials Manufacturing	414	<input type="checkbox"/> Yes	<input type="checkbox"/> Yes	<input type="checkbox"/> Yes	<input type="checkbox"/> Yes
<input type="checkbox"/> Plastic Processing	463	<input type="checkbox"/> Yes	No	No	No
<input type="checkbox"/> Porcelain Enameling	466	No	No	No	No
<input type="checkbox"/> Printing and Publishing		<input type="checkbox"/> Yes	<input type="checkbox"/> Yes	<input type="checkbox"/> Yes	<input type="checkbox"/> Yes
<input type="checkbox"/> Pulp and Paperboard Mills - Subpart C	430	<input type="checkbox"/> *	<input type="checkbox"/> Yes	<input type="checkbox"/> *	<input type="checkbox"/> Yes
<input type="checkbox"/> Pulp and Paperboard Mills - Subparts F, K	430	<input type="checkbox"/> *	<input type="checkbox"/> Yes	<input type="checkbox"/> *	<input type="checkbox"/> *
<input type="checkbox"/> Pulp and Paperboard Mills - Subparts A, B, D, G, H	430	<input type="checkbox"/> Yes	<input type="checkbox"/> Yes	<input type="checkbox"/> *	<input type="checkbox"/> *
<input type="checkbox"/> Pulp and Paperboard Mills - Subparts I, J, L	430	<input type="checkbox"/> Yes	<input type="checkbox"/> Yes	<input type="checkbox"/> *	<input type="checkbox"/> Yes
<input type="checkbox"/> Pulp and Paperboard Mills - Subpart E	430	<input type="checkbox"/> Yes	<input type="checkbox"/> Yes	<input type="checkbox"/> Yes	<input type="checkbox"/> *
<input type="checkbox"/> Rubber Processing	428	<input type="checkbox"/> Yes	<input type="checkbox"/> Yes	<input type="checkbox"/> Yes	No
<input type="checkbox"/> Soap and Detergent Manufacturing	417	<input type="checkbox"/> Yes	<input type="checkbox"/> Yes	<input type="checkbox"/> Yes	No
<input checked="" type="checkbox"/> Steam Electric Power Plants	423	<input checked="" type="checkbox"/> Yes	<input checked="" type="checkbox"/> Yes	No	No
<input type="checkbox"/> Textile Mills (Not Subpart C)	410	<input type="checkbox"/> Yes	<input type="checkbox"/> Yes	<input type="checkbox"/> Yes	No
<input type="checkbox"/> Timber Products Processing	429	<input type="checkbox"/> Yes	<input type="checkbox"/> Yes	<input type="checkbox"/> Yes	<input type="checkbox"/> 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-no discharges since 1997**

**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					10

Pollutant	Sample 1 (µg/L)*	Sample 2 (µg/L)*	Sample 3 (µg/L)*	Sample 4 (µg/L)*	MAL (µg/L)
[1,2-Trans-dichloroethene]					
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.: **001-no discharges since 1997**

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.: **N/A**

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

Pollutant	Sample 1 (µg/L)*	Sample 2 (µg/L)*	Sample 3 (µg/L)*	Sample 4 (µg/L)*	MAL (µg/L)
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
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

Pollutant	Sample 1 (µg/L)*	Sample 2 (µg/L)*	Sample 3 (µg/L)*	Sample 4 (µg/L)*	MAL (µg/L)
Nitrobenzene					10
N-Nitrosodimethylamine					50
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.: N/A

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

Pollutant	Sample 1 (µg/L)*	Sample 2 (µg/L)*	Sample 3 (µg/L)*	Sample 4 (µg/L)*	MAL (µg/L)
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: N/A

#### 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 (Ronnell) CASRN 299-84-3
- ☐ 2,4,5-trichlorophenol (TCP) CASRN 95-95-4
- ☐ hexachlorophene (HCP) CASRN 70-30-4
- ☒ None of the above

Description: N/A

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: N/A

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

Table 12 for Outfall No.: N/A

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

Compound	Toxicity Equivalent Factors	Wastewater Concentration (ppq)	Wastewater Toxicity Equivalents (ppq)	Sludge Concentration (ppt)	Sludge Toxicity Equivalents (ppt)	MAL (ppq)
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.: N/A

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



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): 5/7/2024-5/28/2024
- 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:** N/A

### 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)	<2.00	<2.00	<2.00	<2.00
CBOD (5-day)	<2.00	<2.00	<2.00	<2.00
Chemical oxygen demand	58.0	56.0	65.0	61.0
Total organic carbon	2.50	2.80	3.0	2.70
Dissolved oxygen	1.25	1.32	1.68	1.54
Ammonia nitrogen	0.019	<0.014	<0.014	<0.014
Total suspended solids	2.4	2.80	1.4	2.60
Nitrate nitrogen	<0.01	0.136	<0.01	<0.01
Total organic nitrogen	0.04	0.02	0.46	<0.02
Total phosphorus	<0.01	<0.01	0.01	<0.01
Oil and grease	<1.54	<1.54	<1.54	<1.61

Pollutant	Sample 1 (mg/L)	Sample 2 (mg/L)	Sample 3 (mg/L)	Sample 4 (mg/L)
Total residual chlorine	0.01	0.01	0.00	0.00
Total dissolved solids	3580	3700	3720	3580
Sulfate	109	87.2	190	130
Chloride	1270	1000	1410	1380
Fluoride	0.456	0.571	1.06	0.442
Total alkalinity (mg/L as CaCO <sub>3</sub> )	292	250	298	288
Temperature (°F)	72.6	79.8	80.8	79.6
pH (standard units)	7.05	6.99	6.94	6.8

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	1.7	4.99	2.78	2.35	2.5
Antimony, total	<0.20	0.22	<0.20	<0.20	5
Arsenic, total	0.55	0.53	5.80	0.64	0.5
Barium, total	316	283	292	288	3
Beryllium, total	<0.02	<0.02	0.02	<0.02	0.5
Cadmium, total	<0.05	<0.05	<0.05	<0.05	1
Chromium, total	0.47	0.28	0.48	0.89	3
Chromium, hexavalent	<0.5	<0.5	<0.5	<0.5	3
Chromium, trivalent	0.5	<0.5	0.5	0.9	N/A
Copper, total	<0.40	1.17	0.43	0.45	2
Cyanide, available	<2.2	<2.2	<2.2	<2.2	2/10
Lead, total	<0.04	0.06	0.06	<0.04	0.5
Mercury, total	0.00454	0.00391	0.00372	0.00407	0.005/0.0005
Nickel, total	2.26	2.27	2.62	2.23	2
Selenium, total	0.25	0.32	0.75	0.59	5
Silver, total	<0.05	<0.05	<0.05	<0.05	0.5
Thallium, total	<0.02	<0.02	<0.02	<0.02	0.5
Zinc, total	2.32	4.42	5.18	5.34	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.: N/A

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
Benidine					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

Pollutant	Sample 1 (µg/L)*	Sample 2 (µg/L)*	Sample 3 (µg/L)*	Sample 4 (µg/L)*	MAL (µg/L)*
1,2-Dichloroethane					10
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
Ethylbenzene					10
Fluoride					500
Hexachlorobenzene					5
Hexachlorobutadiene					10
Hexachlorocyclopentadiene					10
Hexachloroethane					20
Methyl ethyl ketone					50
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
Toluene					10
1,1,1-Trichloroethane					10
1,1,2-Trichloroethane					10
Trichloroethene					10

Pollutant	Sample 1 (µg/L)*	Sample 2 (µg/L)*	Sample 3 (µg/L)*	Sample 4 (µg/L)*	MAL (µg/L)*
[Trichloroethylene]					
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.: **N/A**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
<i>E. coli</i> (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.: **N/A**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
Dieldrin					0.02



Pollutant	Sample 1 (µg/L)*	Sample 2 (µg/L)*	Sample 3 (µg/L)*	Sample 4 (µg/L)*	MAL (µg/L)*
Diuron					0.090
Endosulfan I ( <i>alpha</i> )					0.01
Endosulfan II ( <i>beta</i> )					0.02
Endosulfan sulfate					0.1
Endrin					0.02
Guthion [Azinphos methyl]					0.1
Heptachlor					0.01
Heptachlor epoxide					0.01
Hexachlorocyclohexane ( <i>alpha</i> )					0.05
Hexachlorocyclohexane ( <i>beta</i> )					0.05
Hexachlorocyclohexane ( <i>gamma</i> ) [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.: N/A

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	<input type="checkbox"/>	<input type="checkbox"/>					400
Color (PCU)	<input type="checkbox"/>	<input type="checkbox"/>					—
Nitrate-Nitrite (as N)	<input type="checkbox"/>	<input type="checkbox"/>					—
Sulfide (as S)	<input type="checkbox"/>	<input type="checkbox"/>					—
Sulfite (as SO <sub>3</sub> )	<input type="checkbox"/>	<input type="checkbox"/>					—
Surfactants	<input type="checkbox"/>	<input type="checkbox"/>					—
Boron, total	<input type="checkbox"/>	<input type="checkbox"/>					20
Cobalt, total	<input type="checkbox"/>	<input type="checkbox"/>					0.3
Iron, total	<input type="checkbox"/>	<input type="checkbox"/>					7
Magnesium, total	<input type="checkbox"/>	<input type="checkbox"/>					20
Manganese, total	<input type="checkbox"/>	<input type="checkbox"/>					0.5
Molybdenum, total	<input type="checkbox"/>	<input type="checkbox"/>					1
Tin, total	<input type="checkbox"/>	<input type="checkbox"/>					5
Titanium, total	<input type="checkbox"/>	<input type="checkbox"/>					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
<input type="checkbox"/> Adhesives and Sealants		<input type="checkbox"/> Yes	<input type="checkbox"/> Yes	<input type="checkbox"/> Yes	No
<input type="checkbox"/> Aluminum Forming	467	<input type="checkbox"/> Yes	<input type="checkbox"/> Yes	<input type="checkbox"/> Yes	No
<input type="checkbox"/> Auto and Other Laundries		<input type="checkbox"/> Yes	<input type="checkbox"/> Yes	<input type="checkbox"/> Yes	<input type="checkbox"/> Yes
<input type="checkbox"/> Battery Manufacturing	461	<input type="checkbox"/> Yes	No	<input type="checkbox"/> Yes	No
<input type="checkbox"/> Coal Mining	434	No	No	No	No
<input type="checkbox"/> Coil Coating	465	<input type="checkbox"/> Yes	<input type="checkbox"/> Yes	<input type="checkbox"/> Yes	No
<input type="checkbox"/> Copper Forming	468	<input type="checkbox"/> Yes	<input type="checkbox"/> Yes	<input type="checkbox"/> Yes	No
<input type="checkbox"/> Electric and Electronic Components	469	<input type="checkbox"/> Yes	<input type="checkbox"/> Yes	<input type="checkbox"/> Yes	<input type="checkbox"/> Yes
<input type="checkbox"/> Electroplating	413	<input type="checkbox"/> Yes	<input type="checkbox"/> Yes	<input type="checkbox"/> Yes	No
<input type="checkbox"/> Explosives Manufacturing	457	No	<input type="checkbox"/> Yes	<input type="checkbox"/> Yes	No
<input type="checkbox"/> Foundries		<input type="checkbox"/> Yes	<input type="checkbox"/> Yes	<input type="checkbox"/> Yes	No
<input type="checkbox"/> Gum and Wood Chemicals - Subparts A,B,C,E	454	<input type="checkbox"/> Yes	<input type="checkbox"/> Yes	No	No
<input type="checkbox"/> Gum and Wood Chemicals - Subparts D,F	454	<input type="checkbox"/> Yes	<input type="checkbox"/> Yes	<input type="checkbox"/> Yes	No
<input type="checkbox"/> Inorganic Chemicals Manufacturing	415	<input type="checkbox"/> Yes	<input type="checkbox"/> Yes	<input type="checkbox"/> Yes	No
<input type="checkbox"/> Iron and Steel Manufacturing	420	<input type="checkbox"/> Yes	<input type="checkbox"/> Yes	<input type="checkbox"/> Yes	No
<input type="checkbox"/> Leather Tanning and Finishing	425	<input type="checkbox"/> Yes	<input type="checkbox"/> Yes	<input type="checkbox"/> Yes	No
<input type="checkbox"/> Mechanical Products Manufacturing		<input type="checkbox"/> Yes	<input type="checkbox"/> Yes	<input type="checkbox"/> Yes	No
<input type="checkbox"/> Nonferrous Metals Manufacturing	421,471	<input type="checkbox"/> Yes	<input type="checkbox"/> Yes	<input type="checkbox"/> Yes	<input type="checkbox"/> Yes
<input type="checkbox"/> Oil and Gas Extraction - Subparts A, D, E, F, G, H	435	<input type="checkbox"/> Yes	<input type="checkbox"/> Yes	<input type="checkbox"/> Yes	No
<input type="checkbox"/> Ore Mining - Subpart B	440	No	<input type="checkbox"/> Yes	No	No
<input type="checkbox"/> Organic Chemicals Manufacturing	414	<input type="checkbox"/> Yes	<input type="checkbox"/> Yes	<input type="checkbox"/> Yes	<input type="checkbox"/> Yes
<input type="checkbox"/> Paint and Ink Formulation	446,447	<input type="checkbox"/> Yes	<input type="checkbox"/> Yes	<input type="checkbox"/> Yes	No
<input type="checkbox"/> Pesticides	455	<input type="checkbox"/> Yes	<input type="checkbox"/> Yes	<input type="checkbox"/> Yes	<input type="checkbox"/> Yes
<input type="checkbox"/> Petroleum Refining	419	<input type="checkbox"/> Yes	No	No	No
<input type="checkbox"/> Pharmaceutical Preparations	439	<input type="checkbox"/> Yes	<input type="checkbox"/> Yes	<input type="checkbox"/> Yes	No
<input type="checkbox"/> Photographic Equipment and Supplies	459	<input type="checkbox"/> Yes	<input type="checkbox"/> Yes	<input type="checkbox"/> Yes	No
<input type="checkbox"/> Plastic and Synthetic Materials Manufacturing	414	<input type="checkbox"/> Yes	<input type="checkbox"/> Yes	<input type="checkbox"/> Yes	<input type="checkbox"/> Yes
<input type="checkbox"/> Plastic Processing	463	<input type="checkbox"/> Yes	No	No	No
<input type="checkbox"/> Porcelain Enameling	466	No	No	No	No
<input type="checkbox"/> Printing and Publishing		<input type="checkbox"/> Yes	<input type="checkbox"/> Yes	<input type="checkbox"/> Yes	<input type="checkbox"/> Yes
<input type="checkbox"/> Pulp and Paperboard Mills - Subpart C	430	<input type="checkbox"/> *	<input type="checkbox"/> Yes	<input type="checkbox"/> *	<input type="checkbox"/> Yes
<input type="checkbox"/> Pulp and Paperboard Mills - Subparts F, K	430	<input type="checkbox"/> *	<input type="checkbox"/> Yes	<input type="checkbox"/> *	<input type="checkbox"/> *
<input type="checkbox"/> Pulp and Paperboard Mills - Subparts A, B, D, G, H	430	<input type="checkbox"/> Yes	<input type="checkbox"/> Yes	<input type="checkbox"/> *	<input type="checkbox"/> *
<input type="checkbox"/> Pulp and Paperboard Mills - Subparts I, J, L	430	<input type="checkbox"/> Yes	<input type="checkbox"/> Yes	<input type="checkbox"/> *	<input type="checkbox"/> Yes
<input type="checkbox"/> Pulp and Paperboard Mills - Subpart E	430	<input type="checkbox"/> Yes	<input type="checkbox"/> Yes	<input type="checkbox"/> Yes	<input type="checkbox"/> *
<input type="checkbox"/> Rubber Processing	428	<input type="checkbox"/> Yes	<input type="checkbox"/> Yes	<input type="checkbox"/> Yes	No
<input type="checkbox"/> Soap and Detergent Manufacturing	417	<input type="checkbox"/> Yes	<input type="checkbox"/> Yes	<input type="checkbox"/> Yes	No
<input checked="" type="checkbox"/> Steam Electric Power Plants	423	<input checked="" type="checkbox"/> Yes	<input checked="" type="checkbox"/> Yes	No	No
<input type="checkbox"/> Textile Mills (Not Subpart C)	410	<input type="checkbox"/> Yes	<input type="checkbox"/> Yes	<input type="checkbox"/> Yes	No
<input type="checkbox"/> Timber Products Processing	429	<input type="checkbox"/> Yes	<input type="checkbox"/> Yes	<input type="checkbox"/> Yes	<input type="checkbox"/> 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.: N/A**

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

Pollutant	Sample 1 (µg/L)*	Sample 2 (µg/L)*	Sample 3 (µg/L)*	Sample 4 (µg/L)*	MAL (µg/L)
1,2-Trans-dichloroethylene [1,2-Trans-dichloroethene]					10
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.: N/A

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.: N/A

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

Pollutant	Sample 1 (µg/L)*	Sample 2 (µg/L)*	Sample 3 (µg/L)*	Sample 4 (µg/L)*	MAI (µg/L)
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
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



Pollutant	Sample 1 (µg/L)*	Sample 2 (µg/L)*	Sample 3 (µg/L)*	Sample 4 (µg/L)*	MAL (µg/L)
Naphthalene					10
Nitrobenzene					10
N-Nitrosodimethylamine					50
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.: N/A

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

Pollutant	Sample 1 (µg/L)*	Sample 2 (µg/L)*	Sample 3 (µg/L)*	Sample 4 (µg/L)*	MAL (µg/L)
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: N/A

#### 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 (Ronnell) CASRN 299-84-3
- ☐ 2,4,5-trichlorophenol (TCP) CASRN 95-95-4
- ☐ hexachlorophene (HCP) CASRN 70-30-4
- ☒ None of the above

Description: N/A

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: N/A

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

Table 12 for Outfall No.: N/A

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

Compound	Toxicity Equivalent Factors	Wastewater Concentration (ppq)	Wastewater Toxicity Equivalents (ppq)	Sludge Concentration (ppt)	Sludge Toxicity Equivalents (ppt)	MAL (ppq)
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.: N/A

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

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): 5/7/2024-5/28/2024
- 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:** N/A

### 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.: 003

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)	<2.00	<2.00	<2.00	<2.00
CBOD (5-day)	<2.00	<2.00	<2.00	<2.00
Chemical oxygen demand	89.0	73.0	86.0	75.0
Total organic carbon	5.30	5.70	6.30	6.00
Dissolved oxygen	1.32	1.28	1.42	1.68
Ammonia nitrogen	0.080	0.020	0.736	0.751
Total suspended solids	2.4	2.0	2.0	3.80
Nitrate nitrogen	<0.01	<0.01	0.06	0.06
Total organic nitrogen	0.27	0.31	0.644	0.32
Total phosphorus	<0.01	<0.01	<0.01	<0.01
Oil and grease	<1.54	<1.55	<1.54	<1.55

Pollutant	Sample 1 (mg/L)	Sample 2 (mg/L)	Sample 3 (mg/L)	Sample 4 (mg/L)
Total residual chlorine	0.01	0.01	0.00	0.00
Total dissolved solids	3420	3540	3290	3420
Sulfate	34.3	38.9	69.0	72.0
Chloride	1520	1630	1570	1600
Fluoride	0.805	0.883	0.692	0.685
Total alkalinity (mg/L as CaCO <sub>3</sub> )	388	386	380	380
Temperature (°F)	74.2	80.2	79.8	79.8
pH (standard units)	7.02	7.05	6.90	6.88

Table 2 for Outfall No.: **003**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	1.57	3.14	1.79	3.23	2.5
Antimony, total	<0.20	0.23	<0.20	<0.20	5
Arsenic, total	1.74	1.74	1.29	1.45	0.5
Barium, total	1340	1420	887	841	3
Beryllium, total	<0.02	<0.02	<0.02	<0.02	0.5
Cadmium, total	<0.05	<0.05	<0.05	0.07	1
Chromium, total	0.28	0.30	0.79	0.97	3
Chromium, hexavalent	<0.5	<0.5	<0.5	<0.5	3
Chromium, trivalent	<0.5	<0.5	0.8	1.0	N/A
Copper, total	0.30	1.44	0.38	0.79	2
Cyanide, available	<2.2	<2.2	<2.2	<2.2	2/10
Lead, total	<0.04	<0.04	0.07	0.05	0.5
Mercury, total	0.000919	0.00105	0.000984	0.000969	0.005/0.0005
Nickel, total	7.10	7.32	11.0	12.2	2
Selenium, total	0.26	0.48	1.05	0.35	5
Silver, total	<0.05	<0.05	<0.05	<0.05	0.5
Thallium, total	0.04	<0.02	0.03	<0.02	0.5
Zinc, total	1.48	1.92	2.23	6.62	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.: N/A

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
Benidine					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

Pollutant	Sample 1 (µg/L)*	Sample 2 (µg/L)*	Sample 3 (µg/L)*	Sample 4 (µg/L)*	MAL (µg/L)*
1,2-Dichloroethane					10
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
Ethylbenzene					10
Fluoride					500
Hexachlorobenzene					5
Hexachlorobutadiene					10
Hexachlorocyclopentadiene					10
Hexachloroethane					20
Methyl ethyl ketone					50
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
Toluene					10
1,1,1-Trichloroethane					10
1,1,2-Trichloroethane					10
Trichloroethene					10

Pollutant	Sample 1 (µg/L)*	Sample 2 (µg/L)*	Sample 3 (µg/L)*	Sample 4 (µg/L)*	MAL (µg/L)*
[Trichloroethylene]					
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.: N/ASamples 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
<i>E. coli</i> (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.: N/ASamples 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
Dieldrin					0.02

Pollutant	Sample 1 (µg/L)*	Sample 2 (µg/L)*	Sample 3 (µg/L)*	Sample 4 (µg/L)*	MAL (µg/L)*
Diuron					0.090
Endosulfan I ( <i>alpha</i> )					0.01
Endosulfan II ( <i>beta</i> )					0.02
Endosulfan sulfate					0.1
Endrin					0.02
Guthion [Azinphos methyl]					0.1
Heptachlor					0.01
Heptachlor epoxide					0.01
Hexachlorocyclohexane ( <i>alpha</i> )					0.05
Hexachlorocyclohexane ( <i>beta</i> )					0.05
Hexachlorocyclohexane ( <i>gamma</i> ) [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.: N/A

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	<input type="checkbox"/>	<input type="checkbox"/>					400
Color (PCU)	<input type="checkbox"/>	<input type="checkbox"/>					—
Nitrate-Nitrite (as N)	<input type="checkbox"/>	<input type="checkbox"/>					—
Sulfide (as S)	<input type="checkbox"/>	<input type="checkbox"/>					—
Sulfite (as SO <sub>3</sub> )	<input type="checkbox"/>	<input type="checkbox"/>					—
Surfactants	<input type="checkbox"/>	<input type="checkbox"/>					—
Boron, total	<input type="checkbox"/>	<input type="checkbox"/>					20
Cobalt, total	<input type="checkbox"/>	<input type="checkbox"/>					0.3
Iron, total	<input type="checkbox"/>	<input type="checkbox"/>					7
Magnesium, total	<input type="checkbox"/>	<input type="checkbox"/>					20
Manganese, total	<input type="checkbox"/>	<input type="checkbox"/>					0.5
Molybdenum, total	<input type="checkbox"/>	<input type="checkbox"/>					1
Tin, total	<input type="checkbox"/>	<input type="checkbox"/>					5
Titanium, total	<input type="checkbox"/>	<input type="checkbox"/>					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
<input type="checkbox"/> Adhesives and Sealants		<input type="checkbox"/> Yes	<input type="checkbox"/> Yes	<input type="checkbox"/> Yes	No
<input type="checkbox"/> Aluminum Forming	467	<input type="checkbox"/> Yes	<input type="checkbox"/> Yes	<input type="checkbox"/> Yes	No
<input type="checkbox"/> Auto and Other Laundries		<input type="checkbox"/> Yes	<input type="checkbox"/> Yes	<input type="checkbox"/> Yes	<input type="checkbox"/> Yes
<input type="checkbox"/> Battery Manufacturing	461	<input type="checkbox"/> Yes	No	<input type="checkbox"/> Yes	No
<input type="checkbox"/> Coal Mining	434	No	No	No	No
<input type="checkbox"/> Coil Coating	465	<input type="checkbox"/> Yes	<input type="checkbox"/> Yes	<input type="checkbox"/> Yes	No
<input type="checkbox"/> Copper Forming	468	<input type="checkbox"/> Yes	<input type="checkbox"/> Yes	<input type="checkbox"/> Yes	No
<input type="checkbox"/> Electric and Electronic Components	469	<input type="checkbox"/> Yes	<input type="checkbox"/> Yes	<input type="checkbox"/> Yes	<input type="checkbox"/> Yes
<input type="checkbox"/> Electroplating	413	<input type="checkbox"/> Yes	<input type="checkbox"/> Yes	<input type="checkbox"/> Yes	No
<input type="checkbox"/> Explosives Manufacturing	457	No	<input type="checkbox"/> Yes	<input type="checkbox"/> Yes	No
<input type="checkbox"/> Foundries		<input type="checkbox"/> Yes	<input type="checkbox"/> Yes	<input type="checkbox"/> Yes	No
<input type="checkbox"/> Gum and Wood Chemicals - Subparts A,B,C,E	454	<input type="checkbox"/> Yes	<input type="checkbox"/> Yes	No	No
<input type="checkbox"/> Gum and Wood Chemicals - Subparts D,F	454	<input type="checkbox"/> Yes	<input type="checkbox"/> Yes	<input type="checkbox"/> Yes	No
<input type="checkbox"/> Inorganic Chemicals Manufacturing	415	<input type="checkbox"/> Yes	<input type="checkbox"/> Yes	<input type="checkbox"/> Yes	No
<input type="checkbox"/> Iron and Steel Manufacturing	420	<input type="checkbox"/> Yes	<input type="checkbox"/> Yes	<input type="checkbox"/> Yes	No
<input type="checkbox"/> Leather Tanning and Finishing	425	<input type="checkbox"/> Yes	<input type="checkbox"/> Yes	<input type="checkbox"/> Yes	No
<input type="checkbox"/> Mechanical Products Manufacturing		<input type="checkbox"/> Yes	<input type="checkbox"/> Yes	<input type="checkbox"/> Yes	No
<input type="checkbox"/> Nonferrous Metals Manufacturing	421,471	<input type="checkbox"/> Yes	<input type="checkbox"/> Yes	<input type="checkbox"/> Yes	<input type="checkbox"/> Yes
<input type="checkbox"/> Oil and Gas Extraction - Subparts A, D, E, F, G, H	435	<input type="checkbox"/> Yes	<input type="checkbox"/> Yes	<input type="checkbox"/> Yes	No
<input type="checkbox"/> Ore Mining - Subpart B	440	No	<input type="checkbox"/> Yes	No	No
<input type="checkbox"/> Organic Chemicals Manufacturing	414	<input type="checkbox"/> Yes	<input type="checkbox"/> Yes	<input type="checkbox"/> Yes	<input type="checkbox"/> Yes
<input type="checkbox"/> Paint and Ink Formulation	446,447	<input type="checkbox"/> Yes	<input type="checkbox"/> Yes	<input type="checkbox"/> Yes	No
<input type="checkbox"/> Pesticides	455	<input type="checkbox"/> Yes	<input type="checkbox"/> Yes	<input type="checkbox"/> Yes	<input type="checkbox"/> Yes
<input type="checkbox"/> Petroleum Refining	419	<input type="checkbox"/> Yes	No	No	No
<input type="checkbox"/> Pharmaceutical Preparations	439	<input type="checkbox"/> Yes	<input type="checkbox"/> Yes	<input type="checkbox"/> Yes	No
<input type="checkbox"/> Photographic Equipment and Supplies	459	<input type="checkbox"/> Yes	<input type="checkbox"/> Yes	<input type="checkbox"/> Yes	No
<input type="checkbox"/> Plastic and Synthetic Materials Manufacturing	414	<input type="checkbox"/> Yes	<input type="checkbox"/> Yes	<input type="checkbox"/> Yes	<input type="checkbox"/> Yes
<input type="checkbox"/> Plastic Processing	463	<input type="checkbox"/> Yes	No	No	No
<input type="checkbox"/> Porcelain Enameling	466	No	No	No	No
<input type="checkbox"/> Printing and Publishing		<input type="checkbox"/> Yes	<input type="checkbox"/> Yes	<input type="checkbox"/> Yes	<input type="checkbox"/> Yes
<input type="checkbox"/> Pulp and Paperboard Mills - Subpart C	430	<input type="checkbox"/> *	<input type="checkbox"/> Yes	<input type="checkbox"/> *	<input type="checkbox"/> Yes
<input type="checkbox"/> Pulp and Paperboard Mills - Subparts F, K	430	<input type="checkbox"/> *	<input type="checkbox"/> Yes	<input type="checkbox"/> *	<input type="checkbox"/> *
<input type="checkbox"/> Pulp and Paperboard Mills - Subparts A, B, D, G, H	430	<input type="checkbox"/> Yes	<input type="checkbox"/> Yes	<input type="checkbox"/> *	<input type="checkbox"/> *
<input type="checkbox"/> Pulp and Paperboard Mills - Subparts I, J, L	430	<input type="checkbox"/> Yes	<input type="checkbox"/> Yes	<input type="checkbox"/> *	<input type="checkbox"/> Yes
<input type="checkbox"/> Pulp and Paperboard Mills - Subpart E	430	<input type="checkbox"/> Yes	<input type="checkbox"/> Yes	<input type="checkbox"/> Yes	<input type="checkbox"/> *
<input type="checkbox"/> Rubber Processing	428	<input type="checkbox"/> Yes	<input type="checkbox"/> Yes	<input type="checkbox"/> Yes	No
<input type="checkbox"/> Soap and Detergent Manufacturing	417	<input type="checkbox"/> Yes	<input type="checkbox"/> Yes	<input type="checkbox"/> Yes	No
<input checked="" type="checkbox"/> Steam Electric Power Plants	423	<input checked="" type="checkbox"/> Yes	<input checked="" type="checkbox"/> Yes	No	No
<input type="checkbox"/> Textile Mills (Not Subpart C)	410	<input type="checkbox"/> Yes	<input type="checkbox"/> Yes	<input type="checkbox"/> Yes	No
<input type="checkbox"/> Timber Products Processing	429	<input type="checkbox"/> Yes	<input type="checkbox"/> Yes	<input type="checkbox"/> Yes	<input type="checkbox"/> 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.: N/A**

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

Pollutant	Sample 1 (µg/L)*	Sample 2 (µg/L)*	Sample 3 (µg/L)*	Sample 4 (µg/L)*	MAL (µg/L)
1,2-Trans-dichloroethylene [1,2-Trans-dichloroethene]					10
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.: N/A

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.: N/A

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

Pollutant	Sample 1 (µg/L)*	Sample 2 (µg/L)*	Sample 3 (µg/L)*	Sample 4 (µg/L)*	MAI (µg/L)
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
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

Pollutant	Sample 1 (µg/L)*	Sample 2 (µg/L)*	Sample 3 (µg/L)*	Sample 4 (µg/L)*	MAI (µg/L)
Naphthalene					10
Nitrobenzene					10
N-Nitrosodimethylamine					50
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.: N/A

Samples are (check one): ☐ Composite ☐ Grab

Pollutant	Sample 1 (µg/L)*	Sample 2 (µg/L)*	Sample 3 (µg/L)*	Sample 4 (µg/L)*	MAI (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

Pollutant	Sample 1 (µg/L)*	Sample 2 (µg/L)*	Sample 3 (µg/L)*	Sample 4 (µg/L)*	MAL (µg/L)
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: N/A

#### 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 (Ronnell) CASRN 299-84-3
- ☐ 2,4,5-trichlorophenol (TCP) CASRN 95-95-4
- ☐ hexachlorophene (HCP) CASRN 70-30-4
- ☒ None of the above

Description: N/A

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: N/A

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

Table 12 for Outfall No.: N/A

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



Compound	Toxicity Equivalent Factors	Wastewater Concentration (ppq)	Wastewater Toxicity Equivalents (ppq)	Sludge Concentration (ppt)	Sludge Toxicity Equivalents (ppt)	MAL (ppq)
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.: N/A

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

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): 5/7/2024-5/28/2024
- 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:** N/A

### 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.: 004

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)	<2.00	<2.00	<2.00	<2.00
CBOD (5-day)	<2.00	<2.00	<2.00	<2.00
Chemical oxygen demand	56.0	53.0	72.0	60.0
Total organic carbon	3.60	3.70	4.00	3.70
Dissolved oxygen	1.61	1.55	1.3	1.72
Ammonia nitrogen	0.055	<0.014	<0.014	<0.014
Total suspended solids	2.0	2.4	1.4	4.60
Nitrate nitrogen	<0.01	<0.01	<0.01	<0.01
Total organic nitrogen	0.03	0.15	0.31	0.12
Total phosphorus	<0.01	<0.01	<0.01	<0.01
Oil and grease	<1.54	<1.54	<1.54	<1.55

Pollutant	Sample 1 (mg/L)	Sample 2 (mg/L)	Sample 3 (mg/L)	Sample 4 (mg/L)
Total residual chlorine	0.01	0.01	0.00	0.00
Total dissolved solids	2990	3100	2990	2820
Sulfate	46.0	49.7	48.3	53.3
Chloride	1260	1300	1330	1300
Fluoride	0.550	0.511	0.499	0.529
Total alkalinity (mg/L as CaCO <sub>3</sub> )	370	372	370	368
Temperature (°F)	77.2	76.6	74.6	79.2
pH (standard units)	6.95	6.94	6.96	6.68

Table 2 for Outfall No.: **004**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	2.81	4.58	5.10	2.95	2.5
Antimony, total	<0.20	0.20	<0.20	<0.20	5
Arsenic, total	0.66	0.64	0.71	0.84	0.5
Barium, total	416	393	433	437	3
Beryllium, total	<0.02	<0.02	0.03	0.17	0.5
Cadmium, total	<0.05	<0.05	<0.05	0.18	1
Chromium, total	0.38	0.24	0.44	0.97	3
Chromium, hexavalent	<0.5	<0.5	<0.5	<0.5	3
Chromium, trivalent	<0.5	<0.5	<0.5	1.0	N/A
Copper, total	1.54	0.90	0.13	0.36	2
Cyanide, available	<2.2	<2.2	<2.2	<2.2	2/10
Lead, total	0.07	<0.04	0.08	0.14	0.5
Mercury, total	0.00198	0.00186	0.00143	0.00159	0.005/0.0005
Nickel, total	4.88	5.02	5.13	4.88	2
Selenium, total	0.30	0.33	0.88	0.94	5
Silver, total	<0.05	<0.05	<0.05	0.17	0.5
Thallium, total	<0.02	<0.02	0.04	0.14	0.5
Zinc, total	3.43	5.57	4.60	3.33	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.: N/A

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
Benidine					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

Pollutant	Sample 1 (µg/L)*	Sample 2 (µg/L)*	Sample 3 (µg/L)*	Sample 4 (µg/L)*	MAL (µg/L)*
1,2-Dichloroethane					10
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
Ethylbenzene					10
Fluoride					500
Hexachlorobenzene					5
Hexachlorobutadiene					10
Hexachlorocyclopentadiene					10
Hexachloroethane					20
Methyl ethyl ketone					50
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
Toluene					10
1,1,1-Trichloroethane					10
1,1,2-Trichloroethane					10
Trichloroethene					10



Pollutant	Sample 1 (µg/L)*	Sample 2 (µg/L)*	Sample 3 (µg/L)*	Sample 4 (µg/L)*	MAL (µg/L)*
[Trichloroethylene]					
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.: **N/A**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
<i>E. coli</i> (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.: **N/A**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 [Fenprothrin]					—
Demeton					0.20
Diazinon					0.5/0.1
Dicofol [Kelthane]					1
Dieldrin					0.02

Pollutant	Sample 1 (µg/L)*	Sample 2 (µg/L)*	Sample 3 (µg/L)*	Sample 4 (µg/L)*	MAL (µg/L)*
Diuron					0.090
Endosulfan I ( <i>alpha</i> )					0.01
Endosulfan II ( <i>beta</i> )					0.02
Endosulfan sulfate					0.1
Endrin					0.02
Guthion [Azinphos methyl]					0.1
Heptachlor					0.01
Heptachlor epoxide					0.01
Hexachlorocyclohexane ( <i>alpha</i> )					0.05
Hexachlorocyclohexane ( <i>beta</i> )					0.05
Hexachlorocyclohexane ( <i>gamma</i> ) [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.: N/A

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	<input type="checkbox"/>	<input type="checkbox"/>					400
Color (PCU)	<input type="checkbox"/>	<input type="checkbox"/>					—
Nitrate-Nitrite (as N)	<input type="checkbox"/>	<input type="checkbox"/>					—
Sulfide (as S)	<input type="checkbox"/>	<input type="checkbox"/>					—
Sulfite (as SO <sub>3</sub> )	<input type="checkbox"/>	<input type="checkbox"/>					—
Surfactants	<input type="checkbox"/>	<input type="checkbox"/>					—
Boron, total	<input type="checkbox"/>	<input type="checkbox"/>					20
Cobalt, total	<input type="checkbox"/>	<input type="checkbox"/>					0.3
Iron, total	<input type="checkbox"/>	<input type="checkbox"/>					7
Magnesium, total	<input type="checkbox"/>	<input type="checkbox"/>					20
Manganese, total	<input type="checkbox"/>	<input type="checkbox"/>					0.5
Molybdenum, total	<input type="checkbox"/>	<input type="checkbox"/>					1
Tin, total	<input type="checkbox"/>	<input type="checkbox"/>					5
Titanium, total	<input type="checkbox"/>	<input type="checkbox"/>					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
<input type="checkbox"/> Adhesives and Sealants		<input type="checkbox"/> Yes	<input type="checkbox"/> Yes	<input type="checkbox"/> Yes	No
<input type="checkbox"/> Aluminum Forming	467	<input type="checkbox"/> Yes	<input type="checkbox"/> Yes	<input type="checkbox"/> Yes	No
<input type="checkbox"/> Auto and Other Laundries		<input type="checkbox"/> Yes	<input type="checkbox"/> Yes	<input type="checkbox"/> Yes	<input type="checkbox"/> Yes
<input type="checkbox"/> Battery Manufacturing	461	<input type="checkbox"/> Yes	No	<input type="checkbox"/> Yes	No
<input type="checkbox"/> Coal Mining	434	No	No	No	No
<input type="checkbox"/> Coil Coating	465	<input type="checkbox"/> Yes	<input type="checkbox"/> Yes	<input type="checkbox"/> Yes	No
<input type="checkbox"/> Copper Forming	468	<input type="checkbox"/> Yes	<input type="checkbox"/> Yes	<input type="checkbox"/> Yes	No
<input type="checkbox"/> Electric and Electronic Components	469	<input type="checkbox"/> Yes	<input type="checkbox"/> Yes	<input type="checkbox"/> Yes	<input type="checkbox"/> Yes
<input type="checkbox"/> Electroplating	413	<input type="checkbox"/> Yes	<input type="checkbox"/> Yes	<input type="checkbox"/> Yes	No
<input type="checkbox"/> Explosives Manufacturing	457	No	<input type="checkbox"/> Yes	<input type="checkbox"/> Yes	No
<input type="checkbox"/> Foundries		<input type="checkbox"/> Yes	<input type="checkbox"/> Yes	<input type="checkbox"/> Yes	No
<input type="checkbox"/> Gum and Wood Chemicals - Subparts A,B,C,E	454	<input type="checkbox"/> Yes	<input type="checkbox"/> Yes	No	No
<input type="checkbox"/> Gum and Wood Chemicals - Subparts D,F	454	<input type="checkbox"/> Yes	<input type="checkbox"/> Yes	<input type="checkbox"/> Yes	No
<input type="checkbox"/> Inorganic Chemicals Manufacturing	415	<input type="checkbox"/> Yes	<input type="checkbox"/> Yes	<input type="checkbox"/> Yes	No
<input type="checkbox"/> Iron and Steel Manufacturing	420	<input type="checkbox"/> Yes	<input type="checkbox"/> Yes	<input type="checkbox"/> Yes	No
<input type="checkbox"/> Leather Tanning and Finishing	425	<input type="checkbox"/> Yes	<input type="checkbox"/> Yes	<input type="checkbox"/> Yes	No
<input type="checkbox"/> Mechanical Products Manufacturing		<input type="checkbox"/> Yes	<input type="checkbox"/> Yes	<input type="checkbox"/> Yes	No
<input type="checkbox"/> Nonferrous Metals Manufacturing	421,471	<input type="checkbox"/> Yes	<input type="checkbox"/> Yes	<input type="checkbox"/> Yes	<input type="checkbox"/> Yes
<input type="checkbox"/> Oil and Gas Extraction - Subparts A, D, E, F, G, H	435	<input type="checkbox"/> Yes	<input type="checkbox"/> Yes	<input type="checkbox"/> Yes	No
<input type="checkbox"/> Ore Mining - Subpart B	440	No	<input type="checkbox"/> Yes	No	No
<input type="checkbox"/> Organic Chemicals Manufacturing	414	<input type="checkbox"/> Yes	<input type="checkbox"/> Yes	<input type="checkbox"/> Yes	<input type="checkbox"/> Yes
<input type="checkbox"/> Paint and Ink Formulation	446,447	<input type="checkbox"/> Yes	<input type="checkbox"/> Yes	<input type="checkbox"/> Yes	No
<input type="checkbox"/> Pesticides	455	<input type="checkbox"/> Yes	<input type="checkbox"/> Yes	<input type="checkbox"/> Yes	<input type="checkbox"/> Yes
<input type="checkbox"/> Petroleum Refining	419	<input type="checkbox"/> Yes	No	No	No
<input type="checkbox"/> Pharmaceutical Preparations	439	<input type="checkbox"/> Yes	<input type="checkbox"/> Yes	<input type="checkbox"/> Yes	No
<input type="checkbox"/> Photographic Equipment and Supplies	459	<input type="checkbox"/> Yes	<input type="checkbox"/> Yes	<input type="checkbox"/> Yes	No
<input type="checkbox"/> Plastic and Synthetic Materials Manufacturing	414	<input type="checkbox"/> Yes	<input type="checkbox"/> Yes	<input type="checkbox"/> Yes	<input type="checkbox"/> Yes
<input type="checkbox"/> Plastic Processing	463	<input type="checkbox"/> Yes	No	No	No
<input type="checkbox"/> Porcelain Enameling	466	No	No	No	No
<input type="checkbox"/> Printing and Publishing		<input type="checkbox"/> Yes	<input type="checkbox"/> Yes	<input type="checkbox"/> Yes	<input type="checkbox"/> Yes
<input type="checkbox"/> Pulp and Paperboard Mills - Subpart C	430	<input type="checkbox"/> *	<input type="checkbox"/> Yes	<input type="checkbox"/> *	<input type="checkbox"/> Yes
<input type="checkbox"/> Pulp and Paperboard Mills - Subparts F, K	430	<input type="checkbox"/> *	<input type="checkbox"/> Yes	<input type="checkbox"/> *	<input type="checkbox"/> *
<input type="checkbox"/> Pulp and Paperboard Mills - Subparts A, B, D, G, H	430	<input type="checkbox"/> Yes	<input type="checkbox"/> Yes	<input type="checkbox"/> *	<input type="checkbox"/> *
<input type="checkbox"/> Pulp and Paperboard Mills - Subparts I, J, L	430	<input type="checkbox"/> Yes	<input type="checkbox"/> Yes	<input type="checkbox"/> *	<input type="checkbox"/> Yes
<input type="checkbox"/> Pulp and Paperboard Mills - Subpart E	430	<input type="checkbox"/> Yes	<input type="checkbox"/> Yes	<input type="checkbox"/> Yes	<input type="checkbox"/> *
<input type="checkbox"/> Rubber Processing	428	<input type="checkbox"/> Yes	<input type="checkbox"/> Yes	<input type="checkbox"/> Yes	No
<input type="checkbox"/> Soap and Detergent Manufacturing	417	<input type="checkbox"/> Yes	<input type="checkbox"/> Yes	<input type="checkbox"/> Yes	No
<input checked="" type="checkbox"/> Steam Electric Power Plants	423	<input checked="" type="checkbox"/> Yes	<input checked="" type="checkbox"/> Yes	No	No
<input type="checkbox"/> Textile Mills (Not Subpart C)	410	<input type="checkbox"/> Yes	<input type="checkbox"/> Yes	<input type="checkbox"/> Yes	No
<input type="checkbox"/> Timber Products Processing	429	<input type="checkbox"/> Yes	<input type="checkbox"/> Yes	<input type="checkbox"/> Yes	<input type="checkbox"/> 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.: N/A**

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

Pollutant	Sample 1 (µg/L)*	Sample 2 (µg/L)*	Sample 3 (µg/L)*	Sample 4 (µg/L)*	MAL (µg/L)
1,2-Trans-dichloroethylene [1,2-Trans-dichloroethene]					10
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.: N/A

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.: N/A

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



Pollutant	Sample 1 (µg/L)*	Sample 2 (µg/L)*	Sample 3 (µg/L)*	Sample 4 (µg/L)*	MAI (µg/L)
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
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

Pollutant	Sample 1 (µg/L)*	Sample 2 (µg/L)*	Sample 3 (µg/L)*	Sample 4 (µg/L)*	MAL (µg/L)
Naphthalene					10
Nitrobenzene					10
N-Nitrosodimethylamine					50
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.: N/A

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

Pollutant	Sample 1 (µg/L)*	Sample 2 (µg/L)*	Sample 3 (µg/L)*	Sample 4 (µg/L)*	MAL (µg/L)
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: N/A

#### 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 (Ronnell) CASRN 299-84-3
- ☐ 2,4,5-trichlorophenol (TCP) CASRN 95-95-4
- ☐ hexachlorophene (HCP) CASRN 70-30-4
- ☒ None of the above

Description: N/A

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: N/A

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

Table 12 for Outfall No.: N/A

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

Compound	Toxicity Equivalent Factors	Wastewater Concentration (ppq)	Wastewater Toxicity Equivalents (ppq)	Sludge Concentration (ppt)	Sludge Toxicity Equivalents (ppt)	MAL (ppq)
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.: N/A

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

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): 5/7/2024-5/28/2024
- 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:** N/A

### 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.: 005

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)	<2.00	<2.00	<2.00	<2.00
CBOD (5-day)	<2.00	<2.00	<2.00	<2.00
Chemical oxygen demand	48.0	45.0	55.0	50.0
Total organic carbon	2.10	2.10	2.20	2.20
Dissolved oxygen	1.38	1.72	2.1	1.9
Ammonia nitrogen	<0.014	<0.014	<0.014	<0.014
Total suspended solids	2.60	2.60	0.8	2.4
Nitrate nitrogen	<0.01	<0.01	<0.01	<0.01
Total organic nitrogen	<0.02	0.10	0.16	0.02
Total phosphorus	<0.01	<0.01	<0.01	<0.01
Oil and grease	<1.54	<1.55	<1.54	<1.57

Pollutant	Sample 1 (mg/L)	Sample 2 (mg/L)	Sample 3 (mg/L)	Sample 4 (mg/L)
Total residual chlorine	0.01	0.01	0.00	0.00
Total dissolved solids	3060	3190	3030	3000
Sulfate	37.1	41.9	42.5	42.2
Chloride	1060	1170	1020	1150
Fluoride	0.422	0.534	0.373	0.383
Total alkalinity (mg/L as CaCO <sub>3</sub> )	362	368	362	370
Temperature (°F)	76.4	74.4	79.0	80.2
pH (standard units)	6.93	7.05	7.01	7.02

Table 2 for Outfall No.: **005**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	1.19	2.70	3.05	2.85	2.5
Antimony, total	<0.20	<0.20	<0.20	<0.20	5
Arsenic, total	2.03	0.50	0.60	0.69	0.5
Barium, total	275	280	285	292	3
Beryllium, total	<0.02	<0.02	0.02	0.07	0.5
Cadmium, total	<0.05	<0.05	<0.05	0.07	1
Chromium, total	0.30	0.26	0.43	0.85	3
Chromium, hexavalent	<0.5	<0.5	<0.5	<0.5	3
Chromium, trivalent	<0.5	<0.5	<0.5	0.9	N/A
Copper, total	0.42	0.89	0.20	0.77	2
Cyanide, available	<2.2	<2.2	<2.2	<2.2	2/10
Lead, total	0.20	<0.04	0.06	0.10	0.5
Mercury, total	0.00155	0.00104	0.00123	0.00116	0.005/0.0005
Nickel, total	1.56	1.97	1.90	2.05	2
Selenium, total	0.35	0.33	0.86	0.47	5
Silver, total	<0.05	<0.05	<0.05	<0.05	0.5
Thallium, total	<0.02	<0.02	0.03	0.07	0.5
Zinc, total	1.52	1.71	3.50	7.39	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.: N/A

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
Benidine					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

Pollutant	Sample 1 (µg/L)*	Sample 2 (µg/L)*	Sample 3 (µg/L)*	Sample 4 (µg/L)*	MAL (µg/L)*
1,2-Dichloroethane					10
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
Ethylbenzene					10
Fluoride					500
Hexachlorobenzene					5
Hexachlorobutadiene					10
Hexachlorocyclopentadiene					10
Hexachloroethane					20
Methyl ethyl ketone					50
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
Toluene					10
1,1,1-Trichloroethane					10
1,1,2-Trichloroethane					10
Trichloroethene					10

Pollutant	Sample 1 (µg/L)*	Sample 2 (µg/L)*	Sample 3 (µg/L)*	Sample 4 (µg/L)*	MAL (µg/L)*
[Trichloroethylene]					
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.: N/ASamples 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
<i>E. coli</i> (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.: N/ASamples 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
Dieldrin					0.02

Pollutant	Sample 1 (µg/L)*	Sample 2 (µg/L)*	Sample 3 (µg/L)*	Sample 4 (µg/L)*	MAL (µg/L)*
Diuron					0.090
Endosulfan I ( <i>alpha</i> )					0.01
Endosulfan II ( <i>beta</i> )					0.02
Endosulfan sulfate					0.1
Endrin					0.02
Guthion [Azinphos methyl]					0.1
Heptachlor					0.01
Heptachlor epoxide					0.01
Hexachlorocyclohexane ( <i>alpha</i> )					0.05
Hexachlorocyclohexane ( <i>beta</i> )					0.05
Hexachlorocyclohexane ( <i>gamma</i> ) [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.: N/A

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	<input type="checkbox"/>	<input type="checkbox"/>					400
Color (PCU)	<input type="checkbox"/>	<input type="checkbox"/>					—
Nitrate-Nitrite (as N)	<input type="checkbox"/>	<input type="checkbox"/>					—
Sulfide (as S)	<input type="checkbox"/>	<input type="checkbox"/>					—
Sulfite (as SO <sub>3</sub> )	<input type="checkbox"/>	<input type="checkbox"/>					—
Surfactants	<input type="checkbox"/>	<input type="checkbox"/>					—
Boron, total	<input type="checkbox"/>	<input type="checkbox"/>					20
Cobalt, total	<input type="checkbox"/>	<input type="checkbox"/>					0.3
Iron, total	<input type="checkbox"/>	<input type="checkbox"/>					7
Magnesium, total	<input type="checkbox"/>	<input type="checkbox"/>					20
Manganese, total	<input type="checkbox"/>	<input type="checkbox"/>					0.5
Molybdenum, total	<input type="checkbox"/>	<input type="checkbox"/>					1
Tin, total	<input type="checkbox"/>	<input type="checkbox"/>					5
Titanium, total	<input type="checkbox"/>	<input type="checkbox"/>					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
<input type="checkbox"/> Adhesives and Sealants		<input type="checkbox"/> Yes	<input type="checkbox"/> Yes	<input type="checkbox"/> Yes	No
<input type="checkbox"/> Aluminum Forming	467	<input type="checkbox"/> Yes	<input type="checkbox"/> Yes	<input type="checkbox"/> Yes	No
<input type="checkbox"/> Auto and Other Laundries		<input type="checkbox"/> Yes	<input type="checkbox"/> Yes	<input type="checkbox"/> Yes	<input type="checkbox"/> Yes
<input type="checkbox"/> Battery Manufacturing	461	<input type="checkbox"/> Yes	No	<input type="checkbox"/> Yes	No
<input type="checkbox"/> Coal Mining	434	No	No	No	No
<input type="checkbox"/> Coil Coating	465	<input type="checkbox"/> Yes	<input type="checkbox"/> Yes	<input type="checkbox"/> Yes	No
<input type="checkbox"/> Copper Forming	468	<input type="checkbox"/> Yes	<input type="checkbox"/> Yes	<input type="checkbox"/> Yes	No
<input type="checkbox"/> Electric and Electronic Components	469	<input type="checkbox"/> Yes	<input type="checkbox"/> Yes	<input type="checkbox"/> Yes	<input type="checkbox"/> Yes
<input type="checkbox"/> Electroplating	413	<input type="checkbox"/> Yes	<input type="checkbox"/> Yes	<input type="checkbox"/> Yes	No
<input type="checkbox"/> Explosives Manufacturing	457	No	<input type="checkbox"/> Yes	<input type="checkbox"/> Yes	No
<input type="checkbox"/> Foundries		<input type="checkbox"/> Yes	<input type="checkbox"/> Yes	<input type="checkbox"/> Yes	No
<input type="checkbox"/> Gum and Wood Chemicals - Subparts A,B,C,E	454	<input type="checkbox"/> Yes	<input type="checkbox"/> Yes	No	No
<input type="checkbox"/> Gum and Wood Chemicals - Subparts D,F	454	<input type="checkbox"/> Yes	<input type="checkbox"/> Yes	<input type="checkbox"/> Yes	No
<input type="checkbox"/> Inorganic Chemicals Manufacturing	415	<input type="checkbox"/> Yes	<input type="checkbox"/> Yes	<input type="checkbox"/> Yes	No
<input type="checkbox"/> Iron and Steel Manufacturing	420	<input type="checkbox"/> Yes	<input type="checkbox"/> Yes	<input type="checkbox"/> Yes	No
<input type="checkbox"/> Leather Tanning and Finishing	425	<input type="checkbox"/> Yes	<input type="checkbox"/> Yes	<input type="checkbox"/> Yes	No
<input type="checkbox"/> Mechanical Products Manufacturing		<input type="checkbox"/> Yes	<input type="checkbox"/> Yes	<input type="checkbox"/> Yes	No
<input type="checkbox"/> Nonferrous Metals Manufacturing	421,471	<input type="checkbox"/> Yes	<input type="checkbox"/> Yes	<input type="checkbox"/> Yes	<input type="checkbox"/> Yes
<input type="checkbox"/> Oil and Gas Extraction - Subparts A, D, E, F, G, H	435	<input type="checkbox"/> Yes	<input type="checkbox"/> Yes	<input type="checkbox"/> Yes	No
<input type="checkbox"/> Ore Mining - Subpart B	440	No	<input type="checkbox"/> Yes	No	No
<input type="checkbox"/> Organic Chemicals Manufacturing	414	<input type="checkbox"/> Yes	<input type="checkbox"/> Yes	<input type="checkbox"/> Yes	<input type="checkbox"/> Yes
<input type="checkbox"/> Paint and Ink Formulation	446,447	<input type="checkbox"/> Yes	<input type="checkbox"/> Yes	<input type="checkbox"/> Yes	No
<input type="checkbox"/> Pesticides	455	<input type="checkbox"/> Yes	<input type="checkbox"/> Yes	<input type="checkbox"/> Yes	<input type="checkbox"/> Yes
<input type="checkbox"/> Petroleum Refining	419	<input type="checkbox"/> Yes	No	No	No
<input type="checkbox"/> Pharmaceutical Preparations	439	<input type="checkbox"/> Yes	<input type="checkbox"/> Yes	<input type="checkbox"/> Yes	No
<input type="checkbox"/> Photographic Equipment and Supplies	459	<input type="checkbox"/> Yes	<input type="checkbox"/> Yes	<input type="checkbox"/> Yes	No
<input type="checkbox"/> Plastic and Synthetic Materials Manufacturing	414	<input type="checkbox"/> Yes	<input type="checkbox"/> Yes	<input type="checkbox"/> Yes	<input type="checkbox"/> Yes
<input type="checkbox"/> Plastic Processing	463	<input type="checkbox"/> Yes	No	No	No
<input type="checkbox"/> Porcelain Enameling	466	No	No	No	No
<input type="checkbox"/> Printing and Publishing		<input type="checkbox"/> Yes	<input type="checkbox"/> Yes	<input type="checkbox"/> Yes	<input type="checkbox"/> Yes
<input type="checkbox"/> Pulp and Paperboard Mills - Subpart C	430	<input type="checkbox"/> *	<input type="checkbox"/> Yes	<input type="checkbox"/> *	<input type="checkbox"/> Yes
<input type="checkbox"/> Pulp and Paperboard Mills - Subparts F, K	430	<input type="checkbox"/> *	<input type="checkbox"/> Yes	<input type="checkbox"/> *	<input type="checkbox"/> *
<input type="checkbox"/> Pulp and Paperboard Mills - Subparts A, B, D, G, H	430	<input type="checkbox"/> Yes	<input type="checkbox"/> Yes	<input type="checkbox"/> *	<input type="checkbox"/> *
<input type="checkbox"/> Pulp and Paperboard Mills - Subparts I, J, L	430	<input type="checkbox"/> Yes	<input type="checkbox"/> Yes	<input type="checkbox"/> *	<input type="checkbox"/> Yes
<input type="checkbox"/> Pulp and Paperboard Mills - Subpart E	430	<input type="checkbox"/> Yes	<input type="checkbox"/> Yes	<input type="checkbox"/> Yes	<input type="checkbox"/> *
<input type="checkbox"/> Rubber Processing	428	<input type="checkbox"/> Yes	<input type="checkbox"/> Yes	<input type="checkbox"/> Yes	No
<input type="checkbox"/> Soap and Detergent Manufacturing	417	<input type="checkbox"/> Yes	<input type="checkbox"/> Yes	<input type="checkbox"/> Yes	No
<input checked="" type="checkbox"/> Steam Electric Power Plants	423	<input checked="" type="checkbox"/> Yes	<input checked="" type="checkbox"/> Yes	No	No
<input type="checkbox"/> Textile Mills (Not Subpart C)	410	<input type="checkbox"/> Yes	<input type="checkbox"/> Yes	<input type="checkbox"/> Yes	No
<input type="checkbox"/> Timber Products Processing	429	<input type="checkbox"/> Yes	<input type="checkbox"/> Yes	<input type="checkbox"/> Yes	<input type="checkbox"/> 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.: N/A**

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

Pollutant	Sample 1 (µg/L)*	Sample 2 (µg/L)*	Sample 3 (µg/L)*	Sample 4 (µg/L)*	MAL (µg/L)
1,2-Trans-dichloroethylene [1,2-Trans-dichloroethene]					10
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.: N/A

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.: N/A

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

Pollutant	Sample 1 (µg/L)*	Sample 2 (µg/L)*	Sample 3 (µg/L)*	Sample 4 (µg/L)*	MAI (µg/L)
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
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

Pollutant	Sample 1 (µg/L)*	Sample 2 (µg/L)*	Sample 3 (µg/L)*	Sample 4 (µg/L)*	MAL (µg/L)
Naphthalene					10
Nitrobenzene					10
N-Nitrosodimethylamine					50
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.: N/A

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

Pollutant	Sample 1 (µg/L)*	Sample 2 (µg/L)*	Sample 3 (µg/L)*	Sample 4 (µg/L)*	MAL (µg/L)
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: N/A

#### 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 (Ronnell) CASRN 299-84-3
- ☐ 2,4,5-trichlorophenol (TCP) CASRN 95-95-4
- ☐ hexachlorophene (HCP) CASRN 70-30-4
- ☒ None of the above

Description: N/A

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: N/A

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

Table 12 for Outfall No.: N/A

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

Compound	Toxicity Equivalent Factors	Wastewater Concentration (ppq)	Wastewater Toxicity Equivalents (ppq)	Sludge Concentration (ppt)	Sludge Toxicity Equivalents (ppt)	MAL (ppq)
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.: N/A

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

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): 5/7/2024-5/28/2024
- 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:** N/A

### 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.: 006

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)	<2.00	<2.00	<2.00	<2.00
CBOD (5-day)	<2.00	<2.00	<2.00	<2.00
Chemical oxygen demand	88.0	71.0	69.0	63.0
Total organic carbon	4.00	4.20	4.40	4.20
Dissolved oxygen	1.22	1.32	1.58	1.62
Ammonia nitrogen	0.018	<0.014	0.028	0.047
Total suspended solids	2.80	3.00	2.4	4.20
Nitrate nitrogen	<0.01	<0.01	<0.01	<0.01
Total organic nitrogen	0.16	0.20	0.36	0.23
Total phosphorus	<0.01	<0.01	<0.01	<0.01
Oil and grease	<1.54	<1.55	<1.53	<1.55

Pollutant	Sample 1 (mg/L)	Sample 2 (mg/L)	Sample 3 (mg/L)	Sample 4 (mg/L)
Total residual chlorine	0.01	0.01	0.00	0.00
Total dissolved solids	3350	3520	3310	3370
Sulfate	118	109	112	131
Chloride	1370	1470	1490	1540
Fluoride	0.692	0.621	0.619	0.588
Total alkalinity (mg/L as CaCO <sub>3</sub> )	324	326	330	328
Temperature (°F)	82.0	78.8	82.2	84.8
pH (standard units)	6.92	6.93	6.93	7.01

Table 2 for Outfall No.: **006**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	1.69	3.98	4.30	2.78	2.5
Antimony, total	<0.20	0.24	<0.20	<0.20	5
Arsenic, total	0.71	0.75	0.75	0.79	0.5
Barium, total	248	229	240	227	3
Beryllium, total	<0.02	<0.02	0.03	0.09	0.5
Cadmium, total	<0.05	<0.05	0.05	0.06	1
Chromium, total	0.31	0.69	0.98	0.97	3
Chromium, hexavalent	<0.5	<0.5	<0.5	<0.5	3
Chromium, trivalent	<0.5	0.7	1.0	1.0	N/A
Copper, total	0.64	1.32	0.91	0.68	2
Cyanide, available	<2.2	<2.2	<2.2	<2.2	2/10
Lead, total	0.04	<0.04	0.06	0.09	0.5
Mercury, total	0.00260	0.00316	0.00209	0.00169	0.005/0.0005
Nickel, total	6.83	7.02	6.71	6.26	2
Selenium, total	0.25	0.45	1.19	0.84	5
Silver, total	<0.05	<0.05	<0.05	0.08	0.5
Thallium, total	<0.02	<0.02	0.02	0.07	0.5
Zinc, total	2.01	2.55	5.12	2.68	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.: N/A

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
Benidine					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

Pollutant	Sample 1 (µg/L)*	Sample 2 (µg/L)*	Sample 3 (µg/L)*	Sample 4 (µg/L)*	MAL (µg/L)*
1,2-Dichloroethane					10
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
Ethylbenzene					10
Fluoride					500
Hexachlorobenzene					5
Hexachlorobutadiene					10
Hexachlorocyclopentadiene					10
Hexachloroethane					20
Methyl ethyl ketone					50
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
Toluene					10
1,1,1-Trichloroethane					10
1,1,2-Trichloroethane					10
Trichloroethene					10

Pollutant	Sample 1 (µg/L)*	Sample 2 (µg/L)*	Sample 3 (µg/L)*	Sample 4 (µg/L)*	MAL (µg/L)*
[Trichloroethylene]					
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.: N/ASamples 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
<i>E. coli</i> (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.: N/ASamples 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 [Fenprothrin]					—
Demeton					0.20
Diazinon					0.5/0.1
Dicofol [Kelthane]					1
Dieldrin					0.02

Pollutant	Sample 1 (µg/L)*	Sample 2 (µg/L)*	Sample 3 (µg/L)*	Sample 4 (µg/L)*	MAL (µg/L)*
Diuron					0.090
Endosulfan I ( <i>alpha</i> )					0.01
Endosulfan II ( <i>beta</i> )					0.02
Endosulfan sulfate					0.1
Endrin					0.02
Guthion [Azinphos methyl]					0.1
Heptachlor					0.01
Heptachlor epoxide					0.01
Hexachlorocyclohexane ( <i>alpha</i> )					0.05
Hexachlorocyclohexane ( <i>beta</i> )					0.05
Hexachlorocyclohexane ( <i>gamma</i> ) [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.: N/A

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	<input type="checkbox"/>	<input type="checkbox"/>					400
Color (PCU)	<input type="checkbox"/>	<input type="checkbox"/>					—
Nitrate-Nitrite (as N)	<input type="checkbox"/>	<input type="checkbox"/>					—
Sulfide (as S)	<input type="checkbox"/>	<input type="checkbox"/>					—
Sulfite (as SO <sub>3</sub> )	<input type="checkbox"/>	<input type="checkbox"/>					—
Surfactants	<input type="checkbox"/>	<input type="checkbox"/>					—
Boron, total	<input type="checkbox"/>	<input type="checkbox"/>					20
Cobalt, total	<input type="checkbox"/>	<input type="checkbox"/>					0.3
Iron, total	<input type="checkbox"/>	<input type="checkbox"/>					7
Magnesium, total	<input type="checkbox"/>	<input type="checkbox"/>					20
Manganese, total	<input type="checkbox"/>	<input type="checkbox"/>					0.5
Molybdenum, total	<input type="checkbox"/>	<input type="checkbox"/>					1
Tin, total	<input type="checkbox"/>	<input type="checkbox"/>					5
Titanium, total	<input type="checkbox"/>	<input type="checkbox"/>					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
<input type="checkbox"/> Adhesives and Sealants		<input type="checkbox"/> Yes	<input type="checkbox"/> Yes	<input type="checkbox"/> Yes	No
<input type="checkbox"/> Aluminum Forming	467	<input type="checkbox"/> Yes	<input type="checkbox"/> Yes	<input type="checkbox"/> Yes	No
<input type="checkbox"/> Auto and Other Laundries		<input type="checkbox"/> Yes	<input type="checkbox"/> Yes	<input type="checkbox"/> Yes	<input type="checkbox"/> Yes
<input type="checkbox"/> Battery Manufacturing	461	<input type="checkbox"/> Yes	No	<input type="checkbox"/> Yes	No
<input type="checkbox"/> Coal Mining	434	No	No	No	No
<input type="checkbox"/> Coil Coating	465	<input type="checkbox"/> Yes	<input type="checkbox"/> Yes	<input type="checkbox"/> Yes	No
<input type="checkbox"/> Copper Forming	468	<input type="checkbox"/> Yes	<input type="checkbox"/> Yes	<input type="checkbox"/> Yes	No
<input type="checkbox"/> Electric and Electronic Components	469	<input type="checkbox"/> Yes	<input type="checkbox"/> Yes	<input type="checkbox"/> Yes	<input type="checkbox"/> Yes
<input type="checkbox"/> Electroplating	413	<input type="checkbox"/> Yes	<input type="checkbox"/> Yes	<input type="checkbox"/> Yes	No
<input type="checkbox"/> Explosives Manufacturing	457	No	<input type="checkbox"/> Yes	<input type="checkbox"/> Yes	No
<input type="checkbox"/> Foundries		<input type="checkbox"/> Yes	<input type="checkbox"/> Yes	<input type="checkbox"/> Yes	No
<input type="checkbox"/> Gum and Wood Chemicals - Subparts A,B,C,E	454	<input type="checkbox"/> Yes	<input type="checkbox"/> Yes	No	No
<input type="checkbox"/> Gum and Wood Chemicals - Subparts D,F	454	<input type="checkbox"/> Yes	<input type="checkbox"/> Yes	<input type="checkbox"/> Yes	No
<input type="checkbox"/> Inorganic Chemicals Manufacturing	415	<input type="checkbox"/> Yes	<input type="checkbox"/> Yes	<input type="checkbox"/> Yes	No
<input type="checkbox"/> Iron and Steel Manufacturing	420	<input type="checkbox"/> Yes	<input type="checkbox"/> Yes	<input type="checkbox"/> Yes	No
<input type="checkbox"/> Leather Tanning and Finishing	425	<input type="checkbox"/> Yes	<input type="checkbox"/> Yes	<input type="checkbox"/> Yes	No
<input type="checkbox"/> Mechanical Products Manufacturing		<input type="checkbox"/> Yes	<input type="checkbox"/> Yes	<input type="checkbox"/> Yes	No
<input type="checkbox"/> Nonferrous Metals Manufacturing	421,471	<input type="checkbox"/> Yes	<input type="checkbox"/> Yes	<input type="checkbox"/> Yes	<input type="checkbox"/> Yes
<input type="checkbox"/> Oil and Gas Extraction - Subparts A, D, E, F, G, H	435	<input type="checkbox"/> Yes	<input type="checkbox"/> Yes	<input type="checkbox"/> Yes	No
<input type="checkbox"/> Ore Mining - Subpart B	440	No	<input type="checkbox"/> Yes	No	No
<input type="checkbox"/> Organic Chemicals Manufacturing	414	<input type="checkbox"/> Yes	<input type="checkbox"/> Yes	<input type="checkbox"/> Yes	<input type="checkbox"/> Yes
<input type="checkbox"/> Paint and Ink Formulation	446,447	<input type="checkbox"/> Yes	<input type="checkbox"/> Yes	<input type="checkbox"/> Yes	No
<input type="checkbox"/> Pesticides	455	<input type="checkbox"/> Yes	<input type="checkbox"/> Yes	<input type="checkbox"/> Yes	<input type="checkbox"/> Yes
<input type="checkbox"/> Petroleum Refining	419	<input type="checkbox"/> Yes	No	No	No
<input type="checkbox"/> Pharmaceutical Preparations	439	<input type="checkbox"/> Yes	<input type="checkbox"/> Yes	<input type="checkbox"/> Yes	No
<input type="checkbox"/> Photographic Equipment and Supplies	459	<input type="checkbox"/> Yes	<input type="checkbox"/> Yes	<input type="checkbox"/> Yes	No
<input type="checkbox"/> Plastic and Synthetic Materials Manufacturing	414	<input type="checkbox"/> Yes	<input type="checkbox"/> Yes	<input type="checkbox"/> Yes	<input type="checkbox"/> Yes
<input type="checkbox"/> Plastic Processing	463	<input type="checkbox"/> Yes	No	No	No
<input type="checkbox"/> Porcelain Enameling	466	No	No	No	No
<input type="checkbox"/> Printing and Publishing		<input type="checkbox"/> Yes	<input type="checkbox"/> Yes	<input type="checkbox"/> Yes	<input type="checkbox"/> Yes
<input type="checkbox"/> Pulp and Paperboard Mills - Subpart C	430	<input type="checkbox"/> *	<input type="checkbox"/> Yes	<input type="checkbox"/> *	<input type="checkbox"/> Yes
<input type="checkbox"/> Pulp and Paperboard Mills - Subparts F, K	430	<input type="checkbox"/> *	<input type="checkbox"/> Yes	<input type="checkbox"/> *	<input type="checkbox"/> *
<input type="checkbox"/> Pulp and Paperboard Mills - Subparts A, B, D, G, H	430	<input type="checkbox"/> Yes	<input type="checkbox"/> Yes	<input type="checkbox"/> *	<input type="checkbox"/> *
<input type="checkbox"/> Pulp and Paperboard Mills - Subparts I, J, L	430	<input type="checkbox"/> Yes	<input type="checkbox"/> Yes	<input type="checkbox"/> *	<input type="checkbox"/> Yes
<input type="checkbox"/> Pulp and Paperboard Mills - Subpart E	430	<input type="checkbox"/> Yes	<input type="checkbox"/> Yes	<input type="checkbox"/> Yes	<input type="checkbox"/> *
<input type="checkbox"/> Rubber Processing	428	<input type="checkbox"/> Yes	<input type="checkbox"/> Yes	<input type="checkbox"/> Yes	No
<input type="checkbox"/> Soap and Detergent Manufacturing	417	<input type="checkbox"/> Yes	<input type="checkbox"/> Yes	<input type="checkbox"/> Yes	No
<input checked="" type="checkbox"/> Steam Electric Power Plants	423	<input checked="" type="checkbox"/> Yes	<input checked="" type="checkbox"/> Yes	No	No
<input type="checkbox"/> Textile Mills (Not Subpart C)	410	<input type="checkbox"/> Yes	<input type="checkbox"/> Yes	<input type="checkbox"/> Yes	No
<input type="checkbox"/> Timber Products Processing	429	<input type="checkbox"/> Yes	<input type="checkbox"/> Yes	<input type="checkbox"/> Yes	<input type="checkbox"/> 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.: N/A**

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

Pollutant	Sample 1 (µg/L)*	Sample 2 (µg/L)*	Sample 3 (µg/L)*	Sample 4 (µg/L)*	MAL (µg/L)
1,2-Trans-dichloroethylene [1,2-Trans-dichloroethene]					10
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.: N/A

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.: N/A

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

Pollutant	Sample 1 (µg/L)*	Sample 2 (µg/L)*	Sample 3 (µg/L)*	Sample 4 (µg/L)*	MAI (µg/L)
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
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

Pollutant	Sample 1 (µg/L)*	Sample 2 (µg/L)*	Sample 3 (µg/L)*	Sample 4 (µg/L)*	MAL (µg/L)
Naphthalene					10
Nitrobenzene					10
N-Nitrosodimethylamine					50
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.: N/A

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

Pollutant	Sample 1 (µg/L)*	Sample 2 (µg/L)*	Sample 3 (µg/L)*	Sample 4 (µg/L)*	MAL (µg/L)
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: N/A

#### 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 (Ronnell) CASRN 299-84-3
- ☐ 2,4,5-trichlorophenol (TCP) CASRN 95-95-4
- ☐ hexachlorophene (HCP) CASRN 70-30-4
- ☒ None of the above

Description: N/A

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: N/A

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

Table 12 for Outfall No.: N/A

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



Compound	Toxicity Equivalent Factors	Wastewater Concentration (ppq)	Wastewater Toxicity Equivalents (ppq)	Sludge Concentration (ppt)	Sludge Toxicity Equivalents (ppt)	MAL (ppq)
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.: N/A

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

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: N/A
2. The distance and direction from the outfall to the drinking water supply intake: N/A

- 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: ~300 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: N/A

- 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: N/A

### 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: N/A
- b. Check the appropriate description of the immediate receiving waters:
- ☐ Lake or Pond
    - Surface area (acres): N/A
    - Average depth of the entire water body (feet): N/A
    - Average depth of water body within a 500-foot radius of the discharge point (feet): N/A
  - ☐ 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: N/A

- d. List the names of all perennial streams that join the receiving water within three miles downstream of the discharge point: N/A
- 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: N/A

f. General observations of the water body during normal dry weather conditions: N/A

Date and time of observation: N/A

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

☐ Yes ☐ No

If **yes**, describe how: N/A

## 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):

- |   |   |
|---|---|
| <input type="checkbox"/> oil field activities | <input type="checkbox"/> urban runoff               |
| <input type="checkbox"/> agricultural runoff  | <input type="checkbox"/> septic tanks               |
| <input type="checkbox"/> upstream discharges  | <input type="checkbox"/> other, specify: <u>N/A</u> |

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

- |   |   |
|---|---|
| <input type="checkbox"/> livestock watering     | <input type="checkbox"/> industrial water supply    |
| <input type="checkbox"/> non-contact recreation | <input type="checkbox"/> irrigation withdrawal      |
| <input type="checkbox"/> domestic water supply  | <input type="checkbox"/> navigation                 |
| <input type="checkbox"/> contact recreation     | <input type="checkbox"/> picnic/park activities     |
| <input type="checkbox"/> fishing                | <input type="checkbox"/> other, specify: <u>N/A</u> |

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 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: N/A
2. The distance and direction from the outfall to the drinking water supply intake: N/A

- 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: 12 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: N/A

- 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: N/A

### 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: Plant Area Drainage Ditch
- b. Check the appropriate description of the immediate receiving waters:
- ☐ Lake or Pond
    - Surface area (acres): Click to enter text.
    - Average depth of the entire water body (feet): Click to enter text.
    - Average depth of water body within a 500-foot radius of the discharge point (feet): Click to enter text.
  - ☒ 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: Colorado River Tidal in Segment No. 1401
- 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: Yes, the Plant Area Drainage Ditch drains into the Colorado River Tidal in Segment No. 1401

- f. General observations of the water body during normal dry weather conditions: The observation was performed under normal conditions. Clear, slow moving water was observed. The weather was mostly sunny and temperature was 95°F.

Date and time of observation: 7/3/2024 at 14:15

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

☐ Yes ☒ No

If **yes**, describe how: N/A

## 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):

<input type="checkbox"/> oil field activities	<input checked="" type="checkbox"/> urban runoff
<input type="checkbox"/> agricultural runoff	<input type="checkbox"/> septic tanks
<input checked="" type="checkbox"/> upstream discharges	<input type="checkbox"/> other, specify: <u>Click to enter text.</u>

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

<input type="checkbox"/> livestock watering	<input type="checkbox"/> industrial water supply
<input type="checkbox"/> non-contact recreation	<input type="checkbox"/> irrigation withdrawal
<input type="checkbox"/> domestic water supply	<input type="checkbox"/> navigation
<input type="checkbox"/> contact recreation	<input checked="" type="checkbox"/> picnic/park activities
<input type="checkbox"/> fishing	<input type="checkbox"/> other, specify: <u>Click to enter text.</u>

- 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 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: N/A
2. The distance and direction from the outfall to the drinking water supply intake: N/A

- 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: 60 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: N/A

- 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: N/A

### 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: West Branch of the Colorado River

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

☐ Lake or Pond

• Surface area (acres): Click to enter text.

• Average depth of the entire water body (feet): Click to enter text.

• Average depth of water body within a 500-foot radius of the discharge point (feet):  
Click to enter text.

☐ 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: N/A

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: N/A

- f. General observations of the water body during normal dry weather conditions: The observation was performed under normal conditions. Clear, slow moving water was observed. The weather was mostly sunny and temperature was 95°F.

Date and time of observation: 7/3/2024 at 14:32

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

☐ Yes ☒ No

If **yes**, describe how: N/A

## 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):

<input type="checkbox"/> oil field activities	<input checked="" type="checkbox"/> urban runoff
<input type="checkbox"/> agricultural runoff	<input type="checkbox"/> septic tanks
<input type="checkbox"/> upstream discharges	<input type="checkbox"/> other, specify: <u>Click to enter text.</u>

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

<input type="checkbox"/> livestock watering	<input type="checkbox"/> industrial water supply
<input type="checkbox"/> non-contact recreation	<input type="checkbox"/> irrigation withdrawal
<input type="checkbox"/> domestic water supply	<input type="checkbox"/> navigation
<input type="checkbox"/> contact recreation	<input checked="" type="checkbox"/> picnic/park activities
<input type="checkbox"/> fishing	<input type="checkbox"/> other, specify: <u>Click to enter text.</u>

- 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 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: N/A
2. The distance and direction from the outfall to the drinking water supply intake: N/A

- 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: 25 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: N/A

- 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: N/A

### 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: N/A

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

☐ Lake or Pond

- Surface area (acres): Click to enter text.
- Average depth of the entire water body (feet): Click to enter text.
- Average depth of water body within a 500-foot radius of the discharge point (feet): Click to enter text.

☒ 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: Colorado River Tidal in Segment No. 1401

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: Yes, the unnamed ditch drains into the Colorado River Tidal in Segment No. 1401.

- f. General observations of the water body during normal dry weather conditions: The observation was performed under normal conditions. Clear, slow moving water was observed. The weather was mostly sunny and temperature was 95°F.

Date and time of observation: 7/3/2024 at 14:27

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

☐ Yes ☒ No

If **yes**, describe how: N/A

## 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):

<input type="checkbox"/> oil field activities	<input type="checkbox"/> urban runoff
<input type="checkbox"/> agricultural runoff	<input type="checkbox"/> septic tanks
<input type="checkbox"/> upstream discharges	<input type="checkbox"/> other, specify: <u>Click to enter text.</u>

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

<input type="checkbox"/> livestock watering	<input type="checkbox"/> industrial water supply
<input type="checkbox"/> non-contact recreation	<input type="checkbox"/> irrigation withdrawal
<input type="checkbox"/> domestic water supply	<input type="checkbox"/> navigation
<input type="checkbox"/> contact recreation	<input checked="" type="checkbox"/> picnic/park activities
<input type="checkbox"/> fishing	<input type="checkbox"/> other, specify: <u>Click to enter text.</u>

- 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 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: N/A
2. The distance and direction from the outfall to the drinking water supply intake: N/A

- 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: 20 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: N/A

- 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: N/A

### 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: East Fork Little Robbins Slough

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

☐ Lake or Pond

• Surface area (acres): Click to enter text.

• Average depth of the entire water body (feet): Click to enter text.

• Average depth of water body within a 500-foot radius of the discharge point (feet):  
Click to enter text.

☐ 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: N/A

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: N/A

- f. General observations of the water body during normal dry weather conditions: The observation was performed under normal conditions. Clear, slow moving water was observed. The weather was mostly sunny and temperature was 95°F.

Date and time of observation: 7/3/2024 at 14:44

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

☐ Yes ☒ No

If **yes**, describe how: N/A

## 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):

<input type="checkbox"/> oil field activities	<input type="checkbox"/> urban runoff
<input type="checkbox"/> agricultural runoff	<input type="checkbox"/> septic tanks
<input type="checkbox"/> upstream discharges	<input type="checkbox"/> other, specify: <u>Click to enter text.</u>

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

<input type="checkbox"/> livestock watering	<input type="checkbox"/> industrial water supply
<input type="checkbox"/> non-contact recreation	<input type="checkbox"/> irrigation withdrawal
<input type="checkbox"/> domestic water supply	<input type="checkbox"/> navigation
<input type="checkbox"/> contact recreation	<input checked="" type="checkbox"/> picnic/park activities
<input type="checkbox"/> fishing	<input type="checkbox"/> other, specify: <u>Click to enter text.</u>

- 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 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: N/A
2. The distance and direction from the outfall to the drinking water supply intake: N/A

- 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: 30 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: N/A

- 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: N/A

### 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: Little Robbins Slough
- b. Check the appropriate description of the immediate receiving waters:
- ☐ Lake or Pond
    - Surface area (acres): Click to enter text.
    - Average depth of the entire water body (feet): Click to enter text.
    - Average depth of water body within a 500-foot radius of the discharge point (feet): Click to enter text.
  - ☐ 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: N/A
- 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: N/A

- f. General observations of the water body during normal dry weather conditions: The observation was performed under normal conditions. Clear, slow moving water was observed. The weather was mostly sunny and temperature was 95°F.

Date and time of observation: 7/3/2024 at 14:48

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

☐ Yes ☒ No

If **yes**, describe how: N/A

## 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):

<input type="checkbox"/> oil field activities	<input type="checkbox"/> urban runoff
<input type="checkbox"/> agricultural runoff	<input type="checkbox"/> septic tanks
<input type="checkbox"/> upstream discharges	<input type="checkbox"/> other, specify: <u>Click to enter text.</u>

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

<input type="checkbox"/> livestock watering	<input type="checkbox"/> industrial water supply
<input type="checkbox"/> non-contact recreation	<input type="checkbox"/> irrigation withdrawal
<input type="checkbox"/> domestic water supply	<input type="checkbox"/> navigation
<input type="checkbox"/> contact recreation	<input checked="" type="checkbox"/> picnic/park activities
<input type="checkbox"/> fishing	<input type="checkbox"/> other, specify: <u>Click to enter text.</u>

- 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 5.0: SEWAGE SLUDGE MANAGEMENT AND DISPOSAL

The following information **is required** for all TPDES permit applications that meet the conditions as outlined in Technical Report 1.0, Item 7.

### Item 1. Sewage Sludge Solids Management Plan (Instructions, Page 84)

a. Is this a new permit application or an amendment permit application?

☐ Yes ☒ No

b. Does or will the facility discharge in the Lake Houston watershed?

☐ Yes ☒ No

If **yes** to either Item 1.a or 1.b, attach a solids management plan. **Attachment:** N/A

### Item 2. Sewage Sludge Management and Disposal (Instructions, Page 84)

a. Check the box next to the sludge disposal method(s) authorized under the facility's existing permit (check all that apply).

- ☒ Permitted landfill
- ☐ Marketing and distribution by the permittee, attach Form TCEQ-00551
- ☐ Registered land application site, attach Form TCEQ-00565
- ☐ Processed by the permittee, attach Form TCEQ-00744
- ☐ Surface disposal site (sludge monofill), attach Form TCEQ-00744
- ☐ Transported to another WWTP
- ☐ Beneficial land application, attach Form TCEQ-10451
- ☐ Incineration, attach Form TCEQ-00744

Based on the selection(s) made above, complete and attach the required TCEQ forms as directed. Failure to submit the required TCEQ form will result in delays in processing the application

**Attachment:** N/A

b. Provide the following information for each disposal site:

Disposal site name: Blue Ridge Landfill

TCEQ Permit/Registration Number: TXR000084592

County where disposal site is located: Fort Bend County

c. Method of sewage sludge transportation:

☒ truck ☐ train ☐ pipe ☐ other: [Click to enter text.](#)

TCEQ Hauler Registration Number: 85812

d. Sludge is transported as a:

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

e. Purpose of land application: ☐ reclamation ☐ soil conditioning ☒ N/A

f. If sewage sludge is transported to another WWTP for treatment, attach a written statement or copy of contractual agreements confirming that the WWTP identified above will accept and be responsible for the sludge from this facility for the life of the permit (at least 5 years).

Attachment: N/A

### Item 3. Authorization for Sewage Sludge Disposal (Instructions, Page 85)

If this is a new or major amendment application which requests authorization of a new sewage sludge disposal method, check the new sewage disposal method(s) requested for authorization (check all that apply):

- ☐ Marketing and distribution by the permittee, attach Form TCEQ-00551
- ☐ Processed by the permittee, attach Form TCEQ-00744
- ☐ Surface disposal site (sludge monofill), attach Form TCEQ-00744
- ☐ Beneficial land application, attach Form TCEQ-10451
- ☐ Incineration, attach Form TCEQ-00744

Based on the selection(s) made above, complete and attach any required TCEQ forms, as directed. Failure to submit the required TCEQ form will result in delays in processing the application.

Attachment: N/A

**NOTE:** New authorization for beneficial land application, incineration, processing, or disposal in the TPDES permit or TLAP **requires a major amendment to the permit**. New authorization for composting may require a major amendment to the permit. See the instructions to determine if a major amendment is required or if authorization for composting can be added through the renewal process.

# INDUSTRIAL WASTEWATER PERMIT APPLICATION

## WORKSHEET 11.0: COOLING WATER SYSTEM INFORMATION

This worksheet is **required** for all TPDES permit applications that meet the conditions outlined in Technical Report 1.0, Item 12.

### Item 1. Cooling Water System Data (Instructions, Page 104)

a. Complete the following table with information regarding the cooling water system.

**Cooling Water System Data**

Parameter	Volume (include units)
Total DIF	387.8 MGD
Total AIF	92.4 MGD
Intake Flow Use(s) (%)	
Contact cooling	
Non-contact cooling	100%
Process Wastewater	
Other	

b. Attach the following information:

1. A narrative description of the design and annual operation of the facility's cooling water system and its relationship to the CWIS(s).
2. A scaled map depicting the location of each CWIS, impoundment, intake pipe, and canals, pipes, or waterways used to convey cooling water to, or within, the cooling water system. Provide the latitude and longitude for each CWIS and any intake pipe(s) on the map. Indicate the position of the intake pipe within the water column.
3. A description of water reuse activities, if applicable, reductions in total water withdrawals, if applicable, and the proportion of the source waterbody withdrawn (on a monthly basis).
4. Design and engineering calculations prepared by a qualified professional and data to support the information provided in above item a.
5. Previous year (a minimum of 12 months) of AIF data.
6. A narrative description of existing or proposed impingement and entrainment technologies or operation measures and a summary of their performance, including, but not limited to, reductions in impingement mortality and entrainment due to intake location and reductions in total water withdrawals and usage.

**Attachment:** F – 316(b) Supporting Information



## Item 2. Cooling Water Intake Structure(s) Data (Instructions, Page 105)

- a. Complete the following table with information regarding each cooling water intake structure (this includes primary and make-up CWIS(s)).

**Cooling Water Intake Structure(s) Data**

CWIS ID	RMPF	Reservoir		
DIF (include units)	387.8 MGD	1,367 MGD		
AIF (include units)	92.4 MGD	1,365 MGD		
Intake Flow Use(s) (%)				
Contact cooling				
Non-contact cooling	100%	100%		
Process Wastewater				
Other				
Latitude (decimal degrees)	28.774436	28.792247		
Longitude (decimal degrees)	-95.997733	-96.050500		

- b. Attach the following information regarding the CWIS(s):
1. A narrative description of the configuration of each CWIS, annual and daily operation, including any seasonal changes, and where it is located in the water body and in the water column.
  2. Engineering calculations for each CWIS.

**Attachment:** F – 316(b) Supporting Information

## Item 3. Source Water Physical Data (Instructions, Page 105)

- a. Complete the following table with information regarding the CWIS(s) source waterbody (this includes primary and make-up CWIS(s)).

**Source Waterbody Data**

CWIS ID	RMPF	Reservoir		
Source Waterbody	Colorado River	Colorado River		
Mean Annual Flow	1,711 MGD	1,711 MGD		
Source	<a href="https://waterdata.usgs.gov/nwis/inventory?agency_code=USGS&amp;site_no=08162500">https://waterdata.usgs.gov/nwis/inventory?agency_code=USGS&amp;site_no=08162500</a>			

- b. Attach the following information regarding the source waterbody.
1. A narrative description of the source water for each CWIS, including areal dimensions, depths, salinity and temperature regimes, and other documentation that supports this

determination of the water body type where each cooling water intake structure is located.

2. A narrative description of the source waterbody's hydrological and geomorphological features.
3. Scaled drawings showing the physical configuration of all source water bodies used by the facility, including the source waterbody's hydrological and geomorphological features. **NOTE:** The source waterbody's hydrological and geomorphological features may be included on the map submitted for item 1.b.ii of this worksheet.
4. A description of the methods used to conduct any physical studies to determine the intake's area of influence within the waterbody and the results of such studies.

**Attachment:** F – 316(b) Supporting Information

## Item 4. Operational Status (Instructions, Page 106)

- a. Is this application for a power production or steam generation facility?

☒ Yes      ☐ No

If **no**, proceed to Item 4.b. If **yes**, provide the following information as an attachment:

1. Describe the operating status of each individual unit, including age, capacity utilization rate (or equivalent) for the previous five years (a minimum of 60 months), and any seasonal changes in operation.
2. Describe any extended or unusual outages or other factors which significantly affect current data for flow, impingement, entrainment.
3. Identify any operating unit with a capacity utilization rate of less than 8 percent averaged over a contiguous period of two years (a minimum of 24 months).
4. Describe any major upgrades completed within the last 15 years, including but not limited to boiler replacement, condenser replacement, turbine replacement, or changes of fuel type.

**Attachment:** F – 316(b) Supporting Information

- b. Process Units

1. Is this application for a facility which has process units that use cooling water (other than for power production or steam generation)?

☐ Yes      ☒ No

If **no**, proceed to Item 4.c. If **yes**, continue.

2. Does the facility use or intend to use reductions in flow or changes in operations to meet the requirements of *40 CFR § 125.94(c)*?

☐ Yes      ☐ No

If **no**, proceed to Item 4.c. If **yes**, attach descriptions of the following information:

- Individual production processes and product lines
- The operating status, including age of each line and seasonal operation

- Any extended or unusual outages that significantly affect current data for flow, impingement, entrainment, or other factors
- Any major upgrades completed within the last 15 years and plans or schedules for decommissioning or replacement of process units or production processes and product lines.

**Attachment:** N/A

c. Is this an application for a nuclear power production facility?

☒ Yes      ☐ No

If **no**, proceed to Item 4.d. If **yes**, attach a description of completed, approved, or scheduled upgrades and the Nuclear Regulatory Commission relicensing status for each unit at the facility.

**Attachment:** F – 316(b) Supporting Information

d. Is this an application for a manufacturing facility?

☐ Yes      ☒ No

If **no**, proceed to Worksheet 11.1. If **yes**, attach descriptions of current and future production schedules and any plans or schedules for any new units planned within the next five years (a minimum of 60 mos)

**Attachment:** N/A

# INDUSTRIAL WASTEWATER PERMIT APPLICATION

## WORKSHEET 11.1: IMPINGEMENT MORTALITY

This worksheet is **required** for all TPDES permit applications that meet the conditions outlined in Technical Report 1.0, Item 12. Complete one copy of this worksheet for each individual CWIS the facility uses or proposes to use.

CWIS ID: RMPE

### Item 1. Impingement Compliance Technology Selection (Instructions, Page 107)

Check the box next to the method of compliance for the Impingement Mortality Standard selected by the facility.

- ☒ Closed-cycle recirculating system (CCRS) [40 CFR § 125.94(c)(1)]
- ☐ 0.5 ft/s Through-Screen Design Velocity [40 CFR § 125.94(c)(2)] – Proceed to Worksheet 11.2
- ☐ 0.5 ft/s Through Screen Actual Velocity [40 CFR § 125.94(c)(3)]
- ☐ Existing offshore velocity cap [40 CFR § 125.94(c)(4)] – Proceed to Worksheet 11.2
- ☐ Modified traveling screens [40 CFR § 125.94(c)(5)]
- ☐ System of technologies [40 CFR § 125.94(c)(6)]
- ☐ Impingement mortality performance standard [40 CFR § 125.94(c)(7)]
- ☐ De minimis rate of impingement [40 CFR § 125.94(c)(11)]
- ☐ Low capacity utilization power-generation facilities [40 CFR § 125.94(c)(12)]

If 0.5 ft/s Through-Screen Design Velocity [40 CFR § 125.94(c)(2)] or existing offshore velocity cap [40 CFR § 125.94(c)(4)] was selected, proceed to Worksheet 11.2. Otherwise, continue to Item 2.

### Item 2. Impingement Compliance Technology Information (Instructions, Page 107)

Complete the following sections based on the selection made for item 1 above.

a. CCRS [40 CFR § 125.94(c)(1)]

- ☒ Check this box to confirm the CWS meets the definition of CCRS located at 40 CFR § 125.91(c) and provide a response to the following questions.

1. Does the facility use or propose to use a CWIS to replenish water losses to the CWS?

- ☒ Yes      ☐ No

If **no**, proceed to item a.2. If **yes**, provide the following information as an attachment and continue.

- CWIS ID
- 12 months of intake flow data for any CWIS used for make-up intake flows to replenish cooling water losses, excluding intakes for losses due to blowdown, drift, or evaporation.

- A narrative description of any physical or operational measures taken to minimize make-up withdraws.

**Attachment:** F – 316(b) Supporting Information

**NOTE:** Do not complete a separate Worksheet 11.1 for a make-up CWIS.

2. Does the facility use or propose to use cooling towers?

☐ Yes      ☒ No

If **no**, proceed to Worksheet 11.2. If **yes**, provide the following information and proceed to Worksheet 11.2.

- Average number of cycles of concentration (COCs) prior to blowdown:

**Average COCs Prior to Blowdown**

Cooling Tower ID				
COCs	N/A			

- Attach COC monitoring data for each cooling tower from the previous year (a minimum of 12 months): N/A
- Maximum number of COCs each cooling tower can accomplish based on design of the system.

**Calculated COCs Prior to Blowdown**

Cooling Tower ID				
COCs	N/A			

- Describe conditions that may limit the number of COCs prior to blowdown, if any, including but not limited to permit conditions: N/A

b. 0.5 ft/s Through Screen Actual Velocity [40 CFR § 125.94(c)(3)]

Provide daily intake flow measurement monitoring data from the previous year (a minimum of 12 months) as an attachment and proceed to Worksheet 11.2.

**Attachment:** N/A

c. Modified traveling screens [40 CFR § 125.94(c)(5)]

Provide the following information as an attachment and proceed to Worksheet 11.2.

1. A description of the modified traveling screens and associated equipment.
2. A site-specific impingement technology performance optimization study that includes a narrative description of the biological data collection methods
3. Biological sampling data from the previous two years (a minimum of 24 months).

**Attachment:** N/A

d. System of technologies [40 CFR § 125.94(c)(6)] or impingement mortality performance standard [40 CFR § 125.94(c)(7)]

Provide the following information as an attachment and proceed to Worksheet 11.2.

1. A description of the system of technologies used or proposed for use by the facility to

achieve compliance with the impingement mortality standard.

2. A site-specific impingement technology performance optimization study that includes a narrative description of the biological data collection methods.
3. Biological sampling data from the previous two years (a minimum of 24 months).

**Attachment:** N/A

- e. De minimis rate of impingement [*40 CFR § 125.94(c)(11)*]

Provide the following information and proceed to Worksheet 11.2.

1. Attach monitoring data from the previous year (a minimum of 12 months) of intake flow measured at a frequency of 1/day on days of operation.

**Attachment:** N/A

2. If the rate of impingement caused by the CWIS is extremely low (at an organism or age-one equivalent count), attach supplemental information to Worksheet 11.0, item 1.b.6. to support this determination.

**Attachment:** N/A

- f. Low capacity utilization power-generation facilities [*40 CFR § 125.94(c)(12)*]

Attach monthly utilization data from the previous 2 years (a minimum of 24 months) for each operating unit and proceed to Worksheet 11.2.

**Attachment:** N/A

# INDUSTRIAL WASTEWATER PERMIT APPLICATION

## WORKSHEET 11.2: SOURCE WATER BIOLOGICAL DATA

This worksheet is **required** for all TPDES permit applications that **meet the conditions outlined in Technical Report 1.0, Item 12**. Complete one copy of this worksheet for **each** source waterbody of a CWIS for which a facility has selected an Impingement Mortality Technology Option described at *40 CFR §§ 125.94(c)(1)-(7)*.

Name of source waterbody: Colorado River

### Item 1. Species Management (Instructions, Page 109)

- a. The facility has obtained an incidental take permit for its cooling water intake structure(s) from the USFWS or the NMFS.

☐ Yes ☒ No

If yes, attach any information submitted in order to obtain that permit, which may be used to supplement the permit application information requirements of paragraph *40 CFR § 125.95(f)*.

**Attachment:** N/A

- b. Is the facility requesting a waiver from application requirements at *40 CFR § 122.21(r)(4)* in accordance with *40 CFR § 125.95* for any CWIS(s) that withdraw from a man-made reservoir that is stocked and managed by a state or federal natural resources agency or the equivalent?

☐ Yes ☒ No

If **yes**, attach a copy of the most recent managed fisheries report to TPWD, or equivalent.

**Attachment:** N/A

- c. There are no federally listed threatened or endangered species or critical habitat designations within the source water body.

☐ True ☒ False

### Item 2. Source Water Biological Data (Instructions, Page 109)

New Facilities (Phase I, Track I and II)

- Provide responses to all items in this section and stop.

Existing Facilities (Phase II)

- If the answer to **1.b.** above was **no**, provide responses to all items in this section and proceed to Worksheet 11.3.
- If the answer to **1.b.** was **yes** and **1.c.** was **true**, do not complete any items in this section and proceed to Worksheet 11.3.
- If the answer to **1.b.** was **yes** and **1.c.** was **false**, attach a response for any item in this section that is not contained within the most recent TPWD, or equivalent and proceed to Worksheet 11.3.

**Attachment:** F – 316(b) Supporting Information

- a. A list of the data requested at *40 CFR § 122.21(r)(4)(ii)* through (vi) that are not available, and efforts made to identify sources of the data.
- b. Provide a list of species (or relevant taxa) in the vicinity of the CWIS and identify the following information regarding each species listed.
  - all life stages and their relative abundance,
  - identification of all species and life stages that would be most susceptible to impingement and entrainment,
  - forage base,
  - significance to commercial fisheries,
  - significance to recreational fisheries,
  - primary period of reproduction,
  - larval recruitment, and
  - period of peak abundance for relevant taxa.
- c. Data representative of the seasonal and daily activities (e.g., feeding and water column migration) of biological organisms in the vicinity of the CWIS(s).
- d. Identify all threatened, endangered, and other protected species that might be susceptible to impingement and entrainment at the CWIS(s).
- e. Documentation of any public participation or consultation with federal or state agencies undertaken.

The following is required for existing facilities only. Include the following information with the above listed attachment.

- f. Identify any protective measures and stabilization activities that have been implemented and provide a description of how these measures and activities affected the baseline water condition in the vicinity of the intake.
- g. A list of fragile species, as defined at *40 CFR § 125.92(m)*, at the facility. The applicant need only identify those species not already identified as fragile at *40 CFR § 125.92(m)*.

**NOTE:** New units at an existing facility are not required to resubmit this information if the cooling water withdrawals for the operation of the new unit are from an existing intake.



# INDUSTRIAL WASTEWATER PERMIT APPLICATION

## WORKSHEET 11.3: ENTRAINMENT

This worksheet is **required** for all TPDES permit applications that **meet the conditions outlined in Technical Report 1.0, Item 12**. Complete one copy of this worksheet for **each** individual CWIS the facility uses or proposes to use.

CWIS ID: RMPE

### Item 1. Applicability (Instructions, Page 111)

Is the AIF of the CWIS identified above greater than, or equal to, 125 MGD?

☐ Yes ☒ No

- If **no** or the facility has selected **CCRS** [40 CFR § 125.94(c)(1)] for the impingement mortality compliance method, complete Item 2 and stop here.
- If **yes** and the facility is **seeking a waiver** from application requirements in accordance with 40 CFR § 125.95 for any CWIS(s) that withdraw from a man-made reservoir that is stocked and managed by a state or federal natural resources agency or the equivalent, complete item 2 and stop.
- If **yes** and the facility is **not seeking a waiver** from application requirements in accordance with 40 CFR § 125.95, complete item 2 and provide any required and completed studies listed in item 3. For any required studies in item 3 that are not complete, provide a detailed explanation for the delay and an anticipated schedule for completion and submittal.

### Item 2. Existing Entrainment Performance Studies (Instructions, Page 111)

Attach any previously conducted studies or studies obtained from other facilities addressing technology efficacy, through-facility entrainment survival, and other entrainment studies.

**Attachment:** F – 316(b) Supporting Information

### Item 3. Facility Entrainment Performance Studies (Instructions, Page 111)

- Attach an entrainment characterization study, as described at 40 CFR § 122.21(r)(9): N/A
- Attach a comprehensive feasibility study, as described as 40 CFR § 122.21(r)(10): N/A
- Attach a benefits valuation study, as described as 40 CFR § 122.21(r)(11): N/A
- Attach a non-water quality environmental and other impacts study, as described as 40 CFR § 122.21(r)(12): N/A
- Attach a peer review analysis, as described as 40 CFR § 122.21(r)(13): N/A

**ATTACHMENT F**

**316(b) SUPPORTING INFORMATION**

**Attachment F**  
**Worksheet 11.0: Cooling Water System Data**

**Item 1: Cooling Water System Data – Section 122.21(r)5**

b. Provide the following information as an attachment.

1. *A narrative description of the design and annual operation of the facility's cooling water system and its relationship to the CWIS(s).*

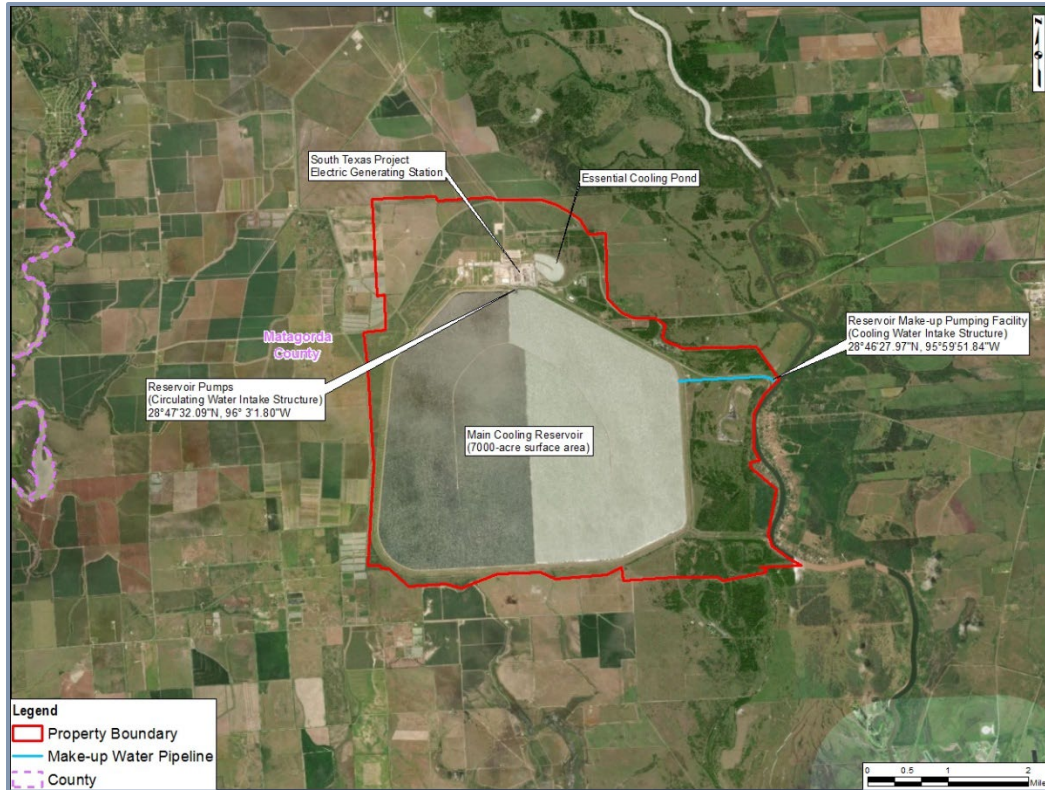
South Texas Project Electric Generating Station (STPEGS) is a nuclear-powered steam electric plant with two generating units (Units 1 and 2) operating as a member of the Electric Reliability Council of Texas (ERCOT) supplying power to the grid. For cooling purposes, STPEGS employs a closed-cycle recirculating cooling system utilizing a 7,000-acre main cooling reservoir (MCR) as an impoundment for the closed-cycle recirculating system. Under current operating conditions, new water to the MCR is provided by rainfall and periodic make-up water diverted from the Colorado River.

The cooling water intake structure located on the Colorado River is referred to as the Reservoir Makeup Pumping Facility (RMPF). The RMPF Cooling Water Intake Structure operates as a make-up water intake providing make-up water from the Colorado River, a water of the U.S., to the MCR, which is not a water of the U.S. The RMPF Cooling Water Intake Structure is operated intermittently based on reservoir level and river flow. Conditions of river water diversions are limited to 55% of the river flow and only when river flow exceeds 300 cubic feet per second (cfs). While the design intake flow (DIF) (387.79 million gallons per day [MGD]) could result in the removal of 22.6% of the mean annual river flow (2,648 cfs-1,711 MGD), the actual river flow withdrawal over the past 5 years (2019-2023), based on the 5-year AIF of 92.4 MGD, resulted in a 5.4% diversion. From the reported 5-year period (2019-2023), STPEGS' annual average capacity factor was 99.1% for Unit 1, 99.2% for Unit 2 with a combined 99.12% station utilization.

2. *A scaled map depicting the location of each CWIS, impoundment, intake pipe, and canals, pipes, or waterways used to convey cooling water to, or within, the cooling water system. Provide the latitude and longitude for each CWIS and any intake pipe(s) on the map. Indicate the position of the intake pipe within the water column.*

Figure 1 shows the location of the RMPF Cooling Water Intake Structure on the Colorado River, the make-up water pipeline from the RMPF Cooling Water Intake Structure to the Main Cooling Reservoir, the Reservoir Circulating Water Intake Structure in the Main Cooling Reservoir, and the Essential Cooling Pond. Additional details are provided in the engineering drawings in Appendix 1.

**Attachment F**  
**Worksheet 11.0: Cooling Water System Data**



**FIGURE 1: Location of the cooling water system components for STPEGS**

3. *A description of water reuse activities, if applicable, reductions in total water withdrawals, if applicable, and the proportion of the source waterbody withdrawn (on a monthly basis).*

Water discharges from internal outfalls 101, 201, 401, and 601 are discharged into the Main Cooling Reservoir for reuse in accordance with the wastewater permit. The Reservoir Makeup Pumping Facility (RMPF) Cooling Water Intake Structure pumps are operated intermittently based on reservoir level, river flow, and the operability of the reservoir pumps. The 7,000-acre MCR is a closed-cycle recirculating system recycling heated water for cooling water. The level of water in the MCR is maintained at a pool level of 47 feet above mean sea level. The make-up water withdrawals required to maintain the pool level amount to only 5.4% of the mean flow from the Colorado River. The monthly proportions are shown in the AIF table below.

4. *Design and engineering calculations prepared by a qualified professional and data to support the information provided in above item a.*

The RMPF Cooling Water Intake Structure supports a DIF of 387.79 MGD based on four, single speed, line-drive turbine pumps operating with a pump rate of 26,930 gallons per minute (gpm) per each of two small-volume pumps and a pump rate of 107,720 gpm per each of two large-volume pumps over a 24-hour period. The following provides the calculation for estimating the DIF:  $26,930 + 107,720 \times 2 \text{ pumps} \times 60 \text{ min} \times 24 \text{ hours} / 1,000,000 = \text{DIF}$ .

Based upon the facility's reported diversion from the Colorado River for 5 years, 2019-2023, the annual volume from all four pumps was  $24,028.43 + 12,794.68 + 79,715.4 + 9,955.29 + 42,127.47$  equaling

**Attachment F**  
**Worksheet 11.0: Cooling Water System Data**

168,631 million gallons over the five-year period and an average of 33,726.26 per year respectively. The daily actual intake flow (AIF) computed on 365 days/year for each year equates to 65.83 + 30.05 + 218.40 + 27.27 + 115.45 MGD with a five-year average of 92.40 MGD. This equates to 23% ( $92.4 \div 387.792$ ) of the DIF volume or a 76.1% reduction in actual usage from the DIF.

5. *Previous year (a minimum of 12 months) of AIF data.*

Actual Intake Flow (MGD) 2023-2024												
Day	Jul	Aug	Sep	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun
1	0.0	0.0	0.0	0.0	0.0	0.0	0.0	1189.9	238.1	0.0	0.0	0.0
2	0.0	0.0	0.0	0.0	126.1	0.0	0.0	1189.9	238.1	0.0	0.0	0.0
3	0.0	0.0	0.0	0.0	93.7	0.0	0.0	1189.9	238.1	0.0	0.0	0.0
4	0.0	0.0	0.0	0.0	0.0	0.0	0.0	1189.9	106.0	0.0	0.0	0.0
5	0.0	0.0	0.0	0.0	0.0	0.0	0.0	1189.9	0.0	0.0	0.0	0.0
6	0.0	0.0	0.0	0.0	0.0	0.0	237.6	942.0	0.0	0.0	0.0	0.0
7	0.0	0.0	0.0	0.0	0.0	0.0	507.4	600.9	0.0	0.0	309.0	0.0
8	0.0	0.0	0.0	0.0	0.0	0.0	413.3	1189.9	0.0	0.0	1189.9	0.0
9	0.0	0.0	0.0	0.0	0.0	0.0	520.9	1189.9	0.0	0.0	1146.9	0.0
10	0.0	0.0	0.0	0.0	0.0	0.0	74.6	1189.9	0.0	0.0	1083.8	0.0
11	0.0	0.0	0.0	0.0	0.0	0.0	0.0	1189.9	0.0	0.0	1151.2	42.8
12	0.0	0.0	0.0	0.0	0.0	0.0	0.0	1189.9	0.0	105.0	582.0	69.3
13	0.0	0.0	0.0	0.0	0.0	0.0	0.0	910.3	0.0	288.8	0.0	0.0
14	0.0	0.0	0.0	0.0	0.0	0.0	0.0	1109.9	0.0	605.0	0.0	0.0
15	0.0	0.0	0.0	0.0	0.0	0.0	0.0	1189.9	0.0	668.3	0.0	0.0
16	0.0	0.0	0.0	0.0	0.0	0.0	0.0	1189.9	0.0	7.9	0.0	0.0
17	0.0	0.0	0.0	0.0	0.0	0.0	0.0	1189.9	0.0	421.6	0.0	0.0
18	0.0	0.0	0.0	0.0	0.0	0.0	0.0	731.8	0.0	300.1	0.0	0.0
19	0.0	0.0	0.0	0.0	0.0	0.0	0.0	150.5	0.0	30.6	0.0	0.0
20	0.0	0.0	0.0	0.0	0.0	0.0	0.0	93.9	0.0	0.0	0.0	0.0
21	0.0	0.0	0.0	0.0	0.0	0.0	0.0	365.3	0.0	0.0	7.4	0.0
22	0.0	0.0	0.0	0.0	0.0	0.0	0.0	238.1	92.5	0.0	963.9	0.0
23	0.0	0.0	0.0	0.0	0.0	0.0	47.9	238.1	1189.9	0.0	731.5	0.0
24	0.0	0.0	0.0	0.0	0.0	0.0	714.0	238.1	1189.9	0.0	238.1	0.0
25	0.0	0.0	0.0	0.0	0.0	0.0	1170.1	238.1	1189.9	0.0	184.5	0.0
26	0.0	0.0	0.0	0.0	0.0	0.0	1189.9	196.5	1155.9	256.1	91.3	0.0
27	0.0	0.0	0.0	0.0	0.0	0.0	1189.9	189.5	453.2	429.7	0.0	0.0
28	0.0	0.0	0.0	0.0	0.0	0.0	1189.9	238.1	101.2	389.3	0.0	0.0
29	0.0	0.0	0.0	0.0	0.0	0.0	1189.9	160.6	0.0	381.3	0.0	0.0
30	0.0	0.0	0.0	0.0	0.0	0.0	1189.9	0.0	0.0	100.7	0.0	0.0
31	0.0	0.0	-	0.0	-	0.0	1189.9	0.0	0.0	0.0	0.0	0.0
% diverted	0.0	0.0	0.0	0.0	2.2	0.0	3.7	25.1	8.4	8.5	13.4	0.2

**Attachment F**  
**Worksheet 11.0: Cooling Water System Data**

6. *A narrative description of existing or proposed impingement and entrainment technologies or operation measures and a summary of their performance, including, but not limited to, reductions in impingement mortality and entrainment due to intake location and reductions in total water withdrawals and usage.*

STPEGS utilizes a closed-cycle recirculating system for achieving impingement reduction as stated under 40 CFR § 125.94(c)(1). This closed-cycle recirculating system is comprised of a 7,000-acre cooling impoundment. The point of compliance for 316(b) will be the RMPF Cooling Water Intake Structure located on the Colorado River.

STPEGS has an average (2019-2023) AIF of 92.4 MGD, which is less than 125 MGD required for meeting the site-specific entrainment (E) requirements. While there is no prescribed single nationally-applicable E-standard, the Rule requires the Director to establish best technology available (BTA) on a site-specific basis. South Texas Project Nuclear Operating Company (STPNOC) believes the BTA technologies identified in this document not only support the impingement mortality (IM) BTA evaluation, but also support the evaluation of BTA for E. Furthermore, it is STPNOC's position that STPEGS's closed-cycle cooling BTA for IM serves as BTA for entrainment under §125.94(d), should the TCEQ decide to evaluate STPEGS's CWIS under the rules for entrainment standards.

In addition to the pre-approved technology of a closed-cycle recirculating system for IM BTA, STPEGS utilizes a combination of other technologies that effectively reduce the likelihood of fish impingement and entrainment including:

- 1) Large capacity cooling water impoundment (MCR) designed for industrial cooling water and waste water. The size of the MCR provides for reduced water diversions i.e. make-up water from waters of the US;
- 2) Traveling screens fitted with 3/8 mesh and fish return system designed to return fish downstream of the intake; and
- 3) Credit for intake location in channel border habitat outside of the bio-productive areas within the source water.

**Attachment F**  
**Worksheet 11.0: Cooling Water System Information**

**Item 2: Cooling Water Intake Structure Data – Section 122.21(r)3**

b. Provide the following information as an attachment.

1. *A narrative description of the configuration of each CWIS, annual and daily operation, including any seasonal changes, and where it is located in the water body and in the water column.*

The South Texas Project Electric Generating Station (STPEGS) Reservoir Makeup Pumping Facility (RMPF) Cooling Water Intake Structure is located on the right descending (west) bank of the Colorado River near river mile 14.6 (28°46'27.97"N, 95°59'51.84"W). The RMPF Cooling Water Intake Structure withdraws water through a 406-foot-wide intake along the shoreline of the Colorado River. Water from the river flows through trash racks with 4-inch bar spacing, then through traveling screens, and over a weir into an embayment before entering the pumps and subsequently into a pipeline delivering makeup water to the 7,000-acre main cooling reservoir (MCR), an impoundment of this closed cycle recirculating system.

At the RMPF Cooling Water Intake Structure, 12 vertical traveling screens exist, each with ¾-inch mesh and a 13.5-foot width. The bottom of the screens is positioned 10 feet below mean sea level (MSL) in the Colorado River based on a water surface elevation of 0 feet MSL. When operating, screen rotation and wash are initiated by differential pressure or optionally can be operated manually dependent upon debris loading. Fish swimming through the trash racks can move laterally along the face of the intake structure and exit through the trash racks. Fish and debris impinged on the intake screens would be washed (via screen wash) into a sluice and fish bypass and returned to the Colorado River downstream of the intake.

New water to the MCR is provided by direct rainfall, as it is a perched reservoir receiving no runoff, and make-up water diverted periodically from the Colorado River. The pumps are operated intermittently based on reservoir level, river flow, and the operability of the reservoir pumping facility. Conditions of river water diversions are limited to 55% of the river flow and only when river flow exceeds 300 cubic feet per second (cfs). While the design intake flow (DIF) (387.79 million gallons per day [MGD]) could result in the removal of 22.6% of the mean annual river flow (2,648 cfs-1,711 MGD), the actual river flow withdrawal over the past 5 years (2019-2023), based on the 5-year AIF of 92.4 MGD, results in a 5.4% diversion.

2. *Engineering calculations for each CWIS.*

The RMPF Cooling Water Intake Structure exists with four circulating pumps. Pumps 1 & 2 are small volume capacity (26,930 gallons per minute [gpm] each) and Pumps 3 & 4 are large volume capacity (107,720 gpm each). The four pumps have a combined design intake flow (DIF) of 387.79 MGD. The following provides the calculation for estimating the DIF:  $26,930 + 107,720 \times 2 \text{ pumps} \times 60 \text{ min} \times 24 \text{ hours} / 1,000,000 = \text{DIF}$ . The two smaller pumps each have a 36-inch discharge and the two larger pumps each have a 66-inch discharge. All four pumps discharge into a common header subsequently providing makeup water to the MCR through a 1-mile long, 108-inch pipeline.

Flow distribution/water balance diagrams are provided as an attachment within STEERS as part of the application filing. Engineering drawings of the RMPF Cooling Water Intake Structure are provided as Appendix 1.

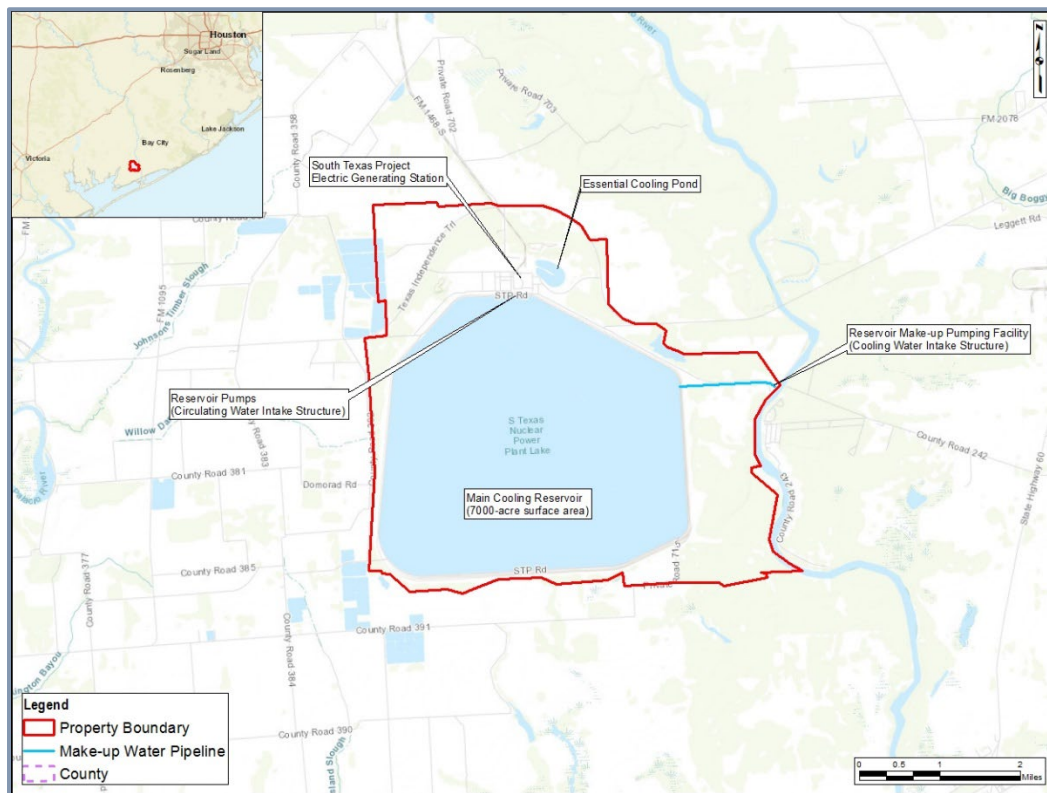
**Attachment F**  
**Worksheet 11.0: Cooling Water System Information**

**Item 3: Source Water Physical Data – Section 122.21(r)2**

b. Provide the following information as an attachment.

1. *A narrative description of the source water for each CWIS, including areal dimensions, depths, salinity and temperature regimes, and other documentation that supports this determination of the water body type where each cooling water intake structure is located.*

South Texas Project Electrical Generating Station (STPEGS) withdraws water from the Colorado River for cooling water purposes via the Reservoir Makeup Pumping Facility (RMPF) Cooling Water Intake Structure. The RMPF Cooling Water Intake Structure is located on the west bank of the lower Colorado River approximately 13 miles southwest of Bay City, Texas and 10 miles north of Matagorda Bay (Figure 1). Water from the Colorado River, a water of the U.S., provides makeup water for cooling water losses to the main cooling reservoir (MCR), not a water of the U.S.

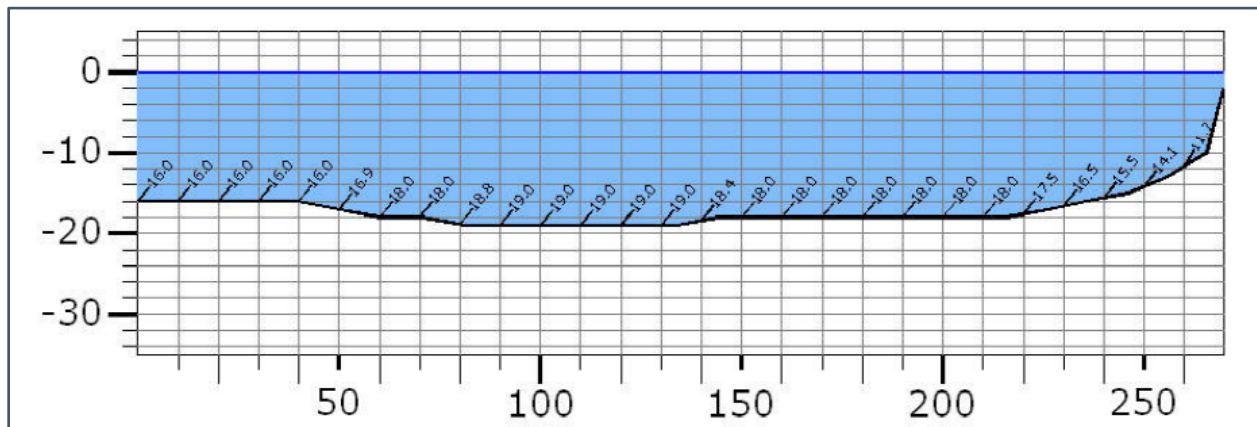


**FIGURE 1: General Location of the STPEGS RMPF Cooling Water Intake Structure within the Colorado River**

The Colorado River is approximately 300 feet across at the RMPF Cooling Water Intake Structure location and water depth ranges from approximately 12 to 19 feet (Figure 2). The RMPF Cooling Water Intake Structure is located parallel to the shoreline of the Colorado River. Water enters the RMPF Cooling Water Intake Structure through a coarse trash rack and traveling mesh screens into a siltation basin before entering the pumping station. The water is pumped from the siltation basin to the MCR through two buried 108-inch diameter pipelines.



**Attachment F**  
**Worksheet 11.0: Cooling Water System Information**



**FIGURE 2: Cross Sectional Bathymetry in the location of the STPEGS RMPF Cooling Water Intake Structure** Source: MWH 2007<sup>1</sup>

The United States Geological Survey (USGS) operates monitoring stations in the Colorado River that support data for water temperature, flow, stage, and specific conductance. The nearest station (08162501) is in the vicinity of the RMPF Cooling Water Intake Structure location. Additional station data on the Colorado River is from Bay City 08162500 and Matagorda Bay 08162506.

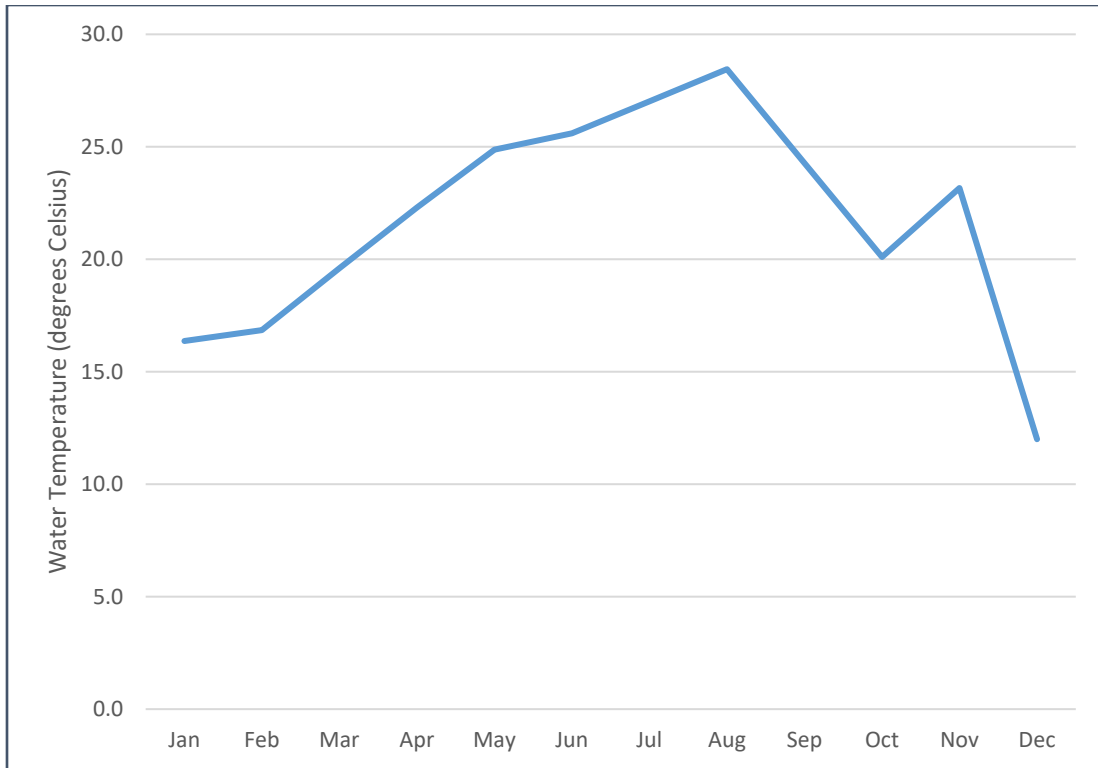
Water temperature data measured at USGS station 08162500 from 2012 to 2018 show the temperature ranges from 12°C to 32.1°C, with highest temperatures between the months of May and September and lowest temperatures in December (Figure 3). Data collected during a trawl sampling study ranged from 12.3°C to 31.0°C (ENSR 2008)<sup>2</sup>. A similar trend was observed with highest temperatures between June and September and lowest temperatures in January (Figure 4).

Specific conductance data from USGS 08162500 in the Colorado River near Bay City, Tx were used to assess conditions at the RMPF Cooling Water Intake Structure location. Data collected from 2012 through 2018 were converted to salinity (practical salinity units [psu]). Salinity ranged from 0.1 to 7.1 psu (Figure 5). Data collected during trawl sampling study ranged from 0.2 to 8.2 psu at the surface and 0.2 to 23.0 psu at the bottom (Figure 6)(ENSR 2008).

<sup>1</sup> MWH. 2007. South Texas Project Electric Generating Station, Wadsworth, Texas, Cooling Water Blowdown Facility. Supplement to Colorado River Streambank Revetment Assessment. Prepared for STPNOC. January 2007.

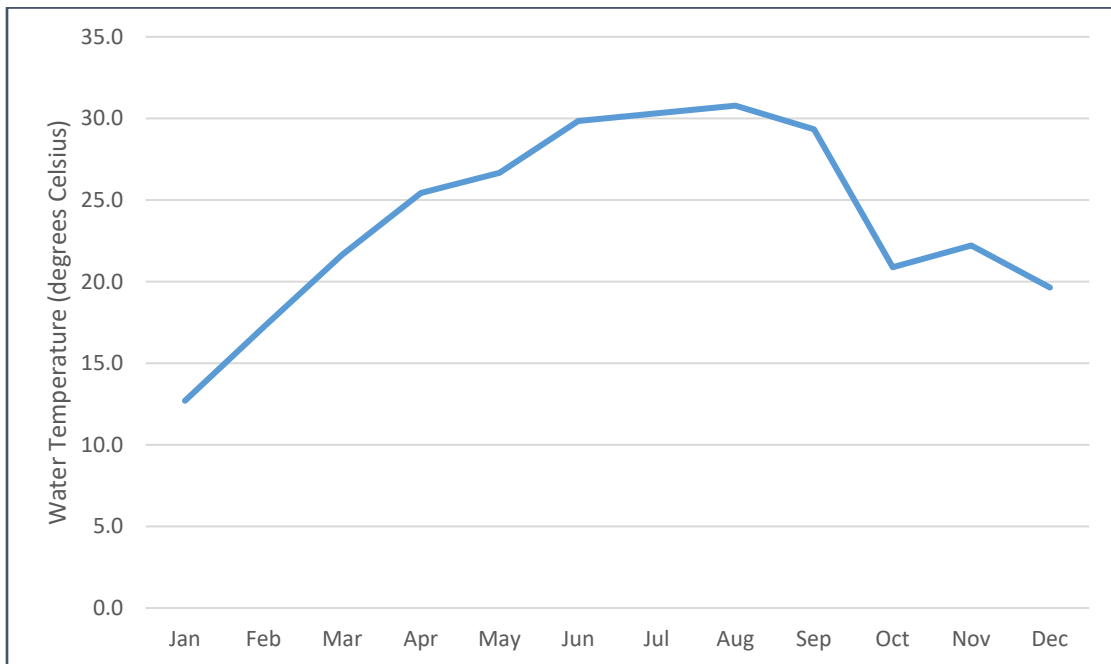
<sup>2</sup> ENSR. 2008. Aquatic Ecology – Colorado River Monitoring Report: Unit 3 and 4 Licensing

**Attachment F**  
**Worksheet 11.0: Cooling Water System Information**



**FIGURE 3:** Average Annual Water Temperature by Month from 2012-2018 at USGS 08162501 Colorado River near Wadsworth, TX in the Colorado River

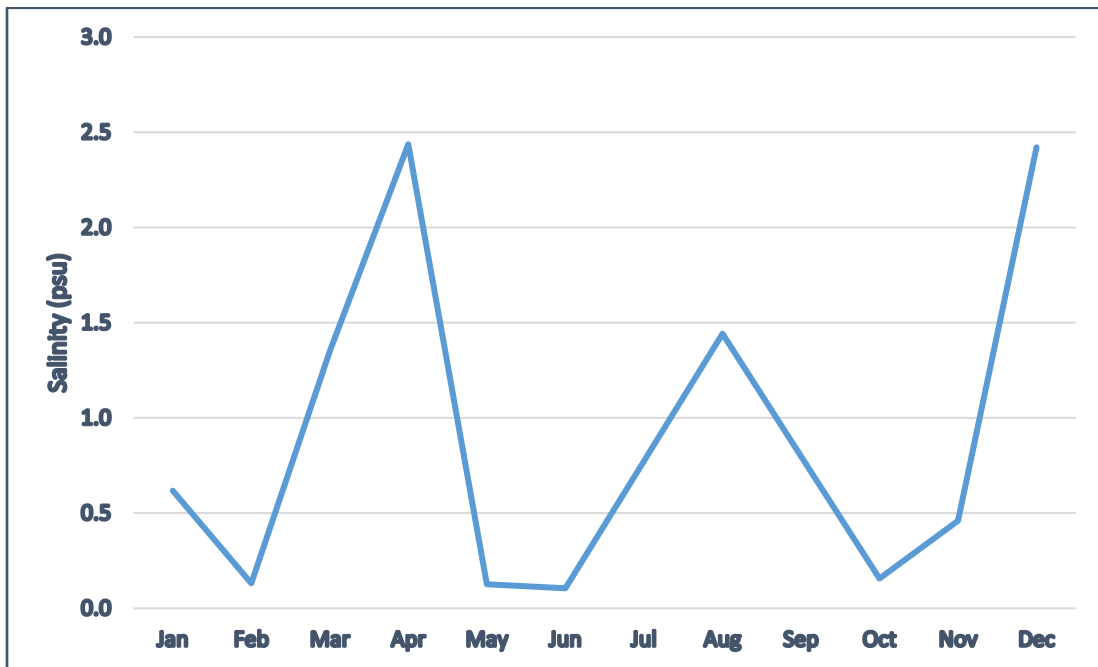
Source: [https://waterdata.usgs.gov/nwis/inventory?agency\\_code=USGS&site\\_no=08162501](https://waterdata.usgs.gov/nwis/inventory?agency_code=USGS&site_no=08162501)



**FIGURE 4:** Average Annual Water Temperature by Month from 2007-2008 on the lower Colorado River

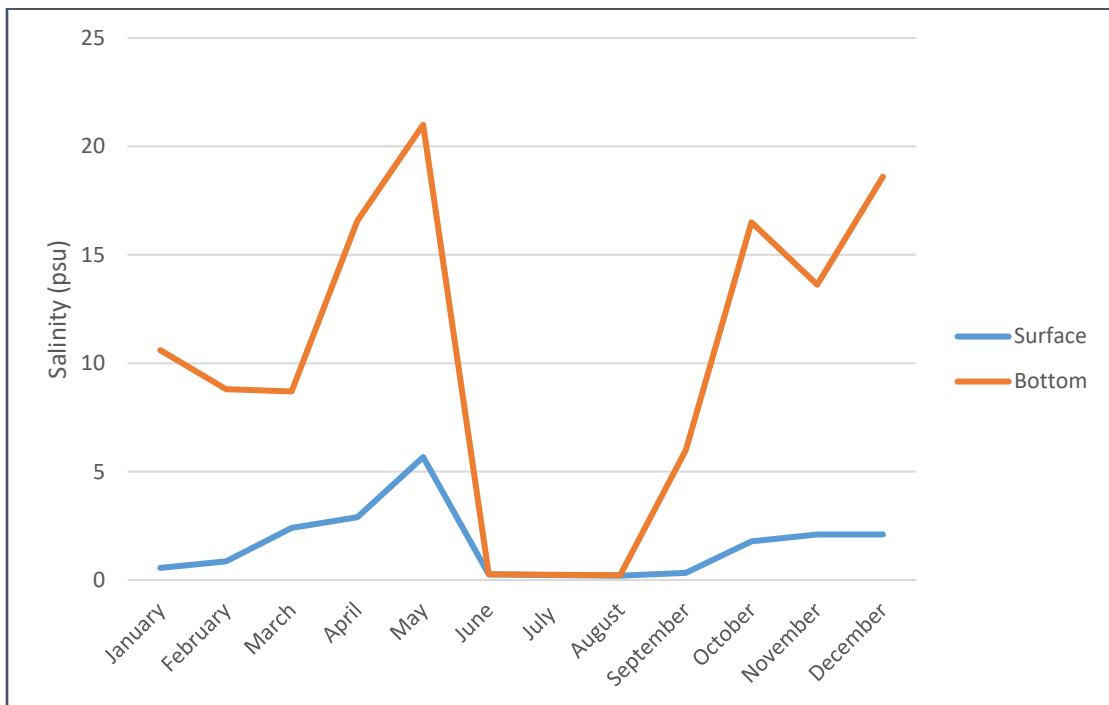
Source: ENSR 2008

Attachment F  
Worksheet 11.0: Cooling Water System Information



**FIGURE 5:** Average Annual Salinity by Month from 2012-2018 at USGS 08162501 Colorado River near Wadsworth, TX in the Colorado River

Source: [https://waterdata.usgs.gov/nwis/inventory?agency\\_code=USGS&site\\_no=08162501](https://waterdata.usgs.gov/nwis/inventory?agency_code=USGS&site_no=08162501)



**FIGURE 6:** Average Annual Salinity by Month from 2007-2008 on the lower Colorado River

Source: ENSR 2008

**Attachment F**  
**Worksheet 11.0: Cooling Water System Information**

2. *A narrative description of the source waterbody's hydrological and geomorphological features.*

The Colorado River originates south of Lubbock and flows generally southeast for 862 miles before emptying into the Gulf of Mexico at Matagorda Bay. Major tributaries include Concho River, Pecan Bayou, Llano River, San Saba River, and Pedernales River. The Colorado River Basin is approximately 42,318 square miles and includes almost 15% of Texas. The watershed includes several major metropolitan areas, including Midland-Odessa, San Angelo, and Austin, as well as hundreds of smaller towns and communities. The section of the river where STPEGS is located is a slow-moving, scenic river that is wide and deep.<sup>3,4</sup>

The Colorado River contains several man-made reservoirs including Lake Buchanan, Inks Lake, Lake Lyndon B. Johnson, Lake Marble Falls, Lake Travis, Lake Austin, and Lady Bird Lake, collectively referred to as the Highland Lakes. Three reservoirs located upstream of the Highland Lakes, Lake J.B. Thomas, E.V. Spence Reservoir, and O.H. Ivie Reservoir are owned and operated by the Colorado River Municipal Water District. The Upper Colorado River Authority and the Lower Colorado River Authority manage flood control and use of the Colorado River.<sup>5</sup>

The RMPF Cooling Water Intake Structure is in the Floodplains and Low Terraces of the Western Gulf Coastal Plain ecoregion. This region consists of bottomland forests of pecan, water oak, southern live oak and elm, with some bald cypress on larger streams. Land cover is a mix of forest, cropland, and pasture.

The RMPF Cooling Water Intake Structure is located within Segment 1401 – Colorado River Tidal of the Colorado River Basin, which extends from the confluence with the Gulf of Mexico in Matagorda County to a point 1.3 miles downstream of the Missouri-Pacific Railroad in Matagorda County. The MCR has been designated for the following uses by the TCEQ: primary contact recreation, high aquatic life use, and general use. The numeric water quality criteria specified for the river segment include a minimum 24-hour mean dissolved oxygen at any point of 4.0 mg/L, a pH range of 6.5 to 9.0 units, an indicator bacteria count of 35 colonies per 100 milliliters (mL), and a maximum temperature of 95 °F (35 °C).<sup>6</sup>

The RMPF Cooling Water Intake Structure is located on the west bank of the Colorado River approximately 14.6 miles upstream from Matagorda Bay. Water enters the intake structure via a 406-foot-wide intake structure located parallel to the shoreline in channel border habitat and enters into the sedimentation basin before entering the makeup water pipeline to the MCR.

Annual flow data show river flow patterns are highly variable and range from -5,000 to 27,000 cubic feet per second (cfs), see Figure 7. Normal flow ranges from -1,000 to 5,000 cfs with monthly highs occurring in May and June and the low occurring in August (Figure 8). Using data

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<sup>3</sup> About the River. 2018. Colorado River Alliance. <https://coloradoriver.org/about-the-river/>

<sup>4</sup> An Analysis of Texas Waterways, A Report on the Physical Characteristics of Rivers, Streams, and Bayous in Texas. No date. Texas Parks & Wildlife Department. [https://tpwd.texas.gov/publications/pwdpubs/pwd\\_rp\\_t3200\\_1047/15\\_c\\_tx\\_colorado.phtml](https://tpwd.texas.gov/publications/pwdpubs/pwd_rp_t3200_1047/15_c_tx_colorado.phtml)

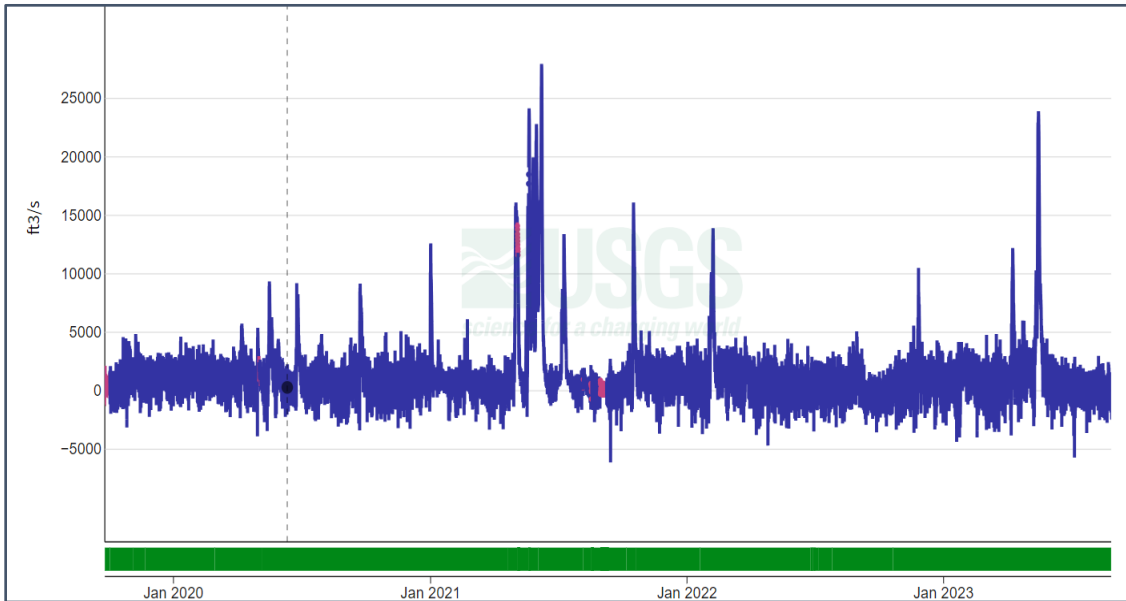
<sup>5</sup> Colorado River (Texas). No date. U.S. Rivers Information. <http://www.usrivers.info/River/Colorado-River-Texas/81/>

<sup>6</sup> Texas Commission on Environmental Quality. 2014. "2014 Texas Integrated Report: Assessment Results for Basin 14 – Colorado River." Available at [https://www.tceq.texas.gov/assets/public/waterquality/swqm/assess/14txir/2014\\_basin14.pdf](https://www.tceq.texas.gov/assets/public/waterquality/swqm/assess/14txir/2014_basin14.pdf).

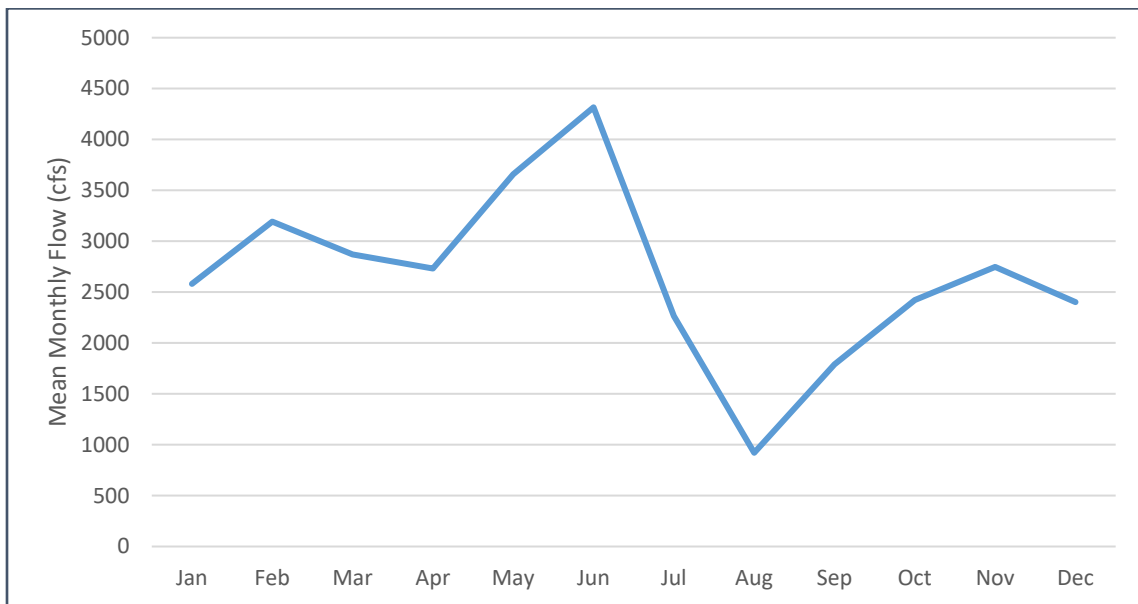
## Attachment F

### Worksheet 11.0: Cooling Water System Information

from USGS 08162500 on the Colorado River near Bay City, Texas, the Colorado River has a mean annual flow of approximately 2,648 cubic feet per second (cfs) which equates to approximately 1,711 million gallons per day (MGD) of flow. Based on these data, it is estimated the facility would withdraw a maximum 22.6% of the mean river flow when pumping at maximum capacity (DIF). Based on the 5-year AIF (2019-2023) of 92.4 MGD, the actual withdrawal over the past 5 years was calculated to be 5.4%.



**FIGURE 7: Annual Flow Data Colorado River 2019-2023 at USGS 08162501 Near the RMPF.**  
Source: [https://waterdata.usgs.gov/nwis/inventory?agency\\_code=USGS&site\\_no=08162501](https://waterdata.usgs.gov/nwis/inventory?agency_code=USGS&site_no=08162501)

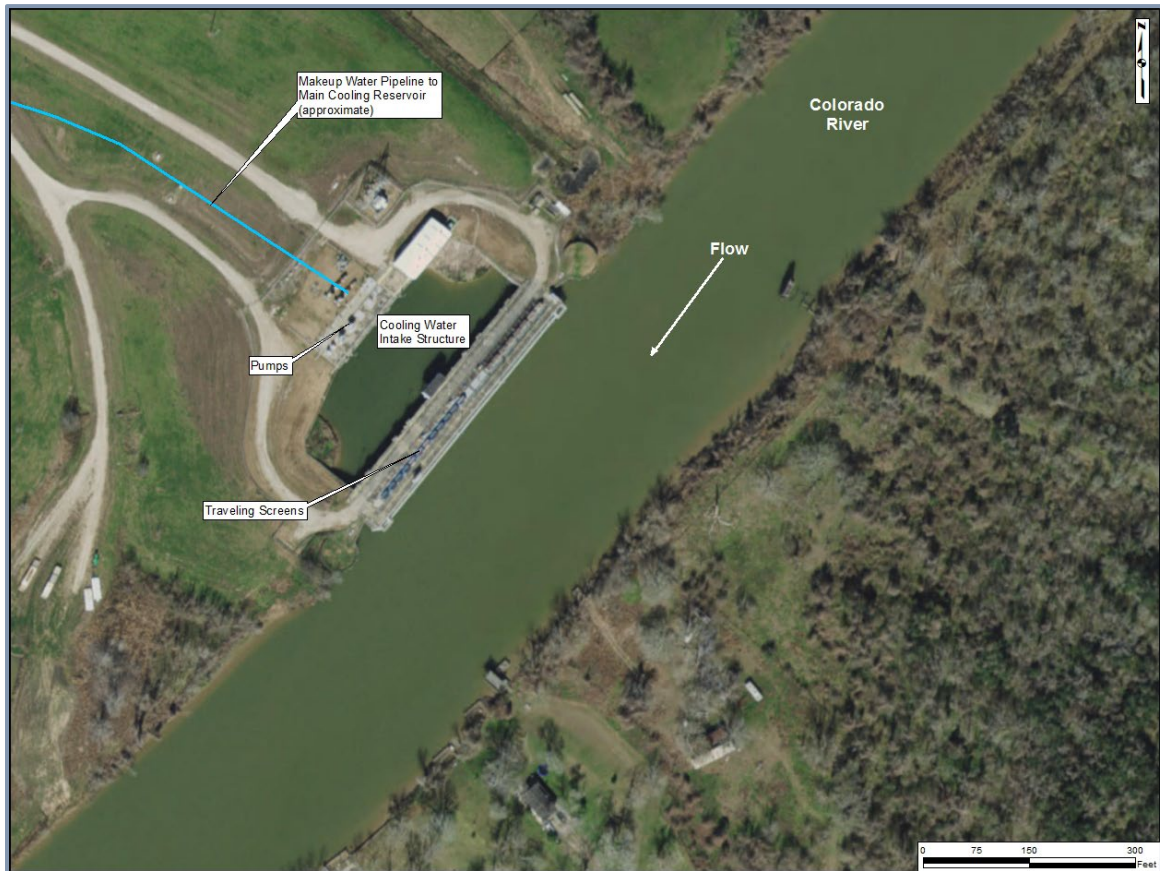


**FIGURE 7: Mean Monthly Flow (cfs) by Month from 1948-2008 at USGS 08162500 Colorado River near Bay City, TX**  
Source: [https://waterdata.usgs.gov/nwis/inventory?agency\\_code=USGS&site\\_no=08162500](https://waterdata.usgs.gov/nwis/inventory?agency_code=USGS&site_no=08162500)

**Attachment F**  
**Worksheet 11.0: Cooling Water System Information**

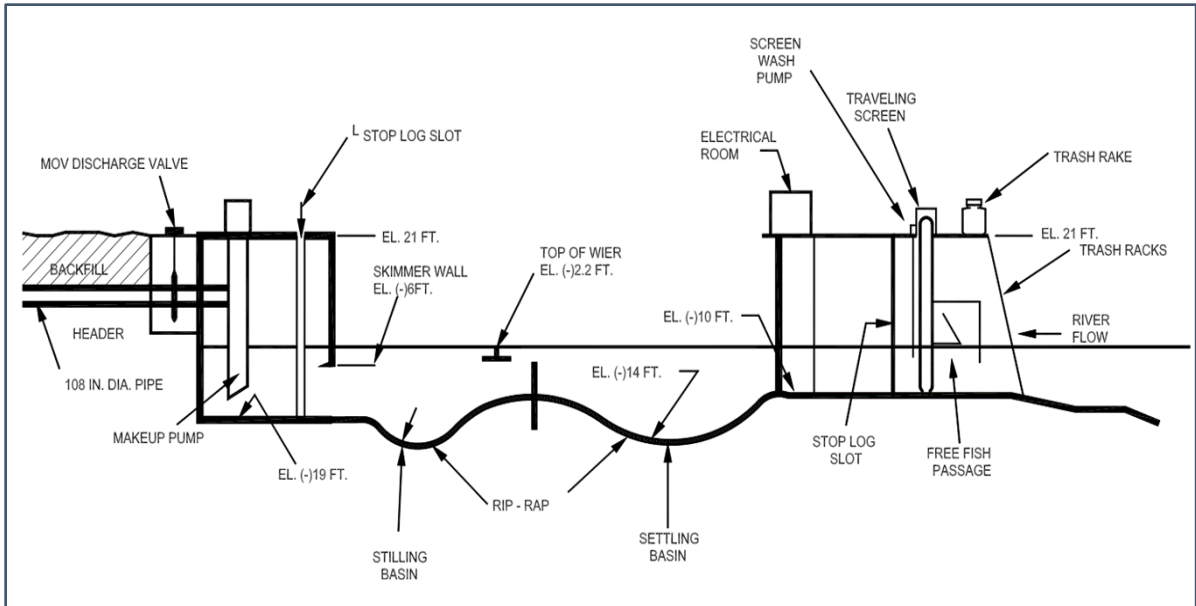
3. *Scaled drawings showing the physical configuration of all source water bodies used by the facility, including the source waterbody's hydrological and geomorphological features. Note: The source waterbody's hydrological and geomorphological features may be included on the map submitted for item 1.b.ii of this worksheet.*

Figure 9 shows the location of the RMPF Cooling Water Intake Structure in the Colorado River. Figure 10 shows the profile view of the RMPF Cooling Water Intake Structure. Refer to Appendix 1 for engineering drawings.



**FIGURE 9:**      **Location of RMPF Cooling Water Intake Structure in the Colorado River**

**Attachment F**  
**Worksheet 11.0: Cooling Water System Information**



**FIGURE 10: Profile view of RMPF Cooling Water Intake Structure in the Colorado River**

4. *A description of the methods used to conduct any physical studies to determine your intake's area of influence within the waterbody and the results of such studies.*

The zone of influence (ZOI) associated with the RMPF Cooling Water Intake Structure at the STPEGS was calculated based upon client-provided design drawings and information related to structure and system data (Appendix 1) and source water physical data. Periodically, four river-water intake pumps withdraw make-up water from the Colorado River at the RMPF Cooling Water Intake Structure through eighteen 13.5 feet wide by 10-feet deep intake bays located along the shoreline. The RMPF Cooling Water Intake Structure includes two small-volume capacity pumps each with a pump rate of 26,930 gallons per minute or 60 cubic feet per second ( $\text{ft}^3/\text{s}$ ) and two large-volume capacity pumps each with a pump rate of 107,720 gpm or 240  $\text{ft}^3/\text{s}$ . Combined, all four pumps discharge at a rate of 269,300 gpm or 600  $\text{ft}^3/\text{s}$ . The maximum velocity through each screen bay is 0.96 feet per second ( $\text{ft}/\text{s}$ ). The ZOI consists of a semi-circle area calculated for each screen bay with a radius of 11.05 feet with an overlap to each other representing their combined influence. Table 1 and Figure 11 include the ZOI data and expected effect.

**Attachment F**  
**Worksheet 11.0: Cooling Water System Information**

**TABLE 1: ZOI Data and Calculations**

Site: Colorado River, TX			
	Value	Units	Reference
<b>Colorado River</b>			
Colorado River Mean Annual Flow Rate	2648	ft <sup>3</sup> /s	Client
Length	862	mi	Client
Depth at intake	10	ft	Client
Width at intake	276	ft	Client
Velocity at intake	0.96	ft/s	Client
<b>RMPF Pump Volumes</b>			
Number of Pumps	4	number	Client
Small volume pump (2 total)	26,930	GPM	Client
Large volume pump (2 total)	107,720	GPM	Client
Small volume pump (2 total)	38.78	MGD	Client
Large volume pump (2 total)	155.12	MGD	Client
Total Design intake flow	269,300	GPM	Client
Total Design intake flow	387.8	MGD	Client
Small Intake Pump Diameter	8	ft	Client
Large Intake Pump Diameter	8	ft	Client
<b>RMPF Dimensions</b>			
Reservoir Makeup Pumping Facility (RMPF) Depth	10	ft	Client
Number of screens at RMPF	18	number	Client
Screen width	13.5	ft	Client
Total width of RMPF	406	ft	Client
Distance from shore	0	ft	Client
<b>ZOI Calculation</b>			
Case	Target Area (sq ft)	Circumference available for flow (fraction)	ZOI radius (ft)
Semi-Circle ZOI (each bay)	347.2480112	50%	11.05324749



**Attachment F**  
**Worksheet 11.0: Cooling Water System Information**



**FIGURE 11: Expected Zone of Influence at the RMPF Cooling Water Intake Structure**

**Attachment F**  
**Worksheet 11.0: Cooling Water System Information**

**Item 4: Operational Status – Section 122.21(r)8**

a. *Is this application for a power production or steam generation facility?*

☒ Yes      ☐ No

If **yes**, provide the following information as an attachment; otherwise, proceed to item b.

1. *Describe the operating status of each individual unit, including age of each unit, capacity utilization rate (or equivalent), for the previous five years (a minimum of 60 months), and any seasonal changes in operation.*

South Texas Project Electric Generating Station (STPEGS) has two nuclear powered steam electric generating units in operation. Commercial operation of Unit 1 began in August 1988 and Unit 2 began in June 1989. Table 1 provides the annual capacity utilization for the previous five years (2019-2023). During this period, STPEGS had an average capacity utilization of 99.12 percent.

**TABLE 1: STP Capacity Utilization by Year**

Year	Unit 1 Capacity Factor (%)	Unit 2 Capacity Factor (%)	Station Capacity Factor (%)
2019	105.1	96.0	100.6
2020	95.1	105.0	100.1
2021	94.9	95.9	95.4
2022	105.7	94.4	100.1
2023	94.5	104.4	100.6

2. *Describe any extended or unusual outages that significantly affect current data for flow, impingement, entrainment, or other factors.*

STPEGS experienced two unplanned outages (other than refueling) over the previous five years January 2019 through December 2023. None of these outages were extended outages that would significantly affect current data for flow, impingement, or entrainment.

3. *Identify any operating unit with a capacity utilization rate of less than 8 percent averaged over a contiguous period of two years (a minimum of 24 months).*

N/A

4. *Describe any major upgrades completed within the last 15 years, including but not limited to boiler replacement, condenser replacement, turbine replacement, or changes to fuel type.*

STPEGS has not had any major upgrades within the last 15 years, nor are there plans or schedules for decommissioning, replacement of units, or any new units at STPEGS within the next five years.

**Attachment F**  
**Worksheet 11.0: Cooling Water System Information**

- a. Is this an application for a nuclear power production facility?

☒ Yes      ☐ No

*If yes, include a description of completed, approved, or scheduled upgrades and the Nuclear Regulatory Commission relicensing status of each unit at the facility.*

The renewal of the Facility Operating License for STPEGS was issued on September 28, 2017, extending the facility operating licenses for Units 1 and 2 for an additional 20 years. This extension allows the reactors to operate until 2047 and 2048, respectively.

**Attachment F**  
**Worksheet 11.1: Impingement Mortality**

**Item 2: Impingement Compliance Technology Information – Section 122.21(r)6**

a. Provide the following information as an attachment.

i. *CWIS ID*

Reservoir Make-up Pumping Facility - RMPF

ii. *12 months of intake flow data for any CWIS used for make-up intake flows to replenish cooling water losses, excluding intakes for losses due to blowdown, drift, or evaporation.*

Actual Intake Flow (MGD) 2023-2024												
Day	Jul	Aug	Sep	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun
1	0.0	0.0	0.0	0.0	0.0	0.0	0.0	1189.9	238.1	0.0	0.0	0.0
2	0.0	0.0	0.0	0.0	126.1	0.0	0.0	1189.9	238.1	0.0	0.0	0.0
3	0.0	0.0	0.0	0.0	93.7	0.0	0.0	1189.9	238.1	0.0	0.0	0.0
4	0.0	0.0	0.0	0.0	0.0	0.0	0.0	1189.9	106.0	0.0	0.0	0.0
5	0.0	0.0	0.0	0.0	0.0	0.0	0.0	1189.9	0.0	0.0	0.0	0.0
6	0.0	0.0	0.0	0.0	0.0	0.0	237.6	942.0	0.0	0.0	0.0	0.0
7	0.0	0.0	0.0	0.0	0.0	0.0	507.4	600.9	0.0	0.0	309.0	0.0
8	0.0	0.0	0.0	0.0	0.0	0.0	413.3	1189.9	0.0	0.0	1189.9	0.0
9	0.0	0.0	0.0	0.0	0.0	0.0	520.9	1189.9	0.0	0.0	1146.9	0.0
10	0.0	0.0	0.0	0.0	0.0	0.0	74.6	1189.9	0.0	0.0	1083.8	0.0
11	0.0	0.0	0.0	0.0	0.0	0.0	0.0	1189.9	0.0	0.0	1151.2	42.8
12	0.0	0.0	0.0	0.0	0.0	0.0	0.0	1189.9	0.0	105.0	582.0	69.3
13	0.0	0.0	0.0	0.0	0.0	0.0	0.0	910.3	0.0	288.8	0.0	0.0
14	0.0	0.0	0.0	0.0	0.0	0.0	0.0	1109.9	0.0	605.0	0.0	0.0
15	0.0	0.0	0.0	0.0	0.0	0.0	0.0	1189.9	0.0	668.3	0.0	0.0
16	0.0	0.0	0.0	0.0	0.0	0.0	0.0	1189.9	0.0	7.9	0.0	0.0
17	0.0	0.0	0.0	0.0	0.0	0.0	0.0	1189.9	0.0	421.6	0.0	0.0
18	0.0	0.0	0.0	0.0	0.0	0.0	0.0	731.8	0.0	300.1	0.0	0.0
19	0.0	0.0	0.0	0.0	0.0	0.0	0.0	150.5	0.0	30.6	0.0	0.0
20	0.0	0.0	0.0	0.0	0.0	0.0	0.0	93.9	0.0	0.0	0.0	0.0
21	0.0	0.0	0.0	0.0	0.0	0.0	0.0	365.3	0.0	0.0	7.4	0.0
22	0.0	0.0	0.0	0.0	0.0	0.0	0.0	238.1	92.5	0.0	963.9	0.0
23	0.0	0.0	0.0	0.0	0.0	0.0	47.9	238.1	1189.9	0.0	731.5	0.0
24	0.0	0.0	0.0	0.0	0.0	0.0	714.0	238.1	1189.9	0.0	238.1	0.0
25	0.0	0.0	0.0	0.0	0.0	0.0	1170.1	238.1	1189.9	0.0	184.5	0.0
26	0.0	0.0	0.0	0.0	0.0	0.0	1189.9	196.5	1155.9	256.1	91.3	0.0
27	0.0	0.0	0.0	0.0	0.0	0.0	1189.9	189.5	453.2	429.7	0.0	0.0
28	0.0	0.0	0.0	0.0	0.0	0.0	1189.9	238.1	101.2	389.3	0.0	0.0
29	0.0	0.0	0.0	0.0	0.0	0.0	1189.9	160.6	0.0	381.3	0.0	0.0
30	0.0	0.0	0.0	0.0	0.0	0.0	1189.9	-	0.0	100.7	0.0	0.0
31	0.0	0.0	-	0.0	-	0.0	1189.9	-	0.0	-	0.0	-

**Attachment F**  
**Worksheet 11.1: Impingement Mortality**

- iii. A narrative description of any physical or operational measures taken to minimize make-up withdraws.*

The Reservoir Makeup Pumping Facility (RMPF) Cooling Water Intake Structure pumps are operated intermittently based on reservoir level, river flow, and the operability of the reservoir pumps. The 7,000-acre MCR is a closed-cycle recirculating system recycling heated water for cooling water. The level of water in the MCR is maintained at a pool level of 47 feet above mean sea level. The make-up water withdrawals required to maintain the pool level amount to only 5.4% of the mean flow from the Colorado River.

Water discharges from internal outfalls 101, 201, 401, and 601 are discharged into the Main Cooling Reservoir for reuse as make-up water in accordance with the wastewater permit.

**Attachment F**  
**Worksheet 11.2: Source Water Biological Data**

**Item 2: Source Water Biological Data – Section 122.21(r)4**

An extensive dataset was previously compiled by South Texas Project Nuclear Operating Company (STPNOC) to support STPNOC's initial 316(b) compliance during the TPDES application renewal submittal on May 21, 2019. The dataset included historical biological demonstrations and studies specific to the South Texas Project Electric Generating Station (STPEGS), including impingement and entrainment studies associated with the Reservoir Make-up Pumping Facility (RMPF) Cooling Water Intake Structure and studies characterizing the biota of the lower Colorado River near the RMPF Cooling Water Intake Structure. Data taken from source waters over the course of 30 years indicate no adverse environmental impacts on the lower Colorado River fishery.

Since that application filing, no substantial changes have occurred with the source water biological data at the RMPF, with the RMPF cooling water intake structure (CWIS), and with the overall operation of the facility. Specifically, no substantial changes have occurred related to the information provided for items 2a, 2b, 2c, 2e, 2f, and 2g (Worksheet 11.2) since the previous application submittal. STPNOC believes the previous information still supports the requirements under 122.21 (r)(4)(ii) through (vi) and will demonstrate STPEGS currently operates BTA that meets the standards for IM and E under 40 CFR § 125.94(c) and (d).

STPNOC is providing updated information regarding item 2d-threatened, endangered, and other protected species susceptible to impingement and entrainment at the RMPF CWIS.

- a. *A list of the data requested at 40 CFR § 122.21(r)(4)(ii) through (vi) that are not available, and efforts made to identify sources of the data.*

No changes from the previous filing.

- b. *Provide a list of species (or relevant taxa) in the vicinity of the CWIS and identify the following information regarding each species listed.*

Table 1 and Figure 1 provide a list of species in the vicinity of the STPEGS RMPF CWIS.

**Attachment F**  
**Worksheet 11.2: Source Water Biological Data**

**TABLE 1: Fish Species Known to Occur in the Lower Colorado River**

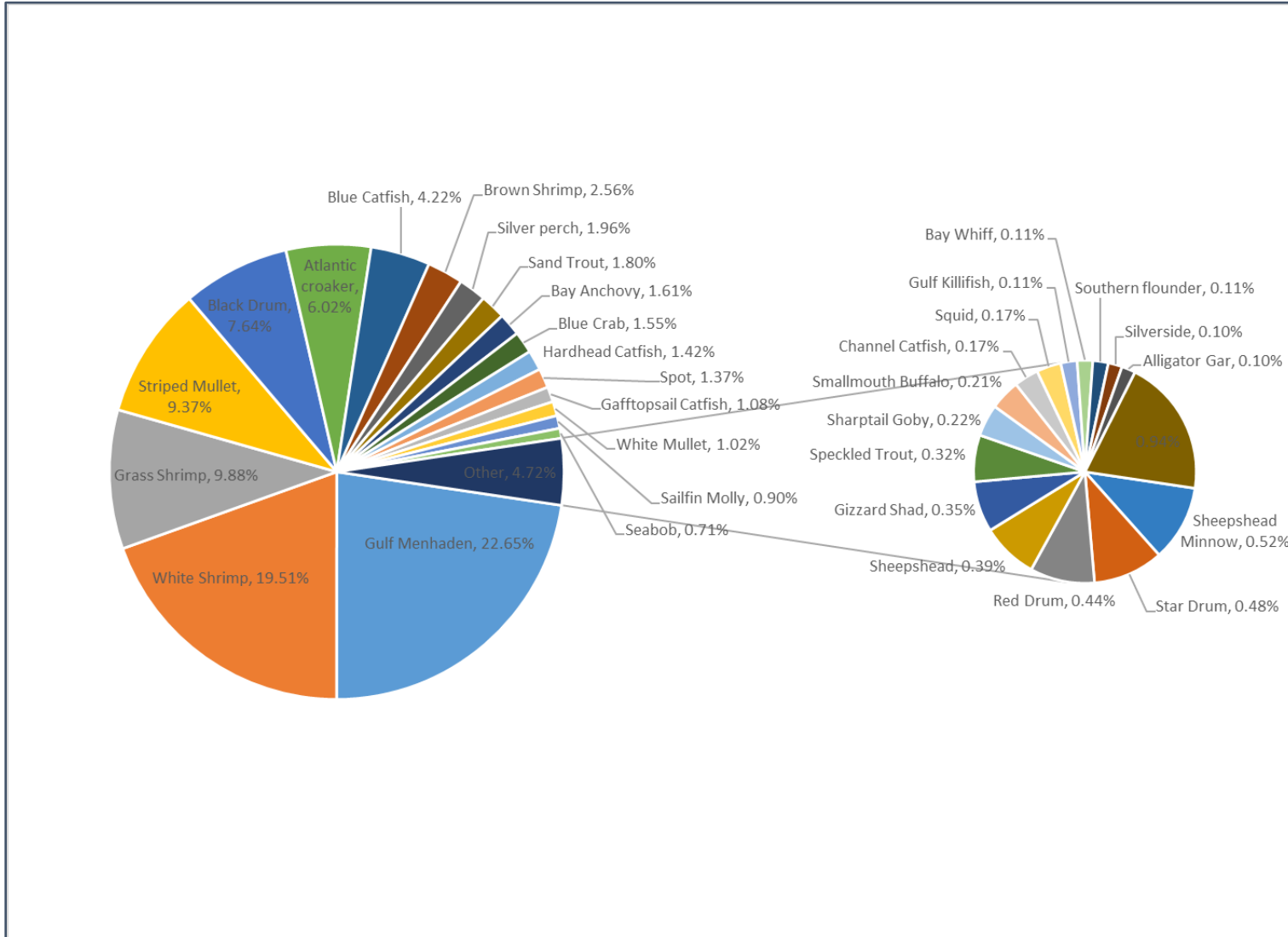
	ENSR 2008		NUREG 1983-84		NUREG 1974	
Family and Species	Number collected	% Total	Number collected	% Total	Number collected	% Total
<b>Palaemonidae</b>						
Ghost shrimp			19	0.26		
Grass shrimp	1763	9.88	65	0.89		
River shrimp			837	11.47	270	14.18
<b>Penaeidae</b>						
Brown shrimp	456	2.56			126	6.62
Seabob	127	0.71				
White shrimp	3482	19.51	1430	19.59	102	5.36
<b>Portunidae</b>						
Blue crab	277	1.55	508	6.96	13	0.68
Lesser blue crab					4	0.21
<b>Loliginidae</b>						
Atlantic brief squid	30	0.17				
<b>Lepisosteidae</b>						
Alligator gar	17	0.10				
<b>Clupeidae</b>						
Gizzard shad	62	0.35				
Gulf menhaden	4043	22.65	56	0.77	381	20.01
Threadfin shad					23	1.21
<b>Engraulidae</b>						
Bay anchovy	288	1.61	3860	52.88	678	35.61
<b>Catostomidae</b>						
Smallmouth buffalo	37	0.21				
<b>Cyprinidae</b>						
Speckled chub					6	0.32
<b>Ariidae</b>						
Gafftopsail catfish	192	1.08			5	0.26
Hardhead catfish	254	1.42	40	0.55	16	0.84
<b>Ictaluridae</b>						
Blue catfish	754	4.22	15	0.21	34	1.79
Channel catfish	30	0.17			7	0.37
<b>Atherinopsidae</b>						
Inland silverside	17	0.10	13	0.18		
<b>Fundulidae</b>						
Gulf killifish	20	0.11				
<b>Cyprinodontidae</b>						
Sheepshead minnow	93	0.52				
<b>Poeciliidae</b>						
Sailfin molly	161	0.90				
<b>Sparidae</b>						
Pinfish			11	0.15		
Sheepshead	69	0.39				
<b>Sciaenidae</b>						
Atlantic croaker	1075	6.02	37	0.51	43	2.26
Black drum	1363	7.64				
Red drum	79	0.44				
Sand trout	321	1.80	41	0.56	78	4.10
Silver perch	350	1.96				
Speckled trout	57	0.32				

**Attachment F**  
**Worksheet 11.2: Source Water Biological Data**

Family and Species	ENSR 2008		NUREG 1983-84		NUREG 1974	
	Number collected	% Total	Number collected	% Total	Number collected	% Total
Spot	245	1.37	28	0.38	96	5.04
Star drum	86	0.48				
<b>Polynemidae</b>						
Atlantic threadfin					5	0.26
<b>Mugilidae</b>						
Striped mullet	1673	9.37	78	1.07		
White mullet	182	1.02				
<b>Carangidae</b>						
Crevalle jack			14	0.19		
<b>Gerreidae</b>						
Spotfin mojarra			11	0.15		
<b>Eleotridae</b>						
Fat sleeper			20	0.27		
<b>Gobiidae</b>						
Darter goby			62	0.85		
Sharptail goby	39	0.22				
<b>Paralichthyidae</b>						
Bay whiff	19	0.11	83	1.14		
Southern flounder	19	0.11				
<b>Other</b>	<b>167</b>	<b>0.94</b>	<b>71</b>	<b>0.97</b>	<b>17</b>	<b>0.89</b>
<b>Total Species (in top 99%)</b>	<b>33</b>		<b>20</b>		<b>17</b>	
<b>Total Abundance Value</b>		<b>100</b>		<b>100</b>		<b>100</b>



**Attachment F**  
**Worksheet 11.2: Source Water Biological Data**



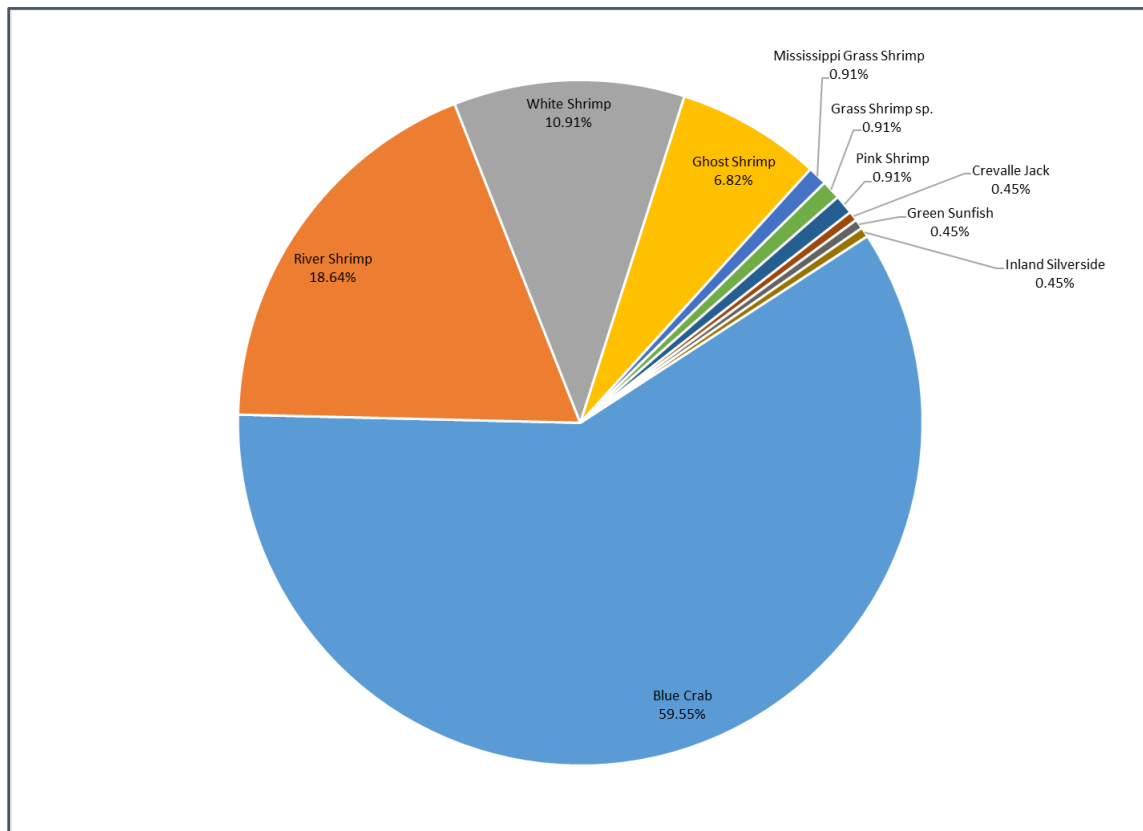
**FIGURE 1: Species Representing 99% of Total Relative Abundance among all Survey Methods of the Lower Colorado River in 2007-08**

**Attachment F**  
**Worksheet 11.2: Source Water Biological Data**

1. all life stages and their relative abundance,

**Historical Impingement Data**

Data from the entrainment and impingement studies in 1983 and 1984 described 10 species impinged at the RMPF Cooling Water Intake Structure during phase II sampling of the intake screens. Four of these species were numerically dominant in the impingement samples and contributed >1% of the total organisms impinged, including blue crab, river shrimp, white shrimp, and ghost shrimp. All of these species are considered estuarine species. A single freshwater species, the green sunfish (*Lepomis cyanellus*) was also impinged but was not included in the study summary since it is a freshwater fish, and therefore, not a part of the estuarine community assessed in this study (Figure 2).



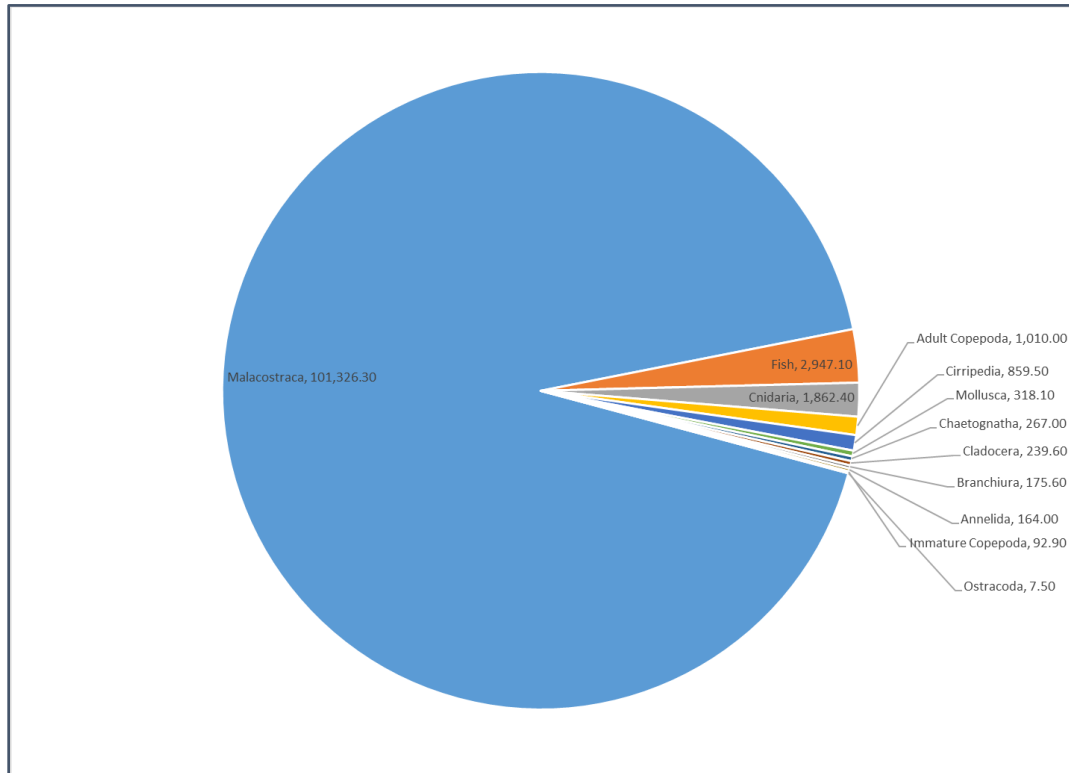
**FIGURE 2: Percent Composition of all Species Impinged at the RMPF Cooling Water Intake Structure during Sampling in 1983 and 1984**

**Historical Entrainment Data**

Samples were taken using 0.5m plankton nets in the lower Colorado River in 1983 and 1984 to represent the faunal community present in the vicinity of the RMPF Cooling Water Intake Structure susceptible to entrainment. A total of 59 taxa (49 invertebrates and 10 vertebrates) were collected in June – September 1983 samples, dominated by cladocerans (water fleas), copepods, and Malacostraca such as mysid shrimp, amphipods, commercial shrimp, grass and river shrimp, and

**Attachment F**  
**Worksheet 11.2: Source Water Biological Data**

crabs. Of the 10 fish taxa collected, only the bay anchovy occasionally occurred in large numbers. In 1984, the most abundant invertebrate plankton were jellyfish medusa, copepods, barnacle nauplii, and zoeal larvae of Malacostraca, specifically grass shrimp, mud shrimp, and xanthid mud crabs (Figure 3).

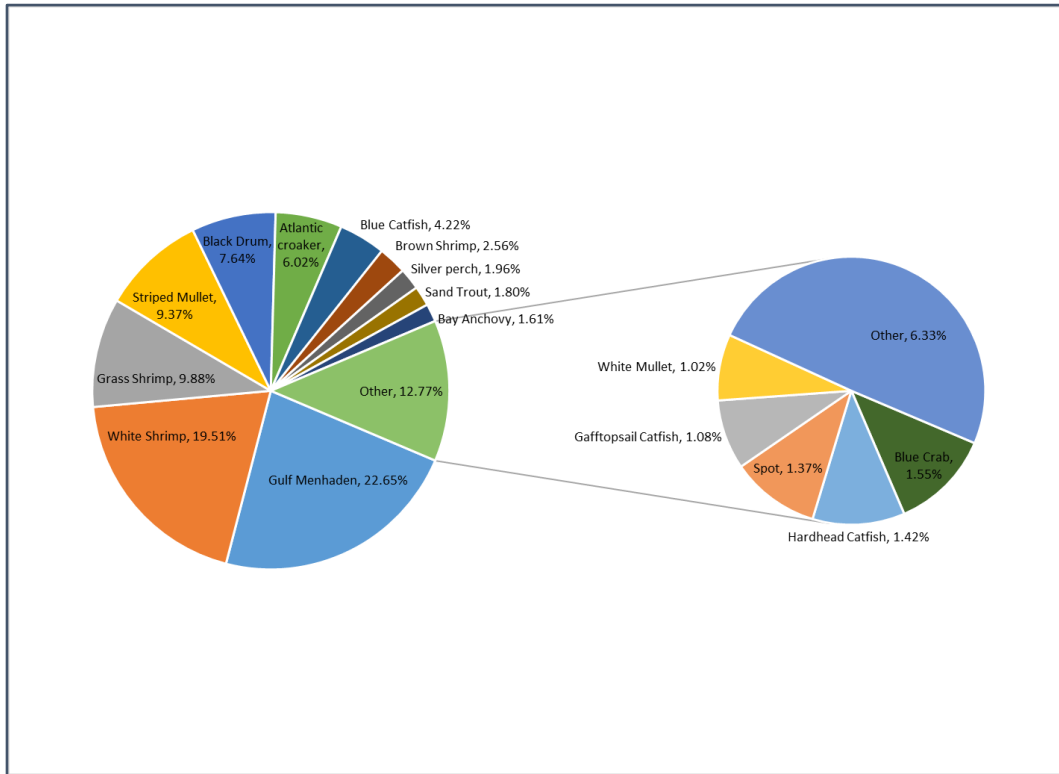


**FIGURE 3: Zooplankton in the Lower Colorado River from 1983-1984, # Individuals / 100m³**

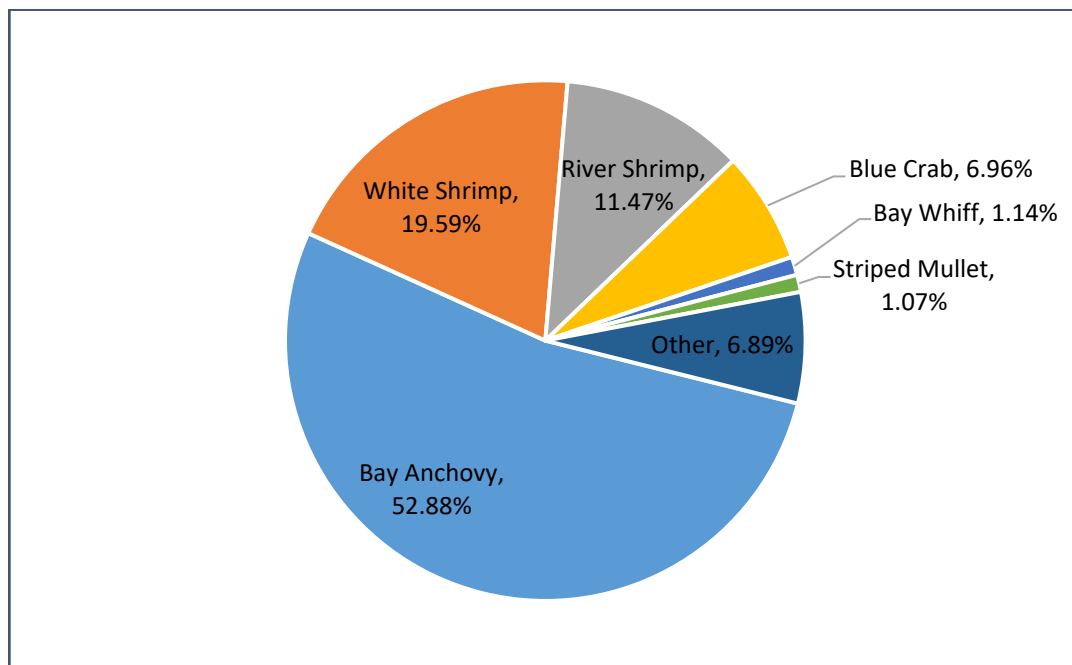
***Lower Colorado River Studies Overall Relative Abundance***

Analysis of historic sampling data conducted in 1974, 1983-1984, and 2007-2008 provided species composition and/or relative abundance of 90 different taxa/species occurring in the lower Colorado River with potential to be associated with the RMPF Cooling Water Intake Structure. Of these 90 taxa, only 20 species represent greater than 1% of the total abundance for any of the historic studies in the lower Colorado River (Table 1). Dominant species included Gulf menhaden, white shrimp, river shrimp, grass shrimp, and bay anchovy (Figures 4 – 6). Several of these species are similar to those identified in the historical impingement sampling at the RMPF Cooling Water Intake Structure.

**Attachment F**  
**Worksheet 11.2: Source Water Biological Data**

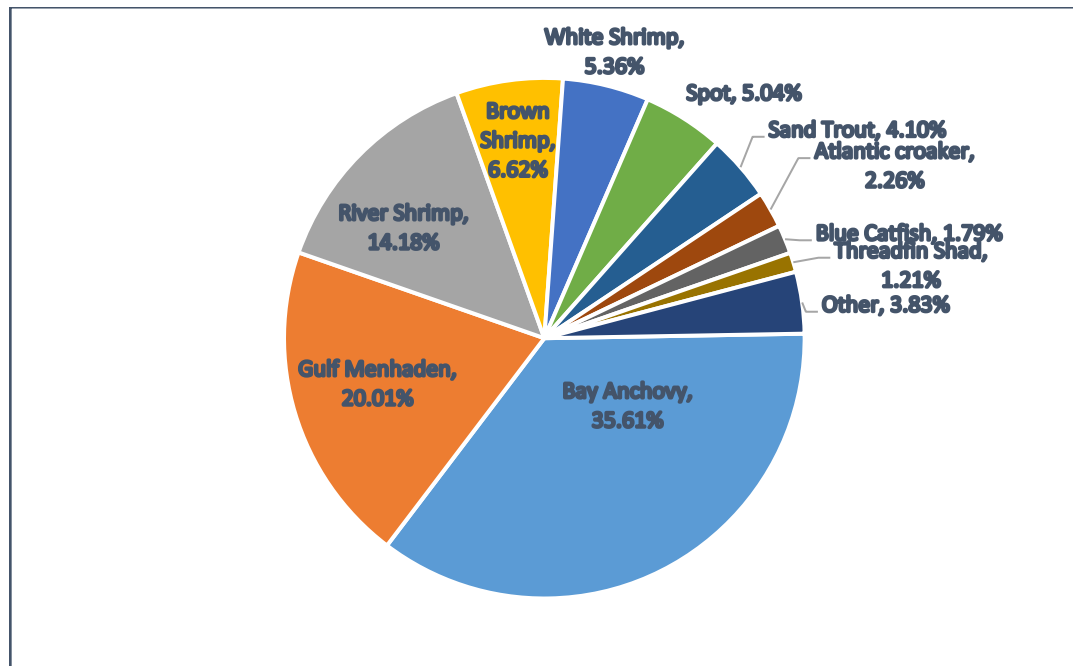


**FIGURE 4: Relative Abundance of Species Comprising Greater than 1% of Total among all Sampling Methods in the Lower Colorado River in 2007-2008**



**FIGURE 5: Relative Abundance of Species Comprising Greater than 1% of Total Among Seine and Trawl Samples in the Lower Colorado River in 1983-1984**

**Attachment F**  
**Worksheet 11.2: Source Water Biological Data**



**FIGURE 6: Relative Abundance of Species Comprising Greater than 1% of Total among all Sampling Methods in the Lower Colorado River in 1974**

2. *identification of all species and life stages that would be most susceptible to impingement and entrainment,*

Table 2 provides a summary of the 16 species identified as being susceptible to impingement, and Table 3 provides a summary of the species identified as being susceptible to entrainment at the RMPF Cooling Water Intake Structure.

**TABLE 2: Species Susceptible to Impingement at the RMPF Cooling Water Intake Structure**

Species Common Name	
White shrimp	Blue crab
Atlantic croaker	Gulf menhaden
Brown shrimp	Inland silverside
Bay anchovy	Threadfin shad
Grass shrimp	Bay whiff
Hardhead catfish	Spot
Gizzard shad	River shrimp
Striped mullet	Black drum

**Attachment F**  
**Worksheet 11.2: Source Water Biological Data**

**TABLE 3: Species Susceptible to Entrainment at the RMPF Cooling Water Intake Structure**

<b>Family</b>	<b>Potential Species</b>
Portunidae	Blue crab
Palaemonidae	Grass shrimp, river shrimp
Penaeidae	Brown shrimp, white shrimp
Clupeidae	Gulf menhaden, gizzard shad, threadfin shad
Engraulidae	Bay anchovy
Sciaenidae	Atlantic croaker, black drum, red drum, sand trout

3. *forage base,*

Estuarine systems are highly diverse systems. Biological data for the lower Colorado River indicated the species present are interchangeable between estuarine and freshwater species with the estuarine species being dominant most of the time. Forage species include Gulf menhaden, mullet, shrimp, blue crab, silversides, anchovy, and other shad species.

4. *significance to commercial fisheries,*

Several of the fish and shellfish species occurring in the lower Colorado River are considered commercially or recreationally important (CRI) species. These species include fish that are targeted by commercial fisheries, recreational anglers, or serve as the forage base for the targeted species. A list of CRI species in the lower Colorado River is provided in Table 4 below.

**TABLE 4: Commercially and Recreationally Important (CRI) Species in the Lower Colorado River**

<b>Species</b>	<b>Commercial</b>	<b>Recreational</b>	<b>Forage</b>
Atlantic croaker	X	X	
Bay anchovy			X
Black drum	X	X	
Blue crab	X	X	
Brown shrimp	X		
Channel catfish		X	
Crevalle jack		X	
Gafftopsail		X	
Gizzard shad			X
Grass shrimp			X
Gulf menhaden			X
Inland silverside			X
Ladyfish		X	

**Attachment F**  
**Worksheet 11.2: Source Water Biological Data**

Species	Commercial	Recreational	Forage
Pinfish		X	
Pink shrimp	X		
Red drum		X	
Sand seatrout		X	
Sheepshead		X	
Southern flounder		X	
Speckled trout		X	
Spot		X	
Striped mullet	X		X
Threadfin shad			X
White mullet	X		X
White shrimp	X		

5. *significance to recreational fisheries,*

See Section b.1.4. and Table 4 above.

6. *primary period of reproduction,*

Spawning and recruitment (movement into the bays as juveniles) of estuarine species is widely variable and dependent upon regional location, habitat conditions, and environmental conditions. It is expected that most, if not all, of the species identified as being susceptible to impingement do not spawn in the lower Colorado River. Spawning will occur in the nearshore Gulf near the river mouths and passes.

Spawning may be influenced by environmental variables including water temperature, freshwater inflow, turbidity, and photoperiod. Spatiotemporally, spawning is highly dependent on the species in terms of their environmental preferences, reproductive strategy and the environmental conditions during spawning. However, based on data presented from the RMPF Cooling Water Intake Structure entrainment studies and species-specific spawning information it can be assumed that peak spawning will occur in spring followed by late spawning into the early summer months of June and July. The species-specific spawning periods and recruitment periods of the species identified as susceptible to impingement and entrainment are detailed below in Table 5.

**Attachment F**  
**Worksheet 11.2: Source Water Biological Data**

**TABLE 5: Typical Spawning and Recruitment Periods of Species Susceptible to Impingement or Entrainment at the RMPF Cooling Water Intake Structure**

<i>Species</i>	<i>Jan</i>	<i>Feb</i>	<i>Mar</i>	<i>Apr</i>	<i>May</i>	<i>Jun</i>	<i>Jul</i>	<i>Aug</i>	<i>Sep</i>	<i>Oct</i>	<i>Nov</i>	<i>Dec</i>
Atlantic croaker												
Bay anchovy												
Bay whiff												
Black drum												
Blue crab												
Brown shrimp												
Gizzard shad												
Grass shrimp												
Gulf menhaden												
Hardhead catfish												
Inland silverside												
Red drum												
River Shrimp												
Sand trout												
Spot												
Striped mullet												
Threadfin shad												
White shrimp												

*Sources: Patillo et al, 1997<sup>1</sup>, TPWD 2018<sup>2</sup>. (Gray shaded cells indicate peak spawning and recruitment months)*

**7. larval recruitment, and**

Once spawning occurs eggs and larvae will float in the water column and then will be transported by currents into the shallow bay waters or rivers that act as nurseries. The time frame for ontogenetic process (eggs to larvae to juvenile) will vary by species. Current literature indicates that once eggs are released it can take between 10 to 60 days for most species to become larvae and then more than 30 days to move from larvae to post-larvae or actual juvenile stage. This temporal lag between eggs to larvae and then larvae to juvenile indicates that the spawning to recruitment process for most of these species represented in lower Colorado River would more than likely be late larvae or early juveniles before reaching the STPEGS RMPF Cooling Water Intake Structure.

Following the abundance of adults during spawning season, a temporal lag of roughly one to two months will occur in which there will be a peak in the abundance of larval stages associated with recruitment into the river. Entrainment data from NUREG recorded in 1983-1984 indicated that larval densities were lower in the first sampling period (early July) than in the other sampling periods (late July, early August, and mid-September).

<sup>1</sup> Pattillo, M.E., T.E. Czaplá, D.M. Nelson, and M.E. Monaco. 1997. Distribution and abundance of fishes and invertebrates in Gulf of Mexico estuaries, Volume II: Species life history summaries. ELMR Rep. No. 11. NOAA/NOS Strategic Environmental Assessments Division, Silver Spring, MD. 377 p.

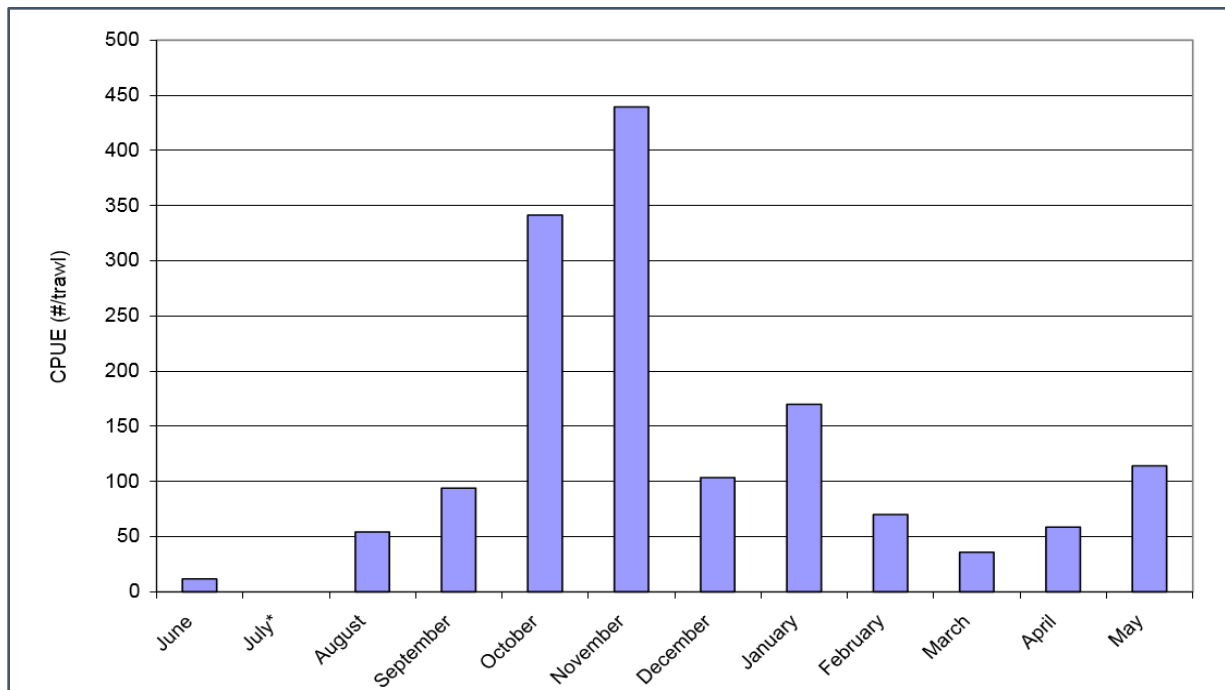
<sup>2</sup> Texas Parks and Wildlife. 2018. Sabine Lake Fisheries Data – Bag Seine Sampling Results from 2006-2017.



**Attachment F**  
**Worksheet 11.2: Source Water Biological Data**

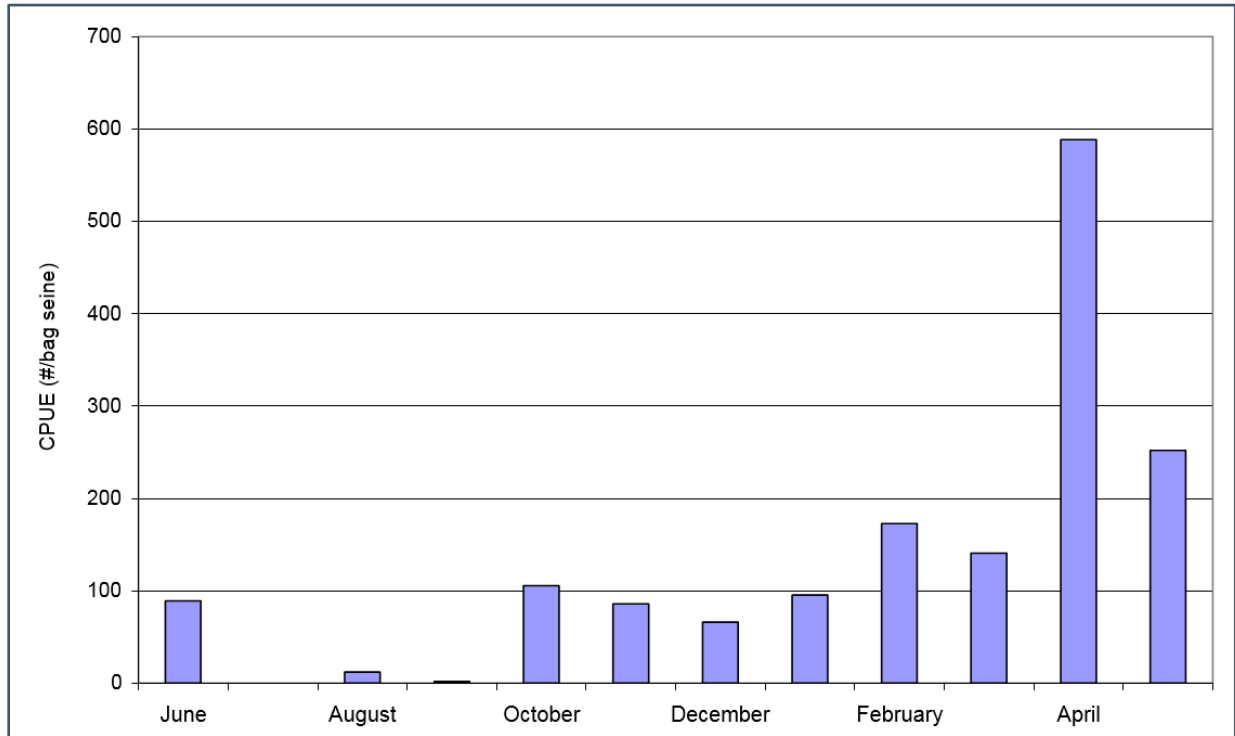
8. *period of peak abundance for relevant taxa.*

Examination of catch rates on a monthly or seasonal basis provides insights into potential species-specific trends due to factors such as spawning periods, habitat preferences, migration patterns, etc. While studies from 1974 and 1983-1984 had a small number of sampling periods, data from 2007-2008 contains monthly data for an entire yearly cycle. Monthly catch rate data were available for overall catch within the 2007-2008 dataset and is presented in Figures 7-8 below. The bag seine and trawl data represent those organisms that are susceptible to impingement.



**FIGURE 7:** Catch per unit effort (CPUE) for organisms collected from trawl samples in the lower Colorado River, 2007 - 2008

**Attachment F**  
**Worksheet 11.2: Source Water Biological Data**

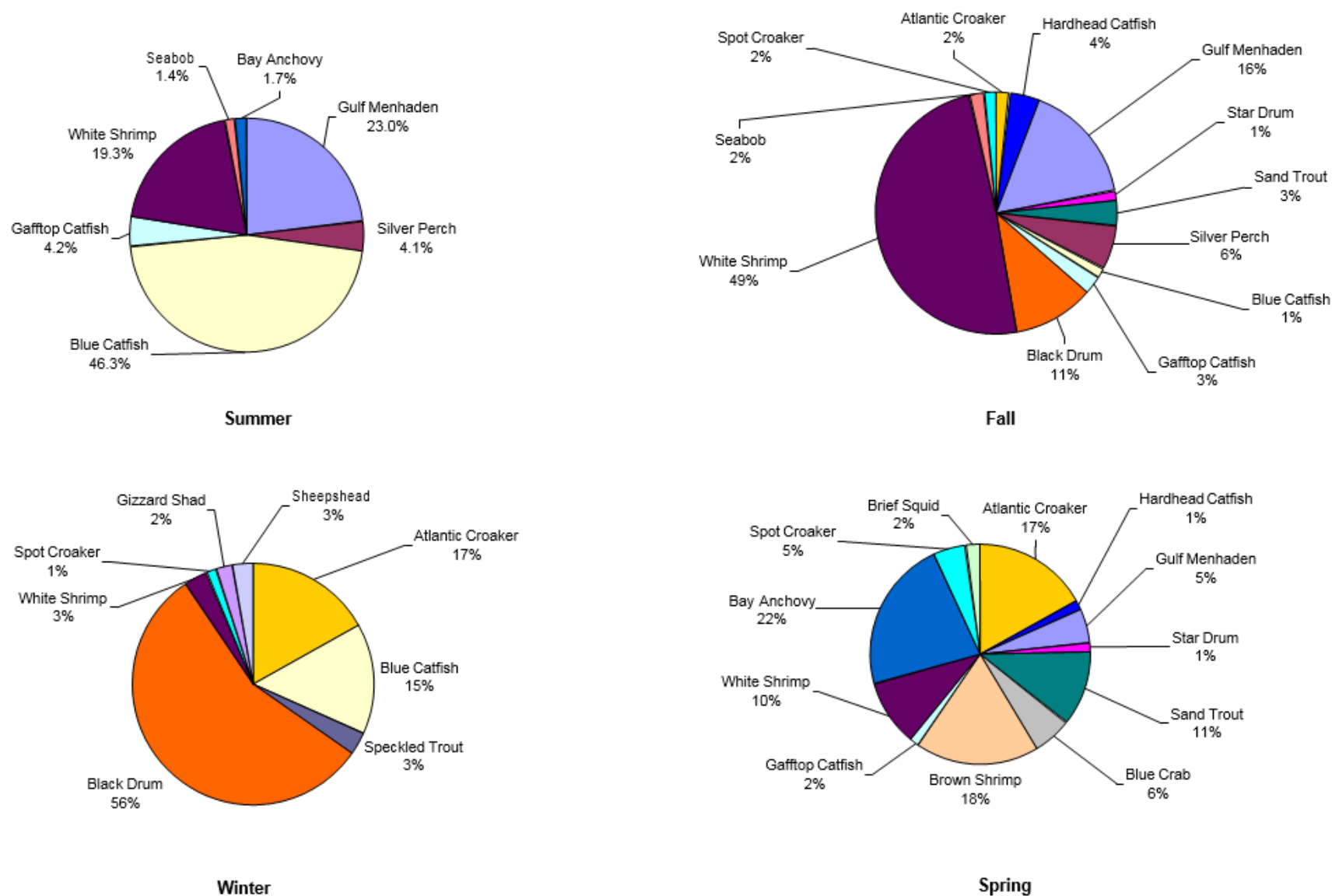


**FIGURE 8: Catch per unit effort (CPUE) for organisms collected from bag seine samples in the lower Colorado River, 2007 - 2008**

- c. Data representative of the seasonal and daily activities (e.g., feeding and water column migration) of biological organisms in the vicinity of the cooling water intake structure.*

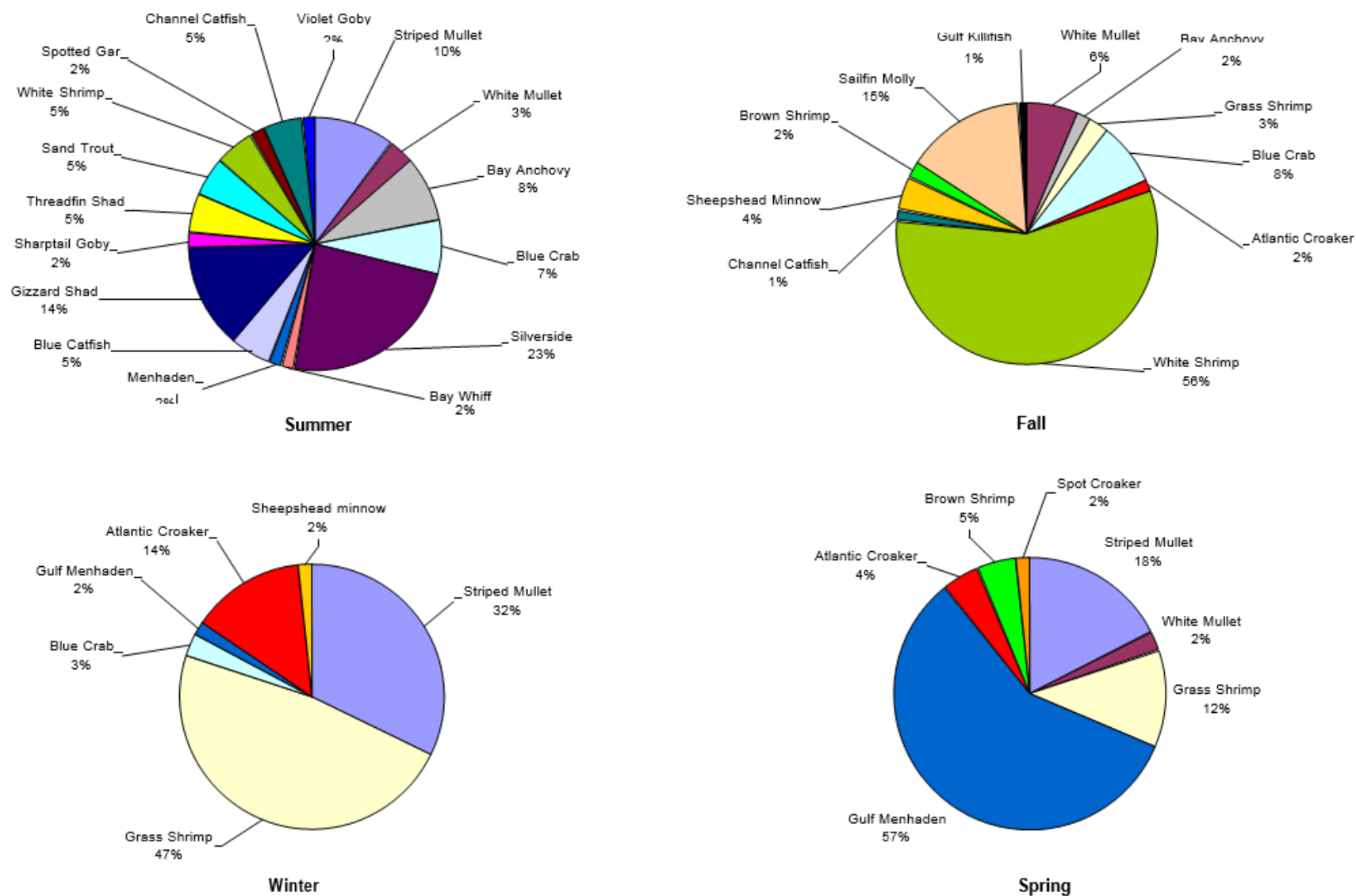
Examination of catch rates on a monthly or seasonal basis provides insights into potential species-specific trends due to factors such as spawning periods, habitat preferences, migration patterns, etc. Monthly catch rate data were available for several species within the 2007-2008 dataset and is presented in Figures 9-10 below.

**Attachment F**  
**Worksheet 11.2: Source Water Biological Data**



**FIGURE 13: Seasonal composition of aquatic organisms representing >1% of trawl samples in the lower Colorado River, 2007-2008**

**Attachment F**  
**Worksheet 11.2: Source Water Biological Data**



**FIGURE 14: Seasonal composition of aquatic organisms representing >1% of bag seine samples in the lower Colorado River, 2007-2008**

**Attachment F**  
**Worksheet 11.2: Source Water Biological Data**

- d. Identify all threatened, endangered, and other protected species that might be susceptible to impingement and entrainment at the CWIS(s).

Review of United States Fish and Wildlife Service (USFWS) Threatened and Endangered Species List on July 11, 2024, for Matagorda County identified 13 protected species: one mammal, five birds, four reptiles, one insect, and two clam/mussel species as shown in Table 6. None of these species are considered susceptible to impingement and entrainment at the STPEGS RMPF Cooling Water Intake Structure. No critical habitat was identified in the vicinity of the RMPF Cooling Water Intake Structure.

**TABLE 6: USFWS Threatened and Endangered Species in Matagorda County**

Type	Common name	Scientific name	Status
<b>Bird</b>	Eastern Black Rail	<i>Laterallus jamaicensis</i> spp. <i>jamaicensis</i>	Threatened
	Piping Plover	<i>Charadrius melodus</i>	Threatened
	Northern Aplomado Falcon	<i>Falco femoralis septentrionalis</i>	Endangered
	Rufa Red Knot	<i>Calidris canutus rufa</i>	Threatened
	Whooping crane	<i>Grus Americana</i>	Endangered
<b>Clam/Mussel</b>	Texas Fawnfoot	<i>Truncilla macrodon</i>	Threatened
	Texas Pimpleback	<i>Cyclonaias petrina</i>	Endangered
<b>Mammal</b>	Tricolored Bat	<i>Perimyotis subflavus</i>	Proposed Endangered
<b>Insect</b>	Monarch Butterfly	<i>Danaus plexippus</i>	Candidate
<b>Reptile</b>	Green sea turtle	<i>Chelonia mydas</i>	Threatened
	Hawksbill sea turtle	<i>Eretmochelys imbricata</i>	Endangered
	Kemp's Ridley sea turtle	<i>Lepidochelys kempii</i>	Endangered
	Leatherback sea turtle	<i>Dermochelys coriacea</i>	Endangered

- e. Documentation of any public participation or consultation with federal or state agencies undertaken and provide an attachment number.

STPNOC has not completed any public participation or consultation with federal or state agencies associated with this application development.

The following is required for existing facilities only. Include the following information with the above-listed attachment.

- f. Identify any protective measures and stabilization activities that have been implemented and provide a description of how these measures and activities affected the baseline water condition in the vicinity of the intake.

The RMPF Cooling Water Intake Structure is designed with steel sheet piling around the structure to provide protective measures and shoreline stabilization. Additionally, STPNOC frequently dredges in and adjacent to the RMPF Cooling Water Intake Structure to maintain the appropriate water depths

**Attachment F**  
**Worksheet 11.2: Source Water Biological Data**

for the intake screens. Neither of these activities have an impact on the baseline water conditions evaluated in the vicinity of the intake.

- g. A list of fragile species, as defined at 40 CFR § 125.92(m), at the facility. The applicant need only identify those species not already identified as fragile at 40 CFR § 125.92(m).*

Fragile species are also susceptible to impingement, and are defined as those with an impingement survival rate of less than 30 percent. Impingement mortality data from the historical studies and current relative abundance data indicated fragile species found in the vicinity of the RMPF Cooling Water Intake Structure include Gulf menhaden, gizzard shad, threadfin shad, and bay anchovy.

**Attachment F**  
**Worksheet 11.3: Entrainment**

**Item 2: Existing Entrainment Performance Studies – Section 122.21(r)7**

Previously conducted studies or studies obtained from other facilities addressing technology efficacy, through-facility entrainment survival, and other entrainment studies.

*§122.21(r)(7) Entrainment Performance Studies*

Entrainment monitoring studies have been performed at the South Texas Project Electric Generating Station (STPEGS) that included the source water makeup from the Colorado River and the Main Cooling Reservoir (MCR).

(i) *Submit a description of any biological survival studies conducted at the facility and a summary of any conclusions or results, including the following: site-specific studies addressing technology efficacy, through facility entrainment survival (distinguished for eggs and larvae), entrainment analyses, or studies conducted at other locations including a justification as to why the data are relevant and representative of conditions at the facility.*

- a. The Construction Phase (CP) of the Final Environmental Statement (FES) for the STPEGS included a requirement from the Nuclear Regulatory Commission (NRC) to conduct a two-phase monitoring program related to the ecological conditions in the lower Colorado River.<sup>1</sup> Phase 1 occurred before the filling of the MCR. Phase 1 of the entrainment monitoring program was conducted from April 1975 to April 1976 and consisted of 26 sampling dates at 15 site locations with samples taken weekly from March through May, August through December, every other week during January through February and June through July.<sup>2</sup> Phase 2 of the entrainment monitoring program was conducted adjacent to the Reservoir Makeup Pumping Facility (RMPF) at one site location from July 1983 through December 1984 during the filling of the MCR.<sup>3</sup> McAden conducted studies to estimate entrainment impacts by collecting surface plankton samples in front of the RMPF. McAden used a hand-towed 0.5-meter (20-inch mouth diameter) ichthyoplankton net with 0.5-millimeter (0.02-inch) square mesh and swept the hand-tow parallel to the front wall of the pump structure. The most collected species included the zoeae and juveniles of Harris mud crabs (*Rhithropanopeus harrisi*), river shrimp (*Macrobrachium ohione*), and white shrimp (*Litopenaeus setiferus*). McAden collected the eggs and larvae of two fish species, bay anchovy (*Anchoa mitchilli*) and mosquito fish (*Gambusia affinis*). McAden also conducted plankton tows in the Colorado River near the RMPF. The most collected species of fish eggs and larvae included bay anchovy, Gulf menhaden (*Brevoortia patronus*), and Atlantic croaker (*Micropogonias undulatus*). Based on the McAden et. al entrainment study (1984;1985), the NRC estimated that entrainment losses would be approximately 10 percent of the organisms passing the RMPF.<sup>3</sup> This value represents the loss of organisms in the influence of the tidal flow in the river and does not represent the entire populations of those species in the lower Colorado River.
- b. STP Nuclear Operating Facility (STPNOC) has not conducted impingement and/or entrainment studies on the Colorado River at the River Makeup Pumping Facility since its 1983 to 1984 study. However, STPNOC conducted impingement and entrainment studies at the Reservoir Circulating Water Intake Structure on the Main Cooling Reservoir (MCR), not a water of the

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<sup>1</sup> U.S. Nuclear Regulatory Commission (NRC) 1975. Final Environmental Statement: Construction Phase – STP Units 1 and 2

<sup>2</sup> NUS 1976b as cited in NRC. 1986. Final Environmental Statement related to the operation of South Texas Project, Units 1 and 2. Docket Nos. 50-498 and 50-499.

<sup>3</sup> McAden et al. 1984 and 1985. Colorado River Entrainment and Impingement Monitoring Program, Reports 1 and 2

**Attachment F**  
**Worksheet 11.3: Entrainment**

U.S., from May 2007 through April 2008.<sup>4</sup> The objective of the study was “to characterize the aquatic species within the MCR, and to evaluate impingement and entrainment impacts to establish, to the extent possible, relationships between the presence of aquatic organisms and the current (STP, Units 1 and 2) intake design and operating parameters”. Entrainment samples were collected over a 24-hour period, twice per month from May through September and once per month from October through April. Entrainment samples were collected by placing 0.363-millimeter (0.014-inch) plankton nets behind the trash bars at the CWIS. Water was pumped from a depth of approximately 12 feet (3.7 meters) through a buffering chamber at flows up to 10,800 gallons per hour or 180 gallons per minute (gpm). Pumps were operated pumps four times per day, for approximately 2 hours per event, for a volume of 100 cubic meters (3,500 cubic feet) of water per 24-hour period. The entrainment study collected 207,696 organisms representing nine different fish families and 12 different classes of invertebrates. The most impinged taxa included Harris mud crab (68%) and unidentified decapod zoea (free swimming larvae) (15%). Ichthyoplankton, or fish eggs and larvae, comprised less than 1% of all entrained organisms. The highest entrainment rates were reported from April through June and the lowest from December through March. Entrainment of threadfin shad and mud crabs was highest in late spring and summer with the entrainment of silversides highest in summer.<sup>4</sup>

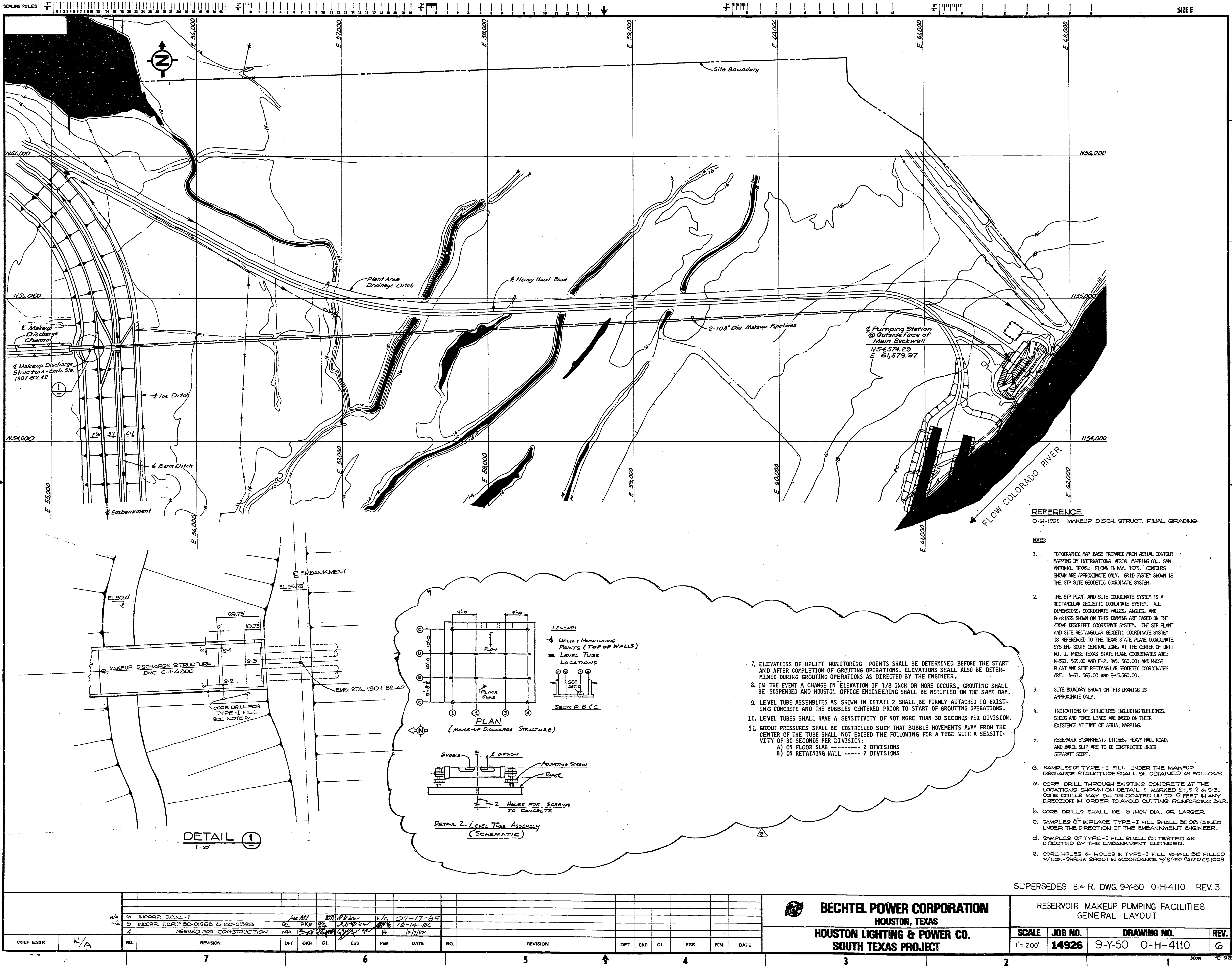
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<sup>4</sup> ENSR 2008. Aquatic Ecology – Colorado River Monitoring Report: Unit 3 and 4 Licensing



**APPENDIX 1**  
**ENGINEERING DRAWINGS**

O-H-4110



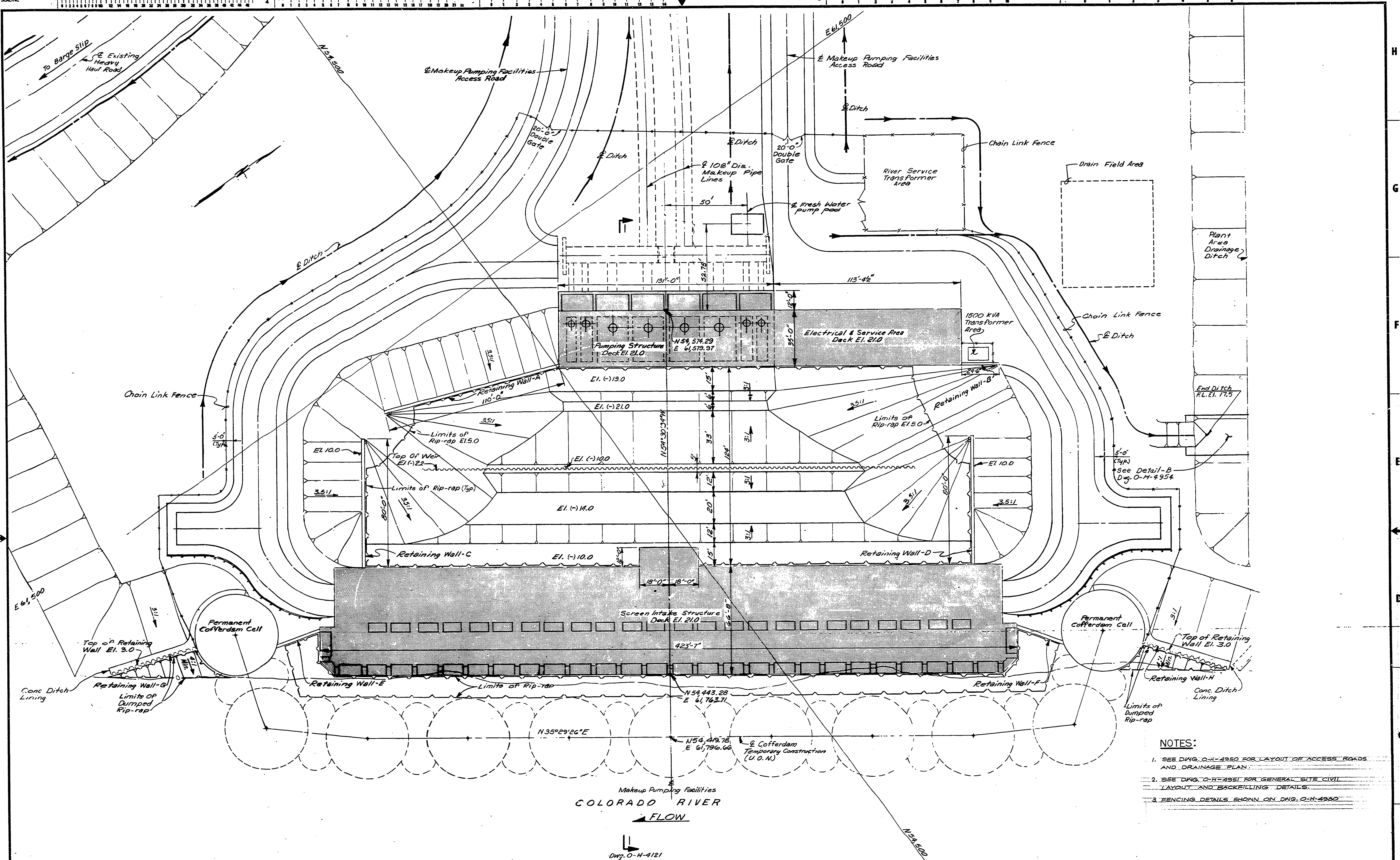
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															<div>SCALE</div> <div>1"= 200'</div>		<div>JOB NO.</div> <div>14926</div>		<div>DRAWING NO.</div> <div>9-Y-50 O-H-4110</div>		<div>REV.</div> <div>6</div>							

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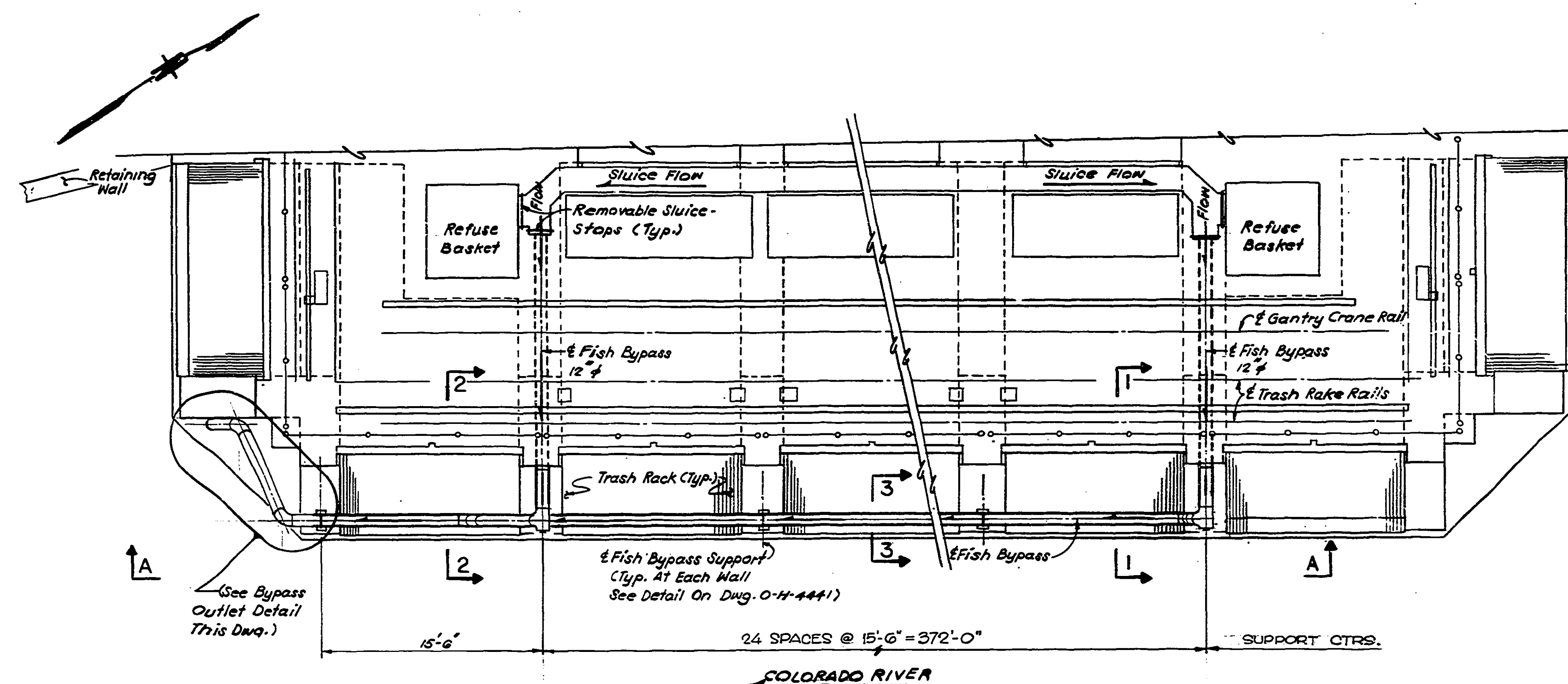


NOTES:

1. SEE DWG. O-H-4950 FOR LAYOUT OF ACCESS ROADS AND DRAINAGE PLAN.
2. SEE DWG. O-H-4951 FOR GENERAL SITE CIVIL LAYOUT AND BACKFILLING DETAILS.
3. FENCING DETAILS SHOWN ON DWG. O-H-4950.

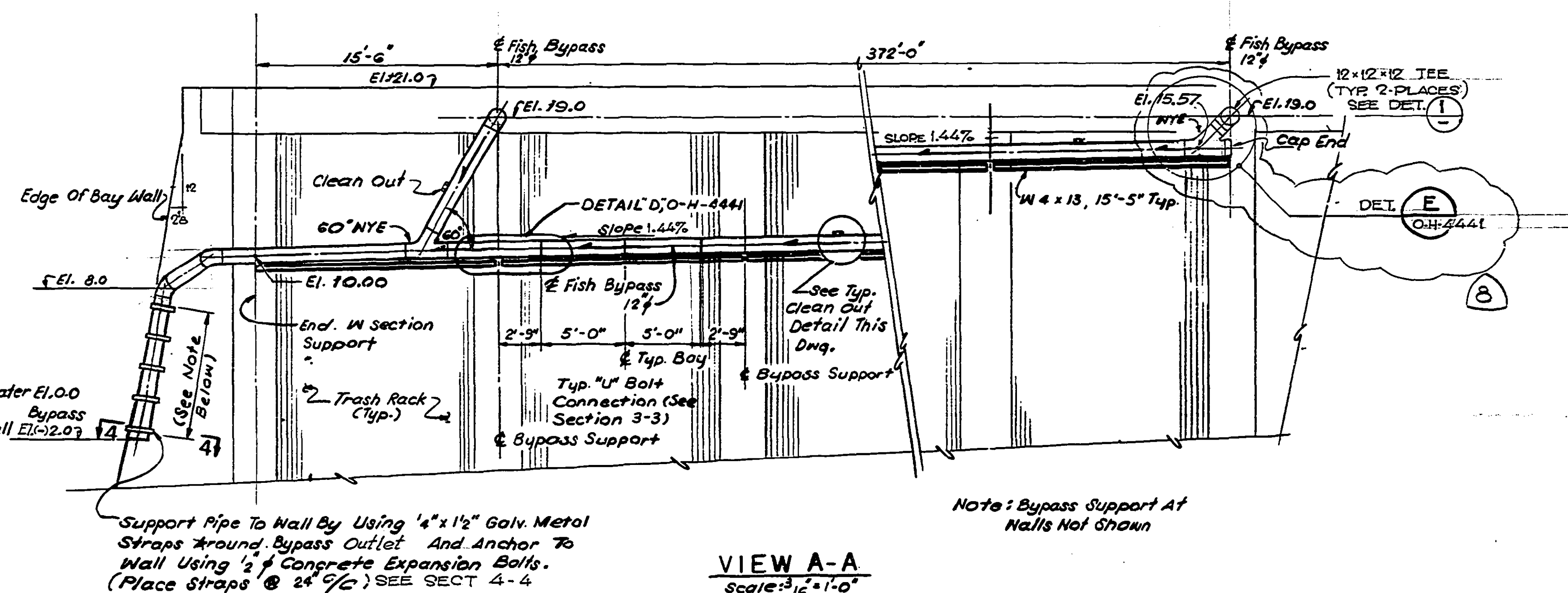
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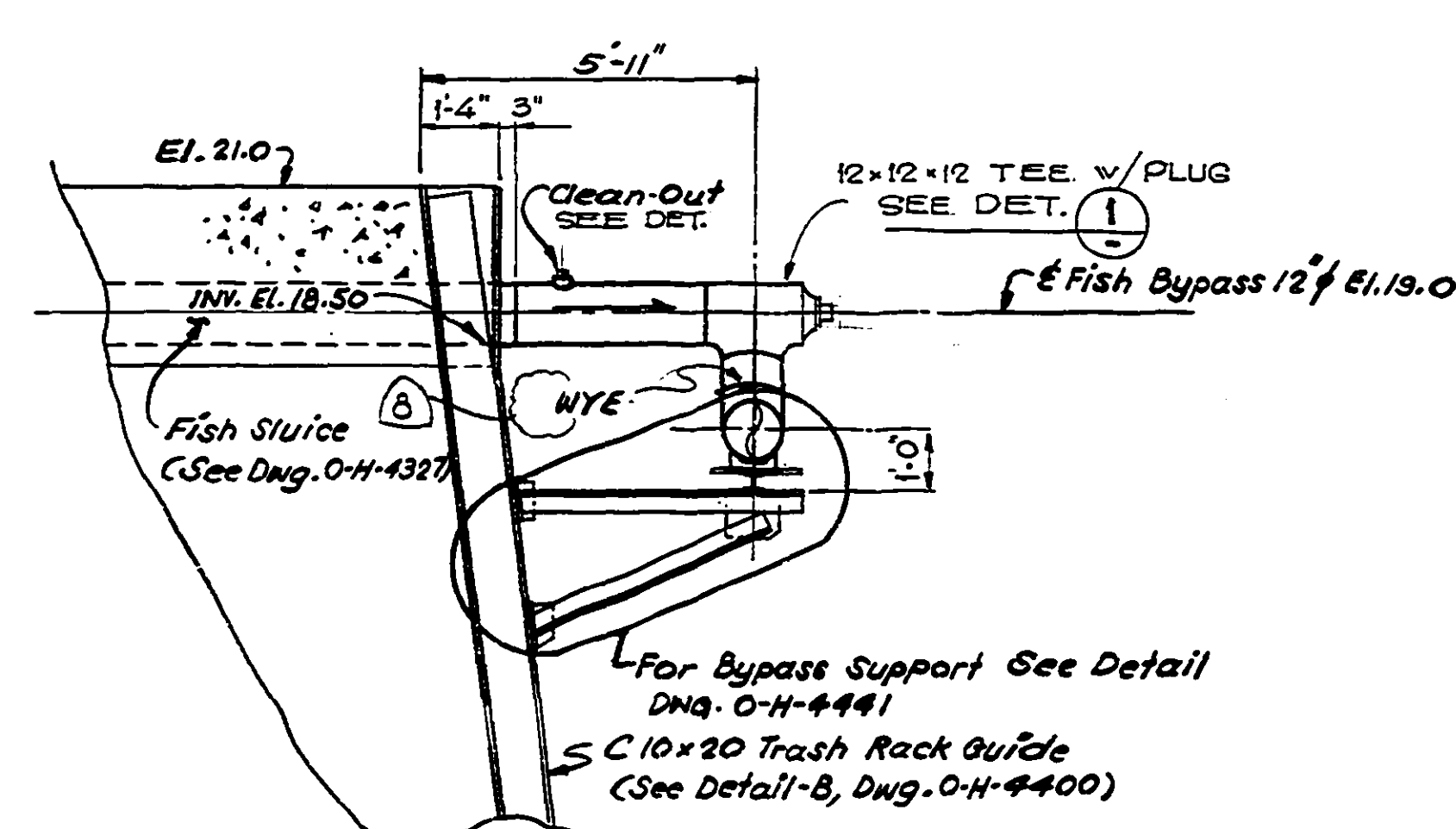


SCREEN INTAKE STRUCTURE PLAN  
Scale: 1/8"=1'-0"

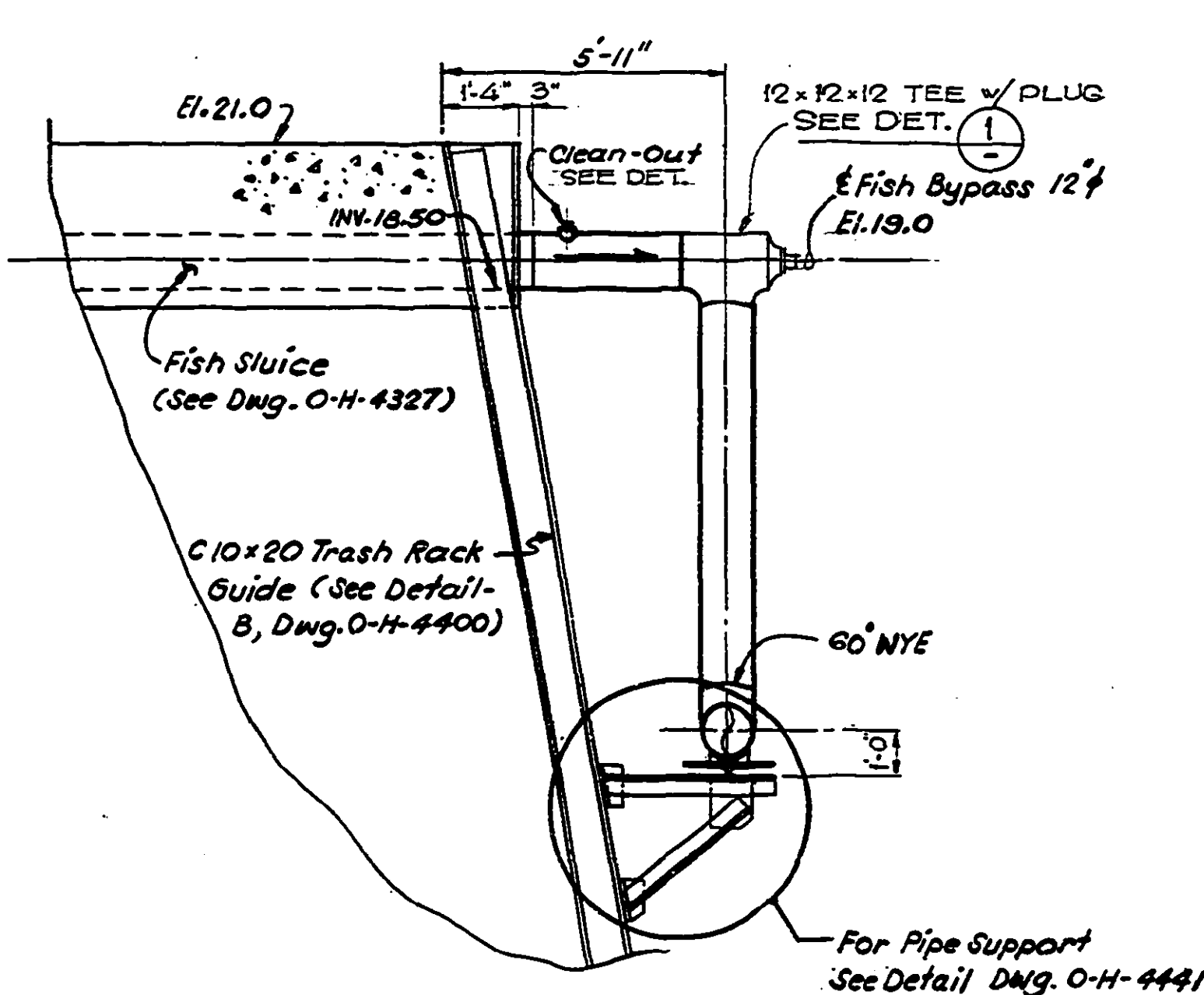
Screen Intake Structure Detail  
See Dwg. O-H-4320, O-H-4321  
& O-H-4322



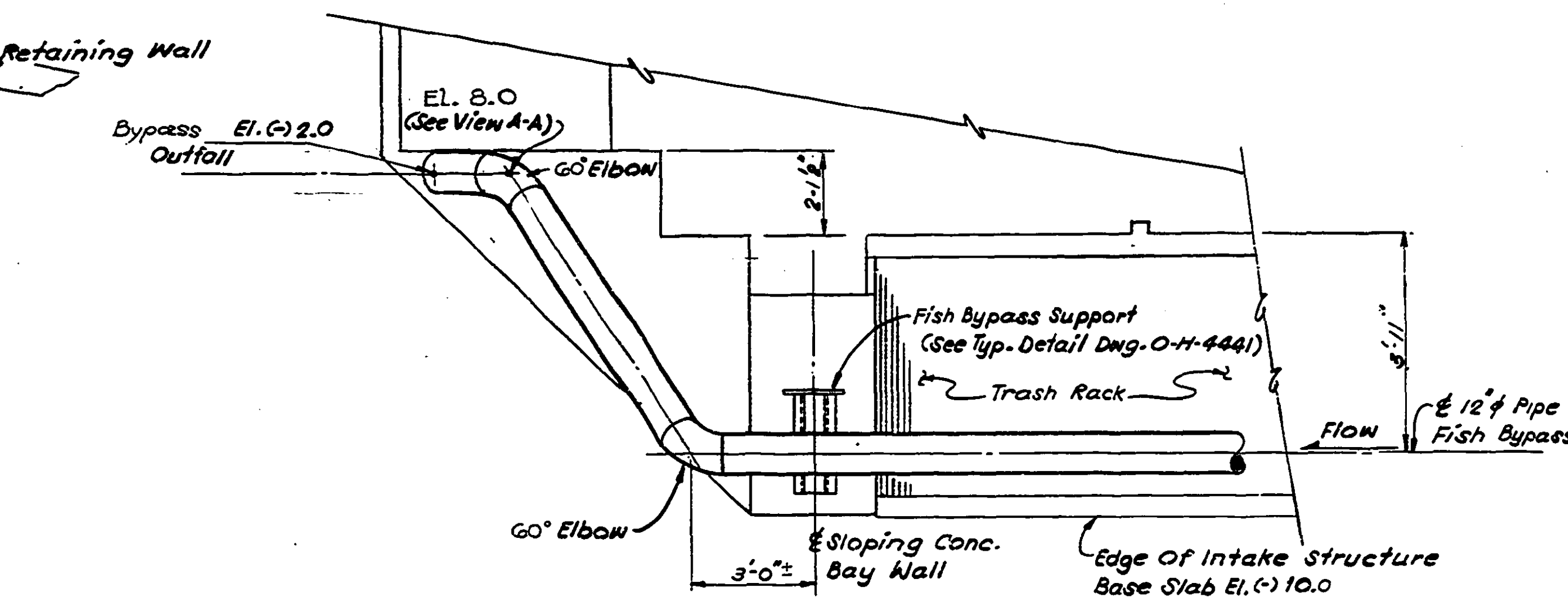
VIEW A-A  
Scale: 1/8"=1'-0"



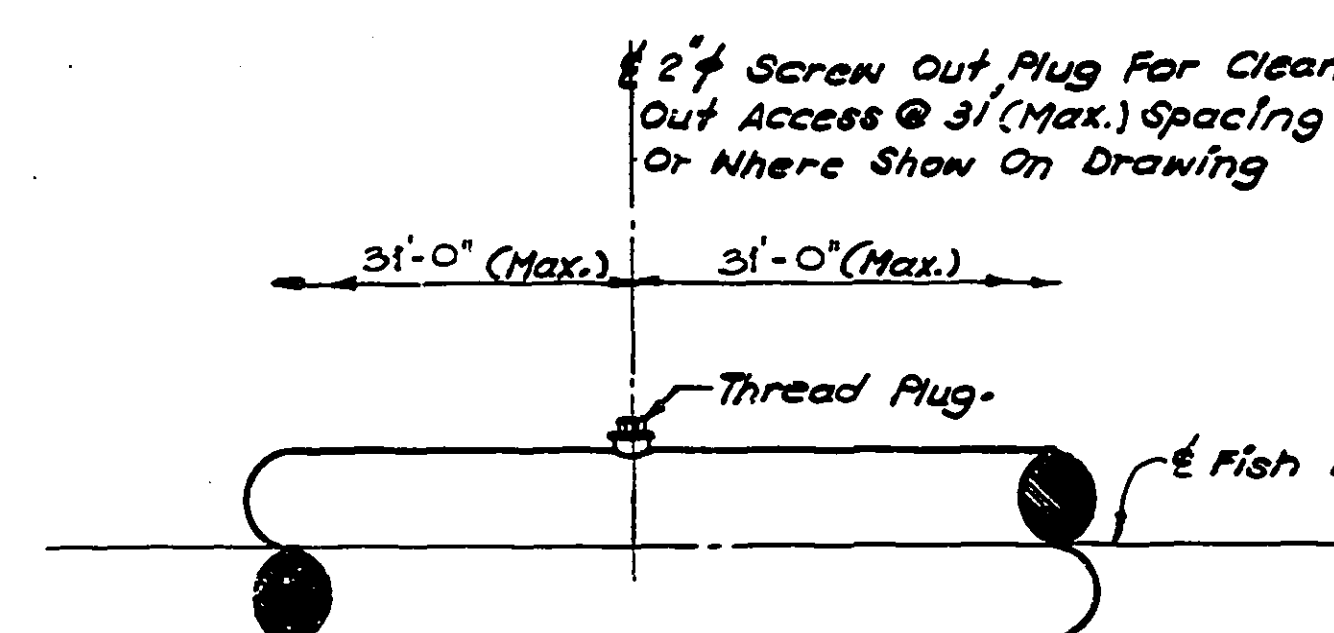
SECTION 1-1  
Scale: 3/8"=1'-0"



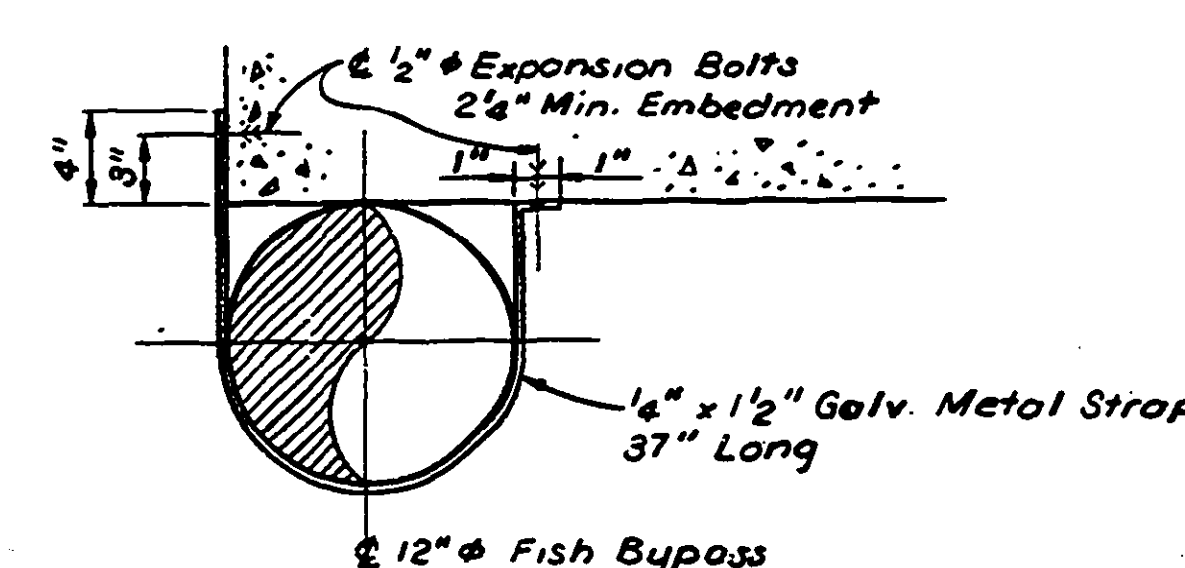
SECTION 2-2  
Scale: 3/8"=1'-0"



BYPASS OUTLET DETAIL  
Scale: 3/8"=1'-0"

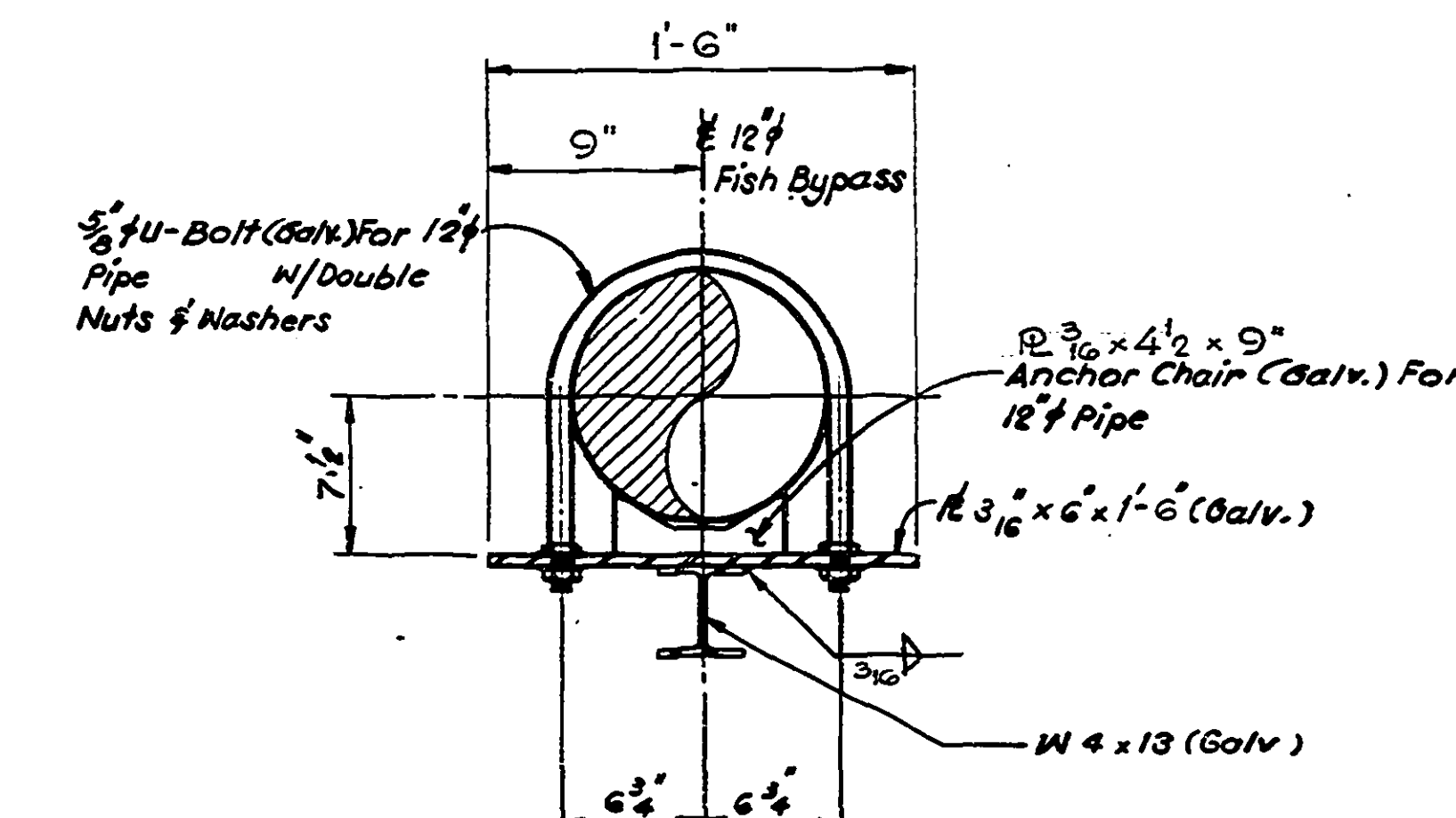


TYPICAL CLEAN-OUT  
DETAIL  
Scale: 1/4"=1'-0"



DETAIL 1  
Scale: 1/4"=1'-0"

SECTION 4-4  
Scale: 1/2"=1'-0"



SECTION 3-3  
Scale: 1/8"=1'-0"

## NOTES:

- FOR GENERAL NOTES SEE DWG. O-H-4203
- FISH BYPASS PIPE & FITTINGS SHALL BE SCH. 40 PVC SEWER PIPE PER SPEC. 9A 820 85003, PLUMBING SEC. 3.7 PIPE JOINTS SHALL BE MADE W/ SOLVENT CEMENT EXCEPT 12"x12" SANITARY TEE & ASSOCIATED FITTINGS FOR MATERIAL REQUIREMENTS SEE DETAIL 1
- ALL STEEL SHALL BE COATED IN ACCORDANCE W/ COATING SYSTEM STANDARD C-801 OF SPECIFICATION 7810AS100.
- ALL BOLTS SHALL CONFORM TO ASTM A 307 U.N.O. BOLTS, NUTS & WASHERS SHALL BE GALVANIZED

## REFERENCE

O-H-36003 FISH BYPASS LINE PLATFORMS

ISSUED IN REFERENCE TO DCP O-C-0001-00

SUPERSEDES B. & R. DWG. 9-Y-50 O-H-4440 REV. 3

NO.	REVISION	DFT	CHK	GL	ESS	PER	DATE	NO.	REVISION	DFT	CHK	GL	ESS	PER	DATE
1	REV'D NORTH END OF FISH BYPASS	AR	AR	AR	AR	AR	04-02-85	1	REV'D NORTH END OF FISH BYPASS	AR	AR	AR	AR	AR	04-02-85
2	INCORP. D.C.N. 4 (O.H. 4 SUPERSEDES D.C.N. 3)	AR	AR	AR	AR	AR	04-02-85	2	INCORP. D.C.N. 4 (O.H. 4 SUPERSEDES D.C.N. 3)	AR	AR	AR	AR	AR	04-02-85
3	INCORP. D.C.N. 5 (O.H. 4 SUPERSEDES D.C.N. 4)	AR	AR	AR	AR	AR	04-02-85	3	INCORP. D.C.N. 5 (O.H. 4 SUPERSEDES D.C.N. 4)	AR	AR	AR	AR	AR	04-02-85
4	REV'D FISH BYPASS ELEV. & SLOPE - INCORP. D.C.N. 1	AR	AR	AR	AR	AR	04-02-85	4	REV'D FISH BYPASS ELEV. & SLOPE - INCORP. D.C.N. 1	AR	AR	AR	AR	AR	04-02-85
5	REV'D AS NOTED & ISSUED FOR CONSTRUCTION	AR	AR	AR	AR	AR	11-18-82	5	REV'D AS NOTED & ISSUED FOR CONSTRUCTION	AR	AR	AR	AR	AR	11-18-82

**BECHTEL ENERGY CORPORATION**  
HOUSTON, TEXAS  
**HOUSTON LIGHTING & POWER CO.**  
SOUTH TEXAS PROJECT

SCALE	JOB NO.	DRAWING NO.	REV.
AS NOTED	14926	9-Y-50 O-H-4440	8

O-H-4121

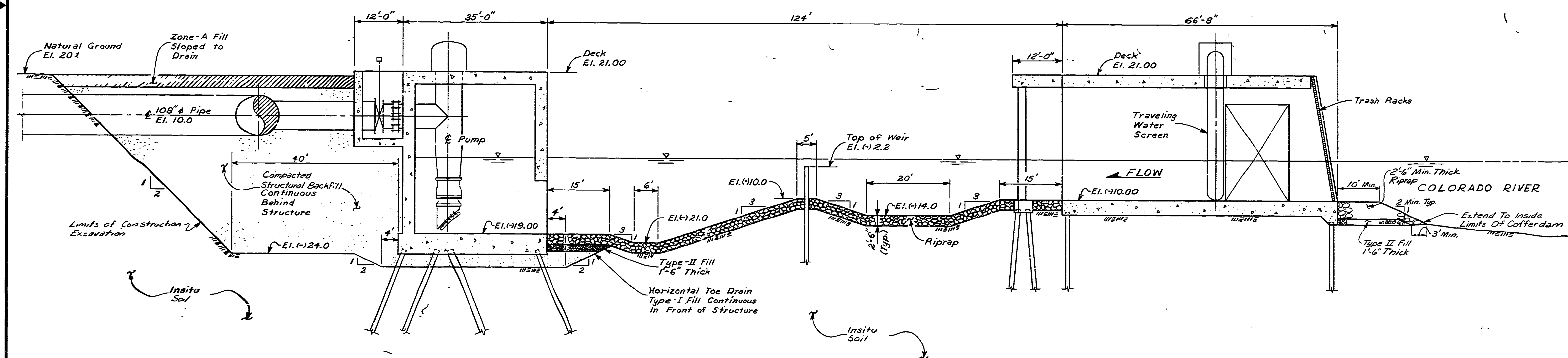
SCALING RULES

DATE

This drawing and the design it covers are the property of BECHTEL. They are hereby loaned and on the borrower's express agreement that they will not be reproduced, copied, loaned, exhibited, or used except in the limited way and private use permitted by any written consent given by the lender to the borrower.

# NOTES:

- 1- See Notes on Drawing O-H-4110.
- 2- See Drawing O-H-4950 for Layout of Roads, Fencing & Drainage Ditches.
- 3- See Drawing O-H-4120 for Plan Layout of Makeup Pumping Facilities.
- 4- Areas under foundation slabs which have been overexcavated shall be brought up to lines and grades as shown on the drawings with compacted Type I fill material or Structural Backfill. Structural Backfill shall conform to the material requirements of South Texas Project Specification 3Y06919029.
- 5- Type I fill material and Structural Backfill material shall be spread in uniform horizontal layers, each not more than 12 inches thick after compaction and shall be compacted to a relative density which, when averaged by the moving average method, will be at least 80% of the maximum relative density as determined by ASTM Designation D-2049-63. The moving average will be determined as follows: In a series of 10 consecutive tests, the relative density shall average at least 80%. No test result shall be lower than 75%. No more than 2 test results shall be lower than 80%. See Drawing O-H-4203, General Notes #28 and #29.
- 6- The density of the Type I fill material and the Structural Backfill material shall be tested at each structure at least once per shift during which Type I fill or Structural Backfill material is placed. Also, hand tamped Type I fill material or Structural Backfill material shall be tested at least once every 200 cubic yards and machine compacted material shall be tested at least once every 1000 cubic yards.



SECTION I-I  
Dwg. O-H-4120  
Scale: 1"=10'

SUPERSEDES B. & R. DWG. 9-Y-50 O-H-4121 REV. 6

CHIEF ENGR	N/A	NO.	REVISION	DFT	CKR	GL	EGS	PEM	DATE	NO.	REVISION	DFT	CKR	GL	EGS	PEM	DATE
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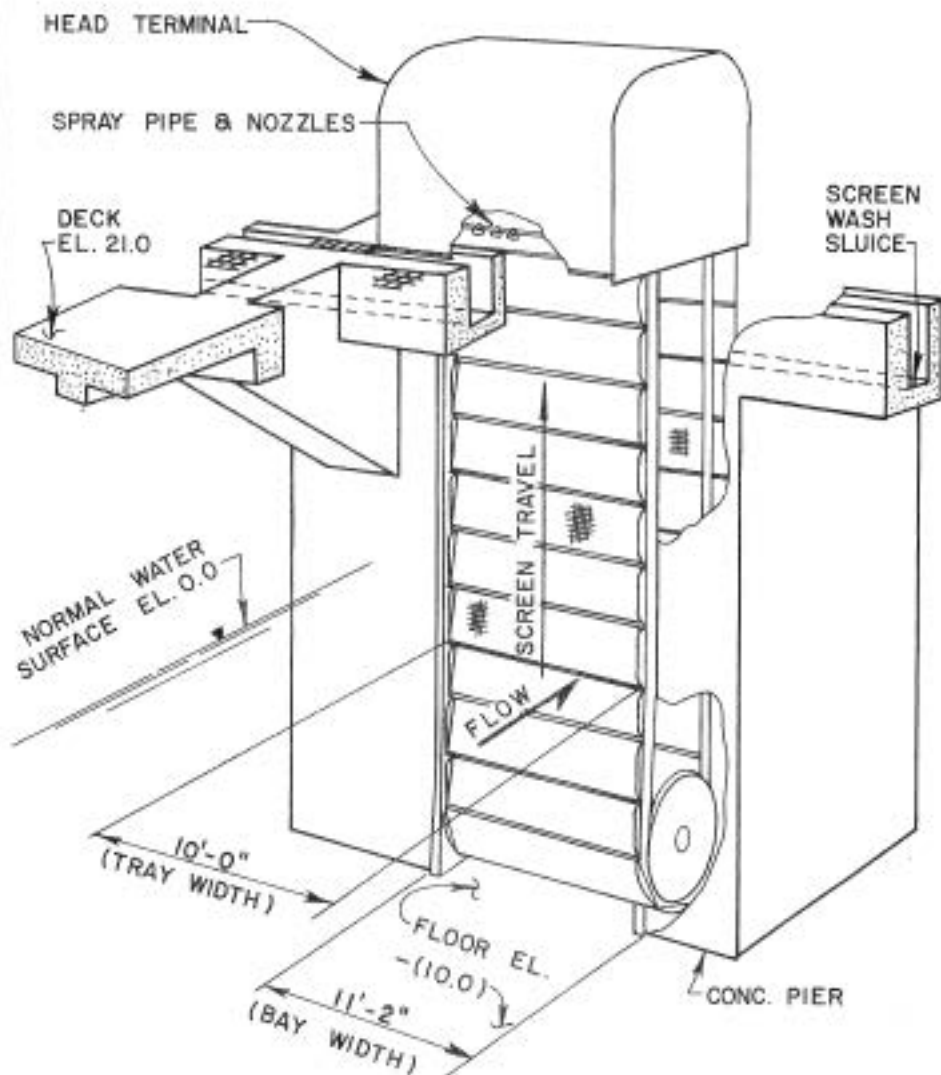
**BECHTEL POWER CORPORATION**  
HOUSTON, TEXAS  
**HOUSTON LIGHTING & POWER CO.**  
SOUTH TEXAS PROJECT

SCALE	JOB NO.	DRAWING NO.	REV.
AS SHOWN	14926	9-Y-50 O-H-4121	8

1. I certify that the design contained on this drawing was prepared by me or under my direct supervision and that I am a duly licensed Professional Engineer in the State of Texas.  
2. I certify that the design contained on this drawing was prepared by me or under my direct supervision and that I am a duly licensed Professional Engineer in the State of Texas.  
3. I certify that the design contained on this drawing was prepared by me or under my direct supervision and that I am a duly licensed Professional Engineer in the State of Texas.  
DATE: Tuesday, October 1, 1985  
SIGNATURE: [Signature]  
OPERATOR: [Signature]  
SUPERVISOR: [Signature]

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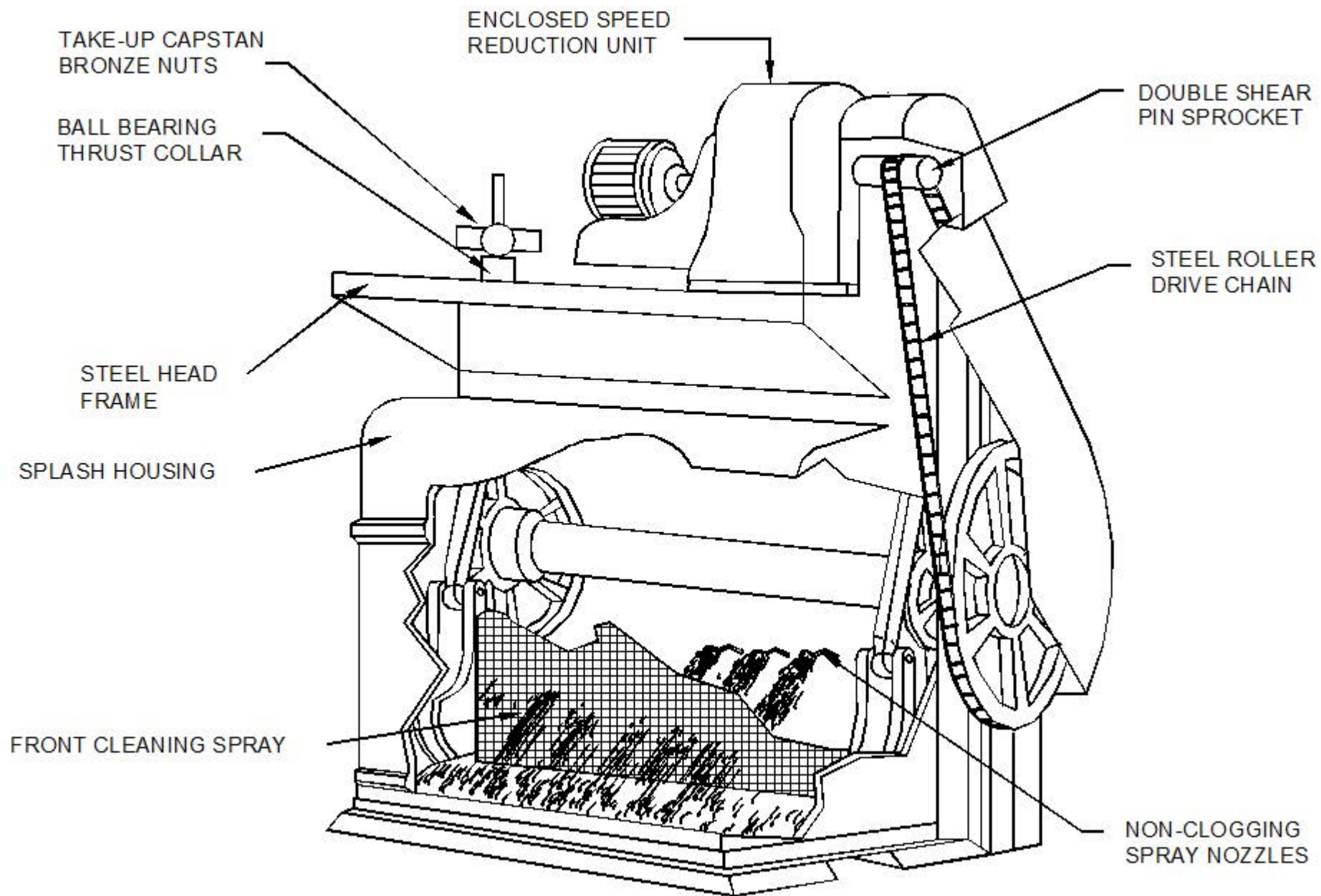




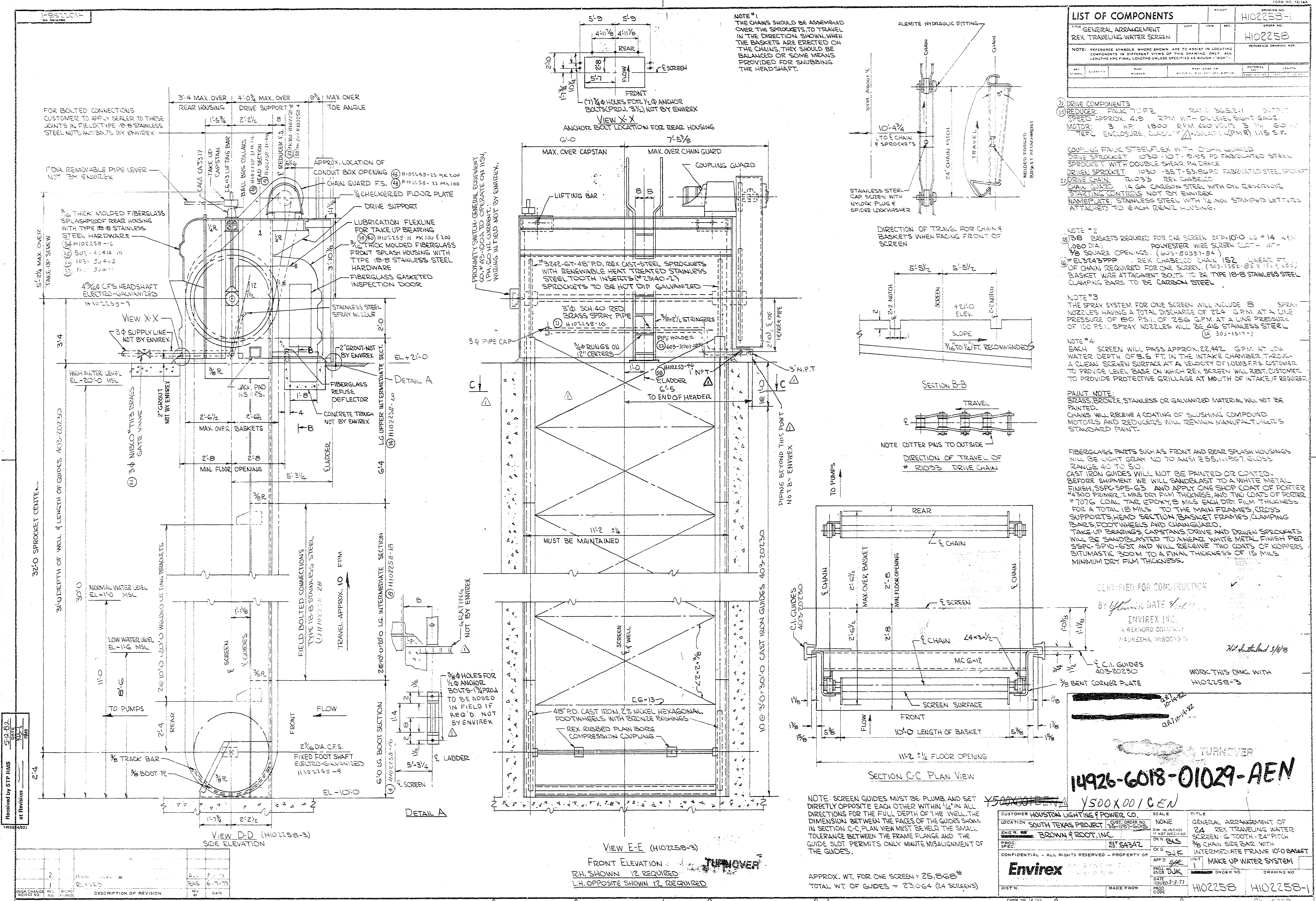
**SOUTH TEXAS PROJECT  
UNITS 1 & 2**

TYPICAL TRAVELING WATER SCREEN  
AT  
MAKEUP INTAKE STRUCTURE

FIGURE 3.4-3







LIST OF COMPONENTS		QTY	UNIT	REV.	DESCRIPTION
GENERAL ARRANGEMENT					
24X TRAVELING WATER SCREEN					
NOTE: REFERENCE SYMBOLS, WHERE SHOWN, ARE TO ASSIST IN LOCATING COMPONENTS IN DIFFERENT VIEWS OF THIS DRAWING. ONLY. ALL LENGTHS ARE FINAL LENGTHS UNLESS SPECIFIED AS ROUGH ("R").					
REV.	DATE	BY	CHKD.	APP'D.	DESCRIPTION
1	10/1/77	W. J. WILSON	J. W. WILSON	J. W. WILSON	ISSUED FOR CONSTRUCTION

**DRIVE COMPONENTS**  
 REDUCER: FALK TOFFI, RATIO 365:2:1, OUTPUT SPEED APPROX. 4.9 RPM WITH OIL LEVEL SIGHT GLASS.  
 MOTOR: 3 HP, 1800 RPM, 460 VOLTS, 3 PH, 60 HZ, TEFC ENCLOSURE, CLASS F INSULATION (PMR) 115 S.F.

**COUPLING FALK STEEL FLEX WITH OILY GUARD**  
 DRIVE SPROCKET: 1030-10T-9-95 PD FABRICATED STEEL SPROCKET WITH DOUBLE SHEAR PIN DEVICE  
 DRIVEN SPROCKET: 1030-155T-55-56 PD FABRICATED STEEL SPROCKET  
 DRIVE CHAIN: T1035-14 GA CARBIDE STEEL WITH OIL RESISTANT STARTING CONTROLS NOT BY ENVIREX  
 NAMEPLATE: STAINLESS STEEL WITH 1/2 INCH STAMPED LETTERS ATTACHED TO EACH REAR HOUSING.

**NOTE #2**  
 38 BASKETS REQUIRED FOR ONE SCREEN 24'X10'0" LG IS 14' X 14' 1080 DIA.  
 1/8 SQUARE OPENINGS (1035-8081-84)  
 3/8 3243PPP REX CHAIN (152 LINEAR FT)  
 OF CHAIN REQUIRED FOR ONE SCREEN (503-1382-85 1/2 1382)  
 BASKET WIRE ATTACHMENT BOLTS TO BE TYPE 18-8 STAINLESS STEEL CLAMPING BARS TO BE CARBON STEEL

**NOTE #3**  
 THE SPRAY SYSTEM FOR ONE SCREEN WILL INCLUDE 8 SPRAY NOZZLES HAVING A TOTAL DISCHARGE OF 224 GPM AT A LINE PRESSURE OF 80 PSI. OF 256 GPM AT A LINE PRESSURE OF 100 PSI. SPRAY NOZZLES WILL BE 3/16 INCH STAINLESS STEEL 3/8 302-1511-1

**NOTE #4**  
 EACH SCREEN WILL PASS APPROX. 22,442 GPM AT LOW WATER DEPTH OF 8.5 FT. IN THE INTAKE CHAMBER THROUGH A CLEAN SCREEN SURFACE AT A VELOCITY OF 1.083 FPS. CUSTOMER TO PROVIDE LEVEL BASE ON WHICH REX SCREEN WILL REST. CUSTOMER TO PROVIDE PROTECTIVE GRILLAGE AT MOUTH OF INTAKE IF REQUIRED.

**PAINT NOTE:**  
 BRASS BRONZE, STAINLESS OR GALVANIZED MATERIAL WILL NOT BE PAINTED.  
 CHAINS WILL RECEIVE A COATING OF SLUSHING COMPOUND.  
 MOTORS AND REDUCERS WILL REMAIN MANUFACTURER'S STANDARD PAINT.

FIBERGLASS PARTS SUCH AS FRONT AND REAR SPLASH HOUSINGS WITH LIGHT GRAY NC 70 ANSI Z55.1-1967, GLOSS RANGE 40 TO 50.  
 CAST IRON GUIDES WILL NOT BE PAINTED OR COATED. BEFORE SHIPMENT WE WILL SANDBLAST TO A WHITE METAL FINISH, SSPC-SP-5-G3 AND APPLY ONE SHOP COAT OF PORTER #4300 PRIMER, 2 MILS DRY FILM THICKNESS, AND TWO COATS OF PORTER #7076 COAL TAR EPOXY, 8 MILS EACH DRY FILM THICKNESS. FOR A TOTAL 16 MILS TO THE MAIN FRAMES, CROSS SUPPORTS, REAR SECTION, MAIN FRAMES, CLAMPING BARS, FOOTWHEELS AND CHANGEGUARD.  
 TAKE-UP BEARINGS, CAPSTANS, DRIVE AND DRIVEN SPROCKETS WILL BE SANDBLASTED TO A NEAR WHITE METAL FINISH PER SSPC-SP-10-GST AND WILL RECEIVE TWO COATS OF Koppers BITUMASTIC 300M TO A FINAL THICKNESS OF 15 MILS MINIMUM DRY FILM THICKNESS.

ISSUED FOR CONSTRUCTION  
 BY: W. J. WILSON, DATE: 10/1/77  
 ENVIREX INC.  
 A REYNOLDS COMPANY  
 WARRICK, INDIANA 46786

WORK THIS DRAWING WITH  
 H102258-3

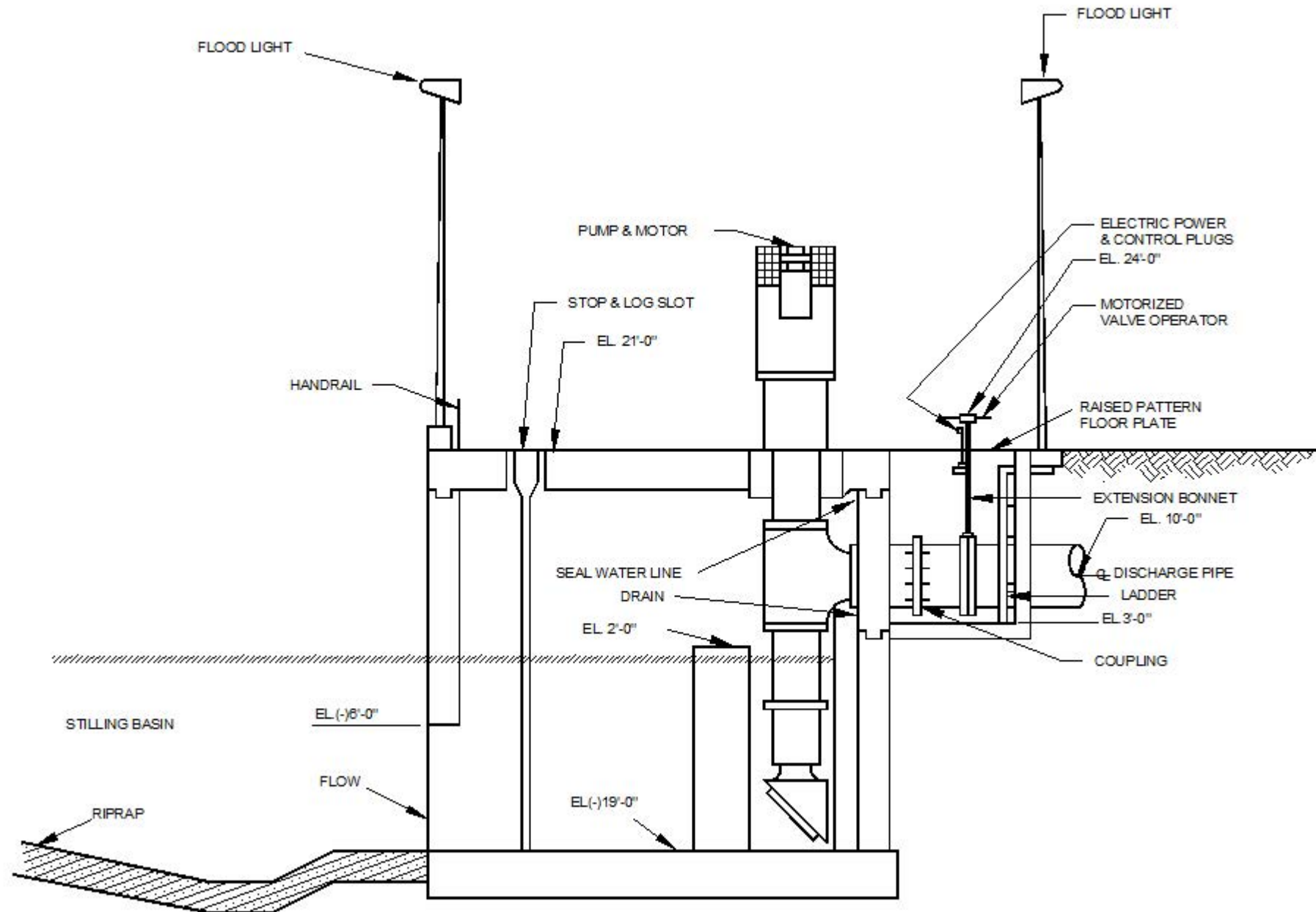
TURNOVER  
 14926-6018-01029-AEN

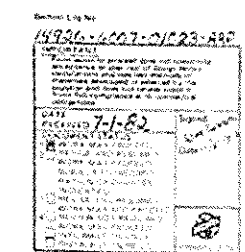
CUSTOMER		SCALE		TITLE	
HOUSTON LIGHTING & POWER CO.		NONE		GENERAL ARRANGEMENT OF	
LOCATION: SOUTH TEXAS PROJECT 38-1187-6018		DW IN INCHES IF NOT SPECIFIED OR R. ELS		24X TRAVELING WATER	
DESIGNED BY: BROWN & ROOT, INC.		BY: W. J. WILSON		SCREEN: 6 TOOTH - 24" PITCH	
PROJ. NO. 587-54342		CHKD. BY: J. W. WILSON		3/8 CHAIN SIDE BAR WITH	
CONFIDENTIAL - ALL RIGHTS RESERVED - PROPERTY OF		APP'D. BY: J. W. WILSON		INTERMEDIATE FRAME 10'0 BASKET	
Envirex		DATE: 10/1/77		MAKE UP WATER SYSTEM	
DIST. NO.		MADE FROM		H102258 H102258-1	
FORM NO. 12-100		PAGE 2200			

I certify that the image contained on this frame was made in the regular course of business, on the date stated below, and that it is an accurate reproduction of the document submitted to Micrographix.

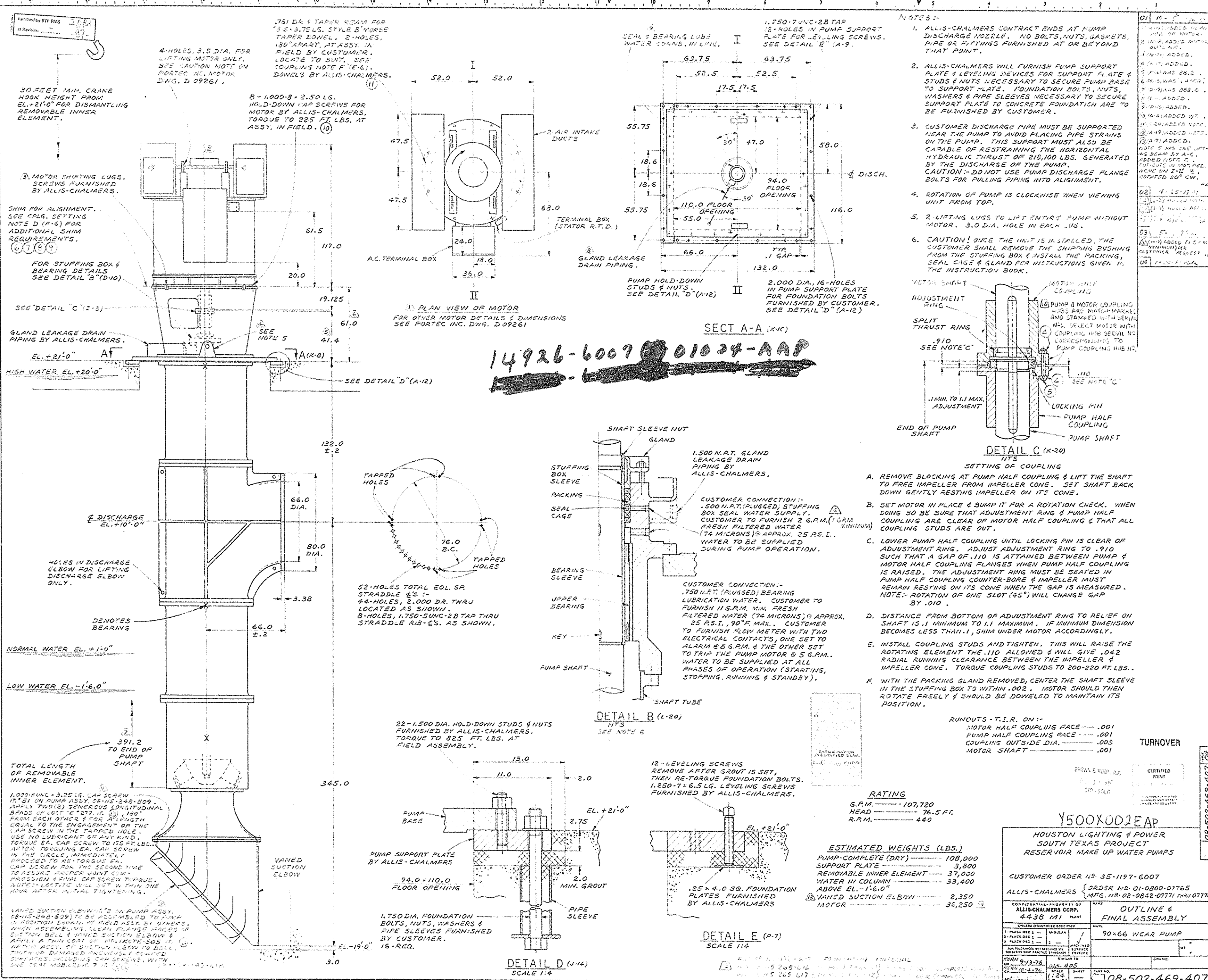
Operator: [Signature]  
 Supervisor: [Signature]  
 Date: 1-26-78



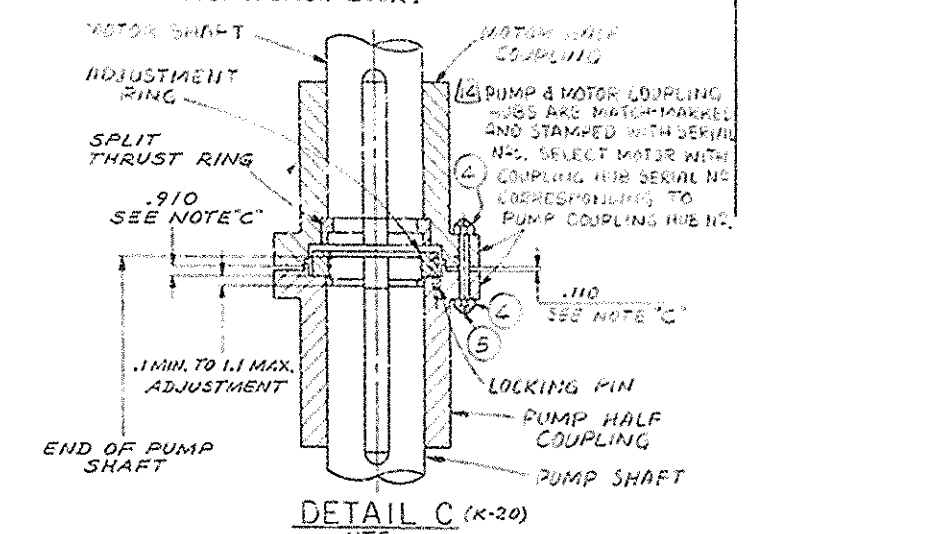








- NOTES:
1. ALLIS-CHALMERS CONTRACT ENDS AT PUMP DISCHARGE NOZZLE. NO BOLTS, NUTS, GASKETS, PIPE OR FITTINGS FURNISHED AT OR BEYOND THAT POINT.
  2. ALLIS-CHALMERS WILL FURNISH PUMP SUPPORT PLATE & LEVELING DEVICES FOR SUPPORT PLATE & STUDS & NUTS NECESSARY TO SECURE PUMP BASE TO SUPPORT PLATE. FOUNDATION BOLTS, NUTS, WASHERS & PIPE SLEEVES NECESSARY TO SECURE SUPPORT PLATE TO CONCRETE FOUNDATION ARE TO BE FURNISHED BY CUSTOMER.
  3. CUSTOMER DISCHARGE PIPE MUST BE SUPPORTED NEAR THE PUMP TO AVOID PLACING PIPE STRAINS ON THE PUMP. THIS SUPPORT MUST ALSO BE CAPABLE OF RESTRAINING THE HORIZONTAL HYDRAULIC THRUST OF 218,000 LBS. GENERATED BY THE DISCHARGE OF THE PUMP. CAUTION: DO NOT USE PUMP DISCHARGE FLANGE BOLTS FOR PULLING PIPING INTO ALIGNMENT.
  4. ROTATION OF PUMP IS CLOCKWISE WHEN VIEWING UNIT FROM TOP.
  5. 2 LIFTING LUGS TO LIFT ENTIRE PUMP WITHOUT MOTOR. 3.0 DIA. HOLE IN EACH LUG.
  6. CAUTION! ONCE THE UNIT IS INSTALLED, THE CUSTOMER SHALL REMOVE THE SHIMMING BUSHING FROM THE STUFFING BOX & INSTALL THE PACKING, SEAL CASE & GLAND FOR INSTRUCTIONS GIVEN IN THE INSTRUCTION BOOK.



- SETTING OF COUPLING
- A. REMOVE BLOCKING AT PUMP HALF COUPLING & LIFT THE SHAFT TO FREE IMPELLER FROM IMPELLER CONE. SET SHAFT BACK DOWN GENTLY RESTING IMPELLER ON ITS CONE.
  - B. SET MOTOR IN PLACE & BUMP IT FOR A ROTATION CHECK. WHEN DOING SO BE SURE THAT ADJUSTMENT RING & PUMP HALF COUPLING ARE CLEAR OF MOTOR HALF COUPLING & THAT ALL COUPLING STUDS ARE OUT.
  - C. LOWER PUMP HALF COUPLING UNTIL LOCKING PIN IS CLEAR OF ADJUSTMENT RING. ADJUST ADJUSTMENT RING TO .910 SUCH THAT A GAP OF .110 IS ATTAINED BETWEEN PUMP & MOTOR HALF COUPLING FLANGES WHEN PUMP HALF COUPLING IS RAISED. THE ADJUSTMENT RING MUST BE SEATED IN PUMP HALF COUPLING COUNTER-BORE & IMPELLER MUST REMAIN RESTING ON ITS CONE WHEN THE GAP IS MEASURED. NOTE: ROTATION OF ONE SLOT (45°) WILL CHANGE GAP BY .010.
  - D. DISTANCE FROM BOTTOM OF ADJUSTMENT RING TO RELIEF ON SHAFT IS .11 MINIMUM TO 1.1 MAXIMUM. IF MINIMUM DIMENSION BECOMES LESS THAN .11, SHIM UNDER MOTOR ACCORDINGLY.
  - E. INSTALL COUPLING STUDS AND TIGHTEN. THIS WILL RAISE THE ROTATING ELEMENT THE .110 ALLOWED & WILL GIVE .042 RADIAL RUNNING CLEARANCE BETWEEN THE IMPELLER & IMPELLER CONE. TORQUE COUPLING STUDS TO 200-220 FT. LBS.
  - F. WITH THE PACKING GLAND REMOVED, CENTER THE SHAFT SLEEVE IN THE STUFFING BOX TO WITHIN .002. MOTOR SHOULD THEN ROTATE FREELY & SHOULD BE DOVELED TO MAINTAIN ITS POSITION.

RUNOUTS - T.I.R. ON:-

MOTOR HALF COUPLING FACE	.001
PUMP HALF COUPLING FACE	.001
COUPLING OUTSIDE DIA.	.003
MOTOR SHAFT	.001

ESTIMATED WEIGHTS (LBS.)

PUMP COMPLETE (DRY)	108,000
SUPPORT PLATE	3,800
REMOVABLE INNER ELEMENT	37,000
WATER IN COLUMN ABOVE EL. -1'6.0"	33,400
1.750 DIA. FOUNDATION BOLTS, NUTS, WASHERS & PIPE SLEEVES FURNISHED BY CUSTOMER	16-REQ.
1.750 DIA. FOUNDATION PLATES FURNISHED BY ALLIS-CHALMERS	12-LEVELING SCREWS REMOVE AFTER GROUT IS SET, THEN RE-TORQUE FOUNDATION BOLTS. 1.250-7x6.5 LG. LEVELING SCREWS FURNISHED BY ALLIS-CHALMERS.

Y500XOD2EAP

HOUSTON LIGHTING & POWER  
SOUTH TEXAS PROJECT  
RESERVOIR MAKE UP WATER PUMPS

CUSTOMER ORDER NO. 35-1197-6007

ALLIS-CHALMERS { ORDER NO. 01-0800-01765  
MFG. NO. 02-0842-07771 THRU 07774

CONFIDENTIAL-PROPERTY OF  
ALLIS-CHALMERS CORP.  
4438 MI. HUNT

OUTLINE &  
FINAL ASSEMBLY

90x66 WEAR PUMP

08-502-469-407

REVISIONS

NO.	DATE	DESCRIPTION
01	11-15-82	ISSUED FOR CONSTRUCTION
02	1-15-83	REVISED TO ADD 1.750 DIA. FOUNDATION BOLTS, NUTS, WASHERS & PIPE SLEEVES FURNISHED BY CUSTOMER
03	5-17-83	REVISED TO ADD 1.250-7x6.5 LG. LEVELING SCREWS FURNISHED BY ALLIS-CHALMERS
04	1-15-84	REVISED TO ADD 1.750 DIA. FOUNDATION PLATES FURNISHED BY ALLIS-CHALMERS

REVISIONS

NO.	DATE	DESCRIPTION
01	11-15-82	ISSUED FOR CONSTRUCTION
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04	1-15-84	REVISED TO ADD 1.750 DIA. FOUNDATION PLATES FURNISHED BY ALLIS-CHALMERS

**ATTACHMENT G**  
**OTHER REQUIREMENTS**

**Attachment G**  
**Other Requirements**

**B. Monitoring Requirements**

The permittee shall adhere to the requirements of 40 CFR § 125.96 when the CWIS is in operation. Specifically, the facility shall:

- (1) monitor actual intake flow, as defined at 40 CFR § 125.92(a), withdrawn by the CWIS for cooling purposes, including cooling water withdrawals and make-up water withdrawals, on a daily basis; and
- (2) conduct visual or remote inspections, on a weekly basis, as required by 40 CFR § 125.96(e).

Alternatives to the procedures described at 40 CFR § 125.96(e) have not been approved by the TCEQ. Requests for alternative procedures must be submitted in writing to the TCEQ's Industrial Permits Team (MC-148) for review and approval.

Results of monitoring activities conducted during the term of this permit must be submitted to the TCEQ with the subsequent renewal permit application, as required by 40 CFR § 122.21(r).

Monitoring results for actual intake flow and visual and remote inspections conducted during the term of the permit are included herein as required per the permit.

**Attachment G  
Other Requirements**

Actual Intake Flow (MGD) 2020												
Day	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
1	0.00	0.00	0.0	0.0	0.0	0.0	0.0	475.6	0.0	0.0	0.0	0.0
2	0.00	0.00	0.0	0.0	0.0	0.0	0.0	380.6	0.0	0.0	0.0	0.0
3	0.00	0.00	0.0	0.0	0.0	0.0	0.0	215.8	0.0	0.0	0.0	0.0
4	0.00	0.00	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	20.7
5	0.00	0.00	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	5.0
6	0.00	0.00	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	12.1
7	0.00	0.00	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
8	0.00	0.00	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
9	0.00	0.00	0.0	0.0	0.0	0.0	0.0	0.0	222.9	0.0	0.0	0.0
10	0.00	0.00	0.0	0.0	0.0	0.0	0.0	0.0	400.7	0.0	0.0	0.0
11	0.00	0.00	0.0	0.0	0.0	0.0	0.0	0.0	237.9	0.0	0.0	0.0
12	0.00	0.00	0.0	0.0	0.0	0.0	0.0	0.0	187.6	0.0	0.0	0.0
13	0.00	0.00	0.0	0.0	0.0	0.0	0.0	0.0	119.0	0.0	0.0	0.0
14	0.00	0.00	0.0	0.0	0.0	0.0	0.0	0.0	119.0	0.0	0.0	0.0
15	0.00	0.00	0.0	0.0	0.0	0.0	0.0	0.0	129.1	0.0	0.0	0.0
16	0.00	0.00	0.0	0.0	0.0	0.0	0.0	0.0	150.0	0.0	0.0	0.0
17	0.00	0.00	0.0	0.0	0.0	0.0	0.0	0.0	109.2	0.0	0.0	0.0
18	0.00	0.00	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
19	0.00	0.00	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
20	0.00	0.00	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
21	0.00	0.00	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	376.3
22	0.00	0.00	0.0	0.0	0.0	0.0	0.0	0.0	220.8	0.0	0.0	54.2
23	0.00	0.00	0.0	0.0	0.0	0.0	0.0	0.0	1164.3	0.0	0.0	0.0
24	0.00	0.00	0.0	0.0	0.0	0.0	0.0	0.0	1189.1	0.0	0.0	0.0
25	0.00	0.00	0.0	0.0	0.0	0.0	0.0	0.0	1189.1	0.0	0.0	0.0
26	0.00	0.00	0.0	0.0	0.0	0.0	0.0	0.0	1189.1	0.0	0.0	0.0
27	54.64	0.00	0.0	0.0	0.0	0.0	0.0	0.0	1189.1	0.0	0.0	0.0
28	58.03	0.00	0.0	0.0	0.0	0.0	0.0	0.0	1046.0	0.0	0.0	0.0
29	0.00		0.0	0.0	0.0	0.0	2.2	0.0	237.9	0.0	0.0	0.0
30	0.00		0.0	0.0	0.0	0.0	715.5	0.0	171.8	0.0	0.0	0.0
31	0.00		0.0	0.0	0.0		921.0			0.0		230.6

**Attachment G  
Other Requirements**

Actual Intake Flow (MGD) 2021												
Day	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
1	1189.92	0.00	0.0	0.0	759.8	1189.9	879.9	0.0	0.0	0.0	0.0	0.0
2	1189.92	0.00	0.0	0.0	1027.6	1189.9	464.6	0.0	0.0	0.0	0.0	0.0
3	1189.92	0.00	0.0	0.0	954.3	1189.9	238.1	0.0	0.0	0.0	0.0	0.0
4	479.11	0.00	0.0	0.0	1189.9	1189.9	613.0	0.0	0.0	0.0	0.0	0.0
5	314.52	0.00	0.0	0.0	1189.9	1189.9	431.2	0.0	0.0	0.0	0.0	0.0
6	749.03	0.00	0.0	0.0	1189.9	1189.9	50.3	0.0	0.0	0.0	0.0	0.0
7	996.58	0.00	0.0	0.0	1189.9	1189.9	0.0	0.0	0.0	0.0	0.0	0.0
8	784.85	0.00	0.0	0.0	1189.9	1189.9	0.0	0.0	0.0	0.0	0.0	0.0
9	410.82	0.00	0.0	0.0	1189.9	1189.9	0.0	0.0	0.0	0.0	0.0	0.0
10	238.08	0.00	0.0	0.0	1027.1	1189.9	0.0	0.0	0.0	0.0	200.4	0.0
11	450.71	0.00	0.0	0.0	770.7	1189.9	0.0	0.0	0.0	0.0	447.9	0.0
12	546.36	0.00	0.0	0.0	97.7	1189.9	0.0	0.0	0.0	0.0	316.6	0.0
13	531.48	0.00	0.0	0.0	0.0	1189.9	0.0	0.0	0.0	0.0	173.9	0.0
14	512.24	0.00	0.0	0.0	0.0	1189.9	0.0	0.0	0.0	0.0	0.0	0.0
15	119.04	0.00	0.0	0.0	0.0	1028.0	0.0	0.0	0.0	0.0	0.0	0.0
16	119.04	0.00	0.0	0.0	0.0	714.0	0.0	0.0	0.0	425.6	0.0	0.0
17	119.04	0.00	0.0	0.0	1036.6	587.0	0.0	0.0	0.0	1189.9	0.0	0.0
18	119.04	0.00	0.0	0.0	1081.1	386.7	0.0	0.0	0.0	1189.9	0.0	0.0
19	70.68	0.00	0.0	0.0	1167.9	166.2	0.0	0.0	0.0	1189.9	0.0	0.0
20	0.00	0.00	0.0	32.9	1189.9	238.1	0.0	0.0	0.0	1189.9	0.0	0.0
21	0.00	0.00	0.0	147.1	1189.9	238.1	0.0	0.0	0.0	725.6	0.0	0.0
22	0.00	0.00	0.0	141.1	1189.9	238.1	0.0	0.0	0.0	714.0	0.0	0.0
23	0.00	60.26	0.0	46.3	1189.9	238.1	0.0	0.0	0.0	714.0	0.0	0.0
24	0.00	119.04	0.0	130.9	1189.9	238.1	0.0	0.0	0.0	714.0	0.0	69.1
25	0.00	65.14	0.0	416.1	1189.9	819.8	0.0	0.0	0.0	699.5	0.0	375.5
26	0.00	0.00	0.0	130.2	1189.9	815.2	0.0	0.0	0.0	628.3	0.0	176.4
27	0.00	0.00	0.0	113.8	1127.9	246.8	0.0	0.0	0.0	240.7	0.0	0.0
28	0.00	0.00	0.0	543.9	612.3	169.6	0.0	0.0	0.0	0.0	0.0	0.0
29	0.00		0.0	1105.6	1189.9	0.0	0.0	0.0	0.0	0.0	0.0	0.0
30	0.00		0.0	380.4	1189.9	225.7	0.0	0.0	0.0	0.0	0.0	0.0
31	0.00		0.0	383.9	1189.9		0.0			0.0		0.0

**Attachment G  
Other Requirements**

Actual Intake Flow (MGD) 2022												
Day	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
1	0.00	0.00	0.0	0.0	0.0	0.0	0.0	0.0	450.2	0.0	0.0	195.6
2	0.00	318.17	0.0	0.0	0.0	0.0	0.0	0.0	216.1	0.0	0.0	0.0
3	0.00	714.00	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
4	0.00	412.90	0.0	0.0	0.0	0.0	0.0	0.0	154.2	0.0	0.0	0.0
5	0.00	0.00	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
6	0.00	0.00	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
7	0.00	0.00	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
8	0.00	0.00	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
9	0.00	0.00	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
10	0.00	15.71	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
11	0.00	494.88	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
12	0.00	714.00	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
13	0.00	527.27	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
14	0.00	448.85	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
15	0.00	445.40	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
16	0.00	287.81	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
17	0.00	442.06	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
18	0.00	238.08	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
19	0.00	156.24	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
20	0.00	0.00	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
21	0.00	0.00	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
22	0.00	34.72	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
23	0.00	50.92	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
24	0.00	0.00	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
25	0.00	0.00	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
26	0.00	0.00	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	252.9	0.0
27	0.00	0.00	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	714.0	0.0
28	0.00	0.00	0.0	0.0	0.0	0.0	0.0	46.3	0.0	0.0	714.0	0.0
29	0.00	160.62	0.0	0.0	0.0	0.0	0.0	131.9	0.0	0.0	466.1	0.0
30	0.00		0.0	0.0	0.0	0.0	0.0	599.0	0.0	0.0	0.0	0.0
31	0.00		0.0	0.0	0.0		0.0	714.0		0.0		0.0



**Attachment G  
Other Requirements**

Actual Intake Flow (MGD) 2023												
Day	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
1	0.00	714.00	0.0	0.0	1189.9	0.0	0.0	0.0	0.0	0.0	0.0	0.0
2	0.00	422.45	0.0	0.0	1189.9	0.0	0.0	0.0	0.0	0.0	126.2	0.0
3	0.00	97.22	0.0	0.0	1189.9	0.0	0.0	0.0	0.0	0.0	93.7	0.0
4	0.00	238.08	0.0	0.0	1189.9	0.0	0.0	0.0	0.0	0.0	0.0	0.0
5	0.00	238.08	0.0	0.0	1124.8	0.0	0.0	0.0	0.0	0.0	0.0	0.0
6	0.00	119.04	0.0	0.0	265.6	0.0	0.0	0.0	0.0	0.0	0.0	0.0
7	0.00	495.87	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
8	0.00	576.17	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
9	0.00	629.18	0.0	710.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
10	0.00	714.00	0.0	714.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
11	0.00	658.86	0.0	595.0	501.6	42.8	0.0	0.0	0.0	0.0	0.0	0.0
12	0.00	537.84	0.0	714.0	1189.9	69.3	0.0	0.0	0.0	0.0	0.0	0.0
13	0.00	159.22	0.0	714.0	1189.9	0.0	0.0	0.0	0.0	0.0	0.0	0.0
14	0.00	0.00	0.0	66.4	1189.9	0.0	0.0	0.0	0.0	0.0	0.0	0.0
15	0.00	0.00	0.0	711.5	1189.9	0.0	0.0	0.0	0.0	0.0	0.0	0.0
16	0.00	145.16	0.0	398.7	1189.9	0.0	0.0	0.0	0.0	0.0	0.0	0.0
17	0.00	0.00	0.0	0.0	1189.9	0.0	0.0	0.0	0.0	0.0	0.0	0.0
18	0.00	0.00	0.0	0.0	1189.9	0.0	0.0	0.0	0.0	0.0	0.0	0.0
19	0.00	0.00	0.0	0.0	1189.9	0.0	0.0	0.0	0.0	0.0	0.0	0.0
20	0.00	0.00	0.0	63.8	1189.9	0.0	0.0	0.0	0.0	0.0	0.0	0.0
21	0.00	0.00	0.0	4.1	1189.9	0.0	0.0	0.0	0.0	0.0	0.0	0.0
22	0.00	0.00	0.0	119.0	746.4	0.0	0.0	0.0	0.0	0.0	0.0	0.0
23	0.00	0.00	0.0	119.0	1004.2	0.0	0.0	0.0	0.0	0.0	0.0	0.0
24	0.00	0.00	0.0	482.2	967.9	0.0	0.0	0.0	0.0	0.0	0.0	0.0
25	0.00	0.00	0.0	122.0	535.5	0.0	0.0	0.0	0.0	0.0	0.0	0.0
26	295.02	0.00	0.0	664.1	378.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
27	714.00	0.00	0.0	709.4	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
28	547.01	0.00	0.0	1189.9	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
29	601.65	160.62	0.0	1189.9	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
30	529.24		0.0	1189.9	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
31	713.42		0.0		0.0		0.0	0.0		0.0		0.0

**Attachment G  
Other Requirements**

Actual Intake Flow (MGD) 2024												
Day	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
1	0.00	1189.92	238.1	0.0	0.0							
2	0.00	1189.92	238.1	0.0	0.0							
3	0.00	1189.92	238.1	0.0	0.0							
4	0.00	1189.92	106.0	0.0	0.0							
5	0.00	1189.92	0.0	0.0	0.0							
6	237.60	942.02	0.0	0.0	0.0							
7	507.44	600.91	0.0	0.0	309.1							
8	413.30	1189.92	0.0	0.0	1189.9							
9	520.88	1189.92	0.0	0.0	1146.9							
10	74.57	1189.92	0.0	0.0	1083.8							
11	0.00	1189.92	0.0	0.0	1151.2							
12	0.00	1189.92	0.0	105.0	582.1							
13	0.00	910.32	0.0	288.8	0.0							
14	0.00	1109.94	0.0	605.0	0.0							
15	0.00	1189.92	0.0	668.3	0.0							
16	0.00	1189.92	0.0	421.6	0.0							
17	0.00	1189.92	0.0	300.1	0.0							
18	0.00	731.85	0.0	30.6	0.0							
19	0.00	150.45	0.0	0.0	0.0							
20	0.00	93.91	0.0	0.0	0.0							
21	0.00	365.32	0.0	0.0	7.4							
22	0.00	238.08	92.6	0.0	963.9							
23	47.93	238.08	1189.9	0.0	731.5							
24	714.00	238.08	1189.9	0.0	238.1							
25	1170.09	238.08	1189.9	0.0	173.6							
26	1189.92	196.50	1155.9	256.2	10.9							
27	1189.92	189.47	453.2	429.7	91.3							
28	1189.92	238.08	101.2	389.3	0.0							
29	1189.92	160.62	0.0	381.3	0.0							
30	1189.92		0.0	100.7	0.0							
31	1189.92		0.0		0.0							

03/02/20 09:34 >>>>>>>>>>>>>>>>>>>LIFT STATION FUNCTIONABILITY CHECKS  
- ALL SAT - TRAINING, BLDG 60, NSC, WEST, WHSE. E, BLDG. 31, BLDG.  
20.  
RP.

03/02/20 14:25 ++++++RESERVOIR MAKEUP PUMPING FACILITY WEEKLY WALKDOWN

RESERVOIR MAKEUP PUMPING FACILITY WEEKLY WALKDOWN  
OBSERVATION DATE- 3/2/2020  
TIME OF OBSERVATION- 14:25  
WEATHER- OVERCAST, 74 DEGREES FAHRENHEIT  
RIVER STREAM FLOW- NORMAL  
GENERAL COMMENTS- STP WAS NOT DIVERTING DURING THE TIME OF THE  
OBSERVATION. THE RMPF TRAVELING SCREENS WERE IN GOOD CONDITION.  
THE FISH RETURN SYSTEM WAS IN PLACE. THE RMPF PUMPS AND ELECTRICAL  
COMPONENTS APPEARED IN GOOD CONDITION. NO INDICATIONS OF FOAM,  
FISH OR WILDLIFE MORTALITIES, UNUSUAL INDICATION OF FLORA OR FAUNA,  
ETC IN THE FOREBAY AREA. NO ABNORMAL CONDITIONS WERE OBSERVED  
DURING THE WEEKLY WALKDOWN.

NOTE:  
DREDGING ACTIVITIES WERE TAKING PLACE IN THE COLORADO RIVER DURING  
THE TIME OF THE OBSERVATION. NO IMPACT TO WILDLIFE WAS OBSERVED.  
RP.

03/02/20 14:30 WEEKLY RIVER CONDUCTIVITY SAMPLE

COLLECTED WEEKLY RIVER CONDUCTIVITY SAMPLE.  
RP.

03/02/20 16:56 -----SPECIAL BACTI SAMPLE - MAIN POTABLE WATER SYSTEM- PW  
1610051

SAMPLE WAS COLLECTED FROM UNIT 1 COLD CHEM LAB (U1 CCL)  
RP.

03/09/20 07:09 PEREZ, RODOLFO (RUDY) relieved the ENVIRONMENTAL CHEMIST  
Environmental Shift Log commenced for Monday 03/09/2020

03/09/20 11:46 >>>>>>>>>>>>>>>>>>>LIFT STATION FUNCTIONABILITY CHECKS  
- ALL SAT - TRAINING, BLDG 60, NSC, WEST, WHSE. E, BLDG. 31, BLDG.  
20.  
RP.

03/09/20 12:02 +++++++RESERVOIR MAKEUP PUMPING FACILITY WEEKLY WALKDOWN

RESERVOIR MAKEUP PUMPING FACILITY WEEKLY WALKDOWN  
OBSERVATION DATE- 3/9/2020  
TIME OF OBSERVATION- 12:02  
WEATHER- OVERCAST, 76.5 DEGREES FAHRENHEIT  
RIVER STREAM FLOW- NORMAL  
GENERAL COMMENTS- STP WAS NOT DIVERTING DURING THE TIME OF THE  
OBSERVATION. THE RMPF TRAVELING SCREENS WERE IN GOOD CONDITION.  
THE FISH RETURN SYSTEM WAS IN PLACE. THE RMPF PUMPS AND ELECTRICAL  
COMPONENTS APPEARED IN GOOD CONDITION. NO INDICATIONS OF FOAM,  
FISH OR WILDLIFE MORTALITIES, UNUSUAL INDICATION OF FLORA OR FAUNA,  
ETC IN THE FOREBAY AREA. NO ABNORMAL CONDITIONS WERE OBSERVED  
DURING THE WEEKLY WALKDOWN.

NOTE:  
DREDGING ACTIVITIES WERE TAKING PLACE IN THE COLORADO RIVER DURING  
THE TIME OF THE OBSERVATION. NO IMPACT TO WILDLIFE WAS OBSERVED.  
RP.

03/09/20 17:15 Dewatered from oily sludge box #4

Shipped approximately 2200 gallons of used oil from used oil storage  
tank to Select Environmental.

Organized environmental yard.

RG

03/09/20 17:30

## SR. ENVIRONMENTAL TECHNICIAN WORK SUMMARY

WALKDOWN ALL POTABLE WATER SYSTEMS AND WASTE WATER SYSTEMS  
ADJUSTED AS NEEDED.

NOTE: FOUND EAST CLARIFIER SKIMMER (WEST SANITARY WASTE TREATMENT  
SYSTEM) NOT WORKING. ACTION TAKEN: RESET BREAKER. WASHED DOWN AREA  
AND NETTED DEBRIS.

## WEST SANITARY WASTE TREATMENT SYSTEM

- RETURNED SUPERNATE
- 1.5 HOUR SLUDGE WASTING
- APPLIED SODIUM HYPO TABLETS TO BOTH EAST AND WEST CLARIFIER WEIRS  
FOR PREVENTATIVE ALGAE CONTROL.

## TRAINING SANITARY WASTE TREATMENT SYSTEM

- CLEANED BAR SCREEN
  - WASHED DOWN CLARIFIER WEIRS
  - WASHED DOWN AIR HEADER (AERATION BASIN)
  - 15 MINUTE SLUDGE WASTING
- RP.

03/16/20 10:29       +++++++RESERVOIR MAKEUP PUMPING FACILITY WEEKLY WALKDOWN

RESERVOIR MAKEUP PUMPING FACILITY WEEKLY WALKDOWN  
OBSERVATION DATE- 3/16/2020  
TIME OF OBSERVATION- 10:29  
WEATHER- OVERCAST, 67.5 DEGREES FAHRENHEIT  
RIVER STREAM FLOW- NORMAL  
GENERAL COMMENTS-   STP WAS NOT DIVERTING DURING THE TIME OF THE  
OBSERVATION.   THE RMPF TRAVELING SCREENS WERE IN GOOD CONDITION.  
THE FISH RETURN SYSTEM WAS IN PLACE. THE RMPF PUMPS AND ELECTRICAL  
COMPONENTS APPEARED IN GOOD CONDITION.   NO INDICATIONS OF FOAM,  
FISH OR WILDLIFE MORTALITIES, UNUSUAL INDICATION OF FLORA OR FAUNA,  
ETC IN THE FOREBAY AREA.   NO ABNORMAL CONDITIONS WERE OBSERVED  
DURING THE WEEKLY WALKDOWN.

NOTE:  
DREDGING ACTIVITIES WERE TAKING PLACE IN THE COLORADO RIVER DURING  
THE TIME OF THE OBSERVATION. NO IMPACT TO WILDLIFE WAS OBSERVED.  
RP.

03/16/20 11:10       Commenced manual injection to CW/OC systems.

03/16/20 13:05       Secured manual injection to CW/OC systems.

03/16/20 13:15       Commenced manual injection to CW/OC systems.

03/16/20 13:35       Secured manual injection to CW/OC systems.

03/23/20 08:46 PEREZ, RODOLFO (RUDY) relieved the ENVIRONMENTAL CHEMIST  
Environmental Shift Log commenced for Monday 03/23/2020

03/23/20 09:00 SYSTEMS WALKDOWN-MAIN AND NSC/NTF POTABLE WATER SYSTEMS, WEST AND  
TRAINING SANITARY WASTE TREATMENT SYSTEMS.

ALL SYSTEMS WERE SAT. ADJUSTED AS NEEDED. PRIMED HYPO INJECTION  
PUMPS.  
RP.

03/23/20 10:28 CIRC WATER INTAKE STRUCTURE WEEKLY WALK DOWN

PERFORMED WEEKLY WALK DOWN OF THE CIRC WATER INTAKE STRUCTURE,  
INSPECTING FOR PRESENCE OF FOAM, FISH OR WILDLIFE MORTALITIES,  
UNUSUAL INDICATIONS OF FLORA OR FAUNA, ETC. NO ABNORMAL CONDITIONS  
WERE OBSERVED, NO FOAM WAS OBSERVED.  
RP.

03/23/20 10:47 +++++++RESERVOIR MAKEUP PUMPING FACILITY WEEKLY WALKDOWN

RESERVOIR MAKEUP PUMPING FACILITY WEEKLY WALKDOWN  
OBSERVATION DATE- 3/23/2020  
TIME OF OBSERVATION- 10:47  
WEATHER- OVERCAST, 86.9 DEGREES FAHRENHEIT  
RIVER STREAM FLOW- NORMAL  
GENERAL COMMENTS- STP WAS NOT DIVERTING DURING THE TIME OF THE  
OBSERVATION. THE RMPF TRAVELING SCREENS WERE IN GOOD CONDITION.  
THE FISH RETURN SYSTEM WAS IN PLACE. THE RMPF PUMPS AND ELECTRICAL  
COMPONENTS APPEARED IN GOOD CONDITION. NO INDICATIONS OF FOAM,  
FISH OR WILDLIFE MORTALITIES, UNUSUAL INDICATION OF FLORA OR FAUNA,  
ETC IN THE FOREBAY AREA. NO ABNORMAL CONDITIONS WERE OBSERVED  
DURING THE WEEKLY WALKDOWN.

NOTE:  
DREDGING ACTIVITIES WERE TAKING PLACE IN THE COLORADO RIVER DURING  
THE TIME OF THE OBSERVATION. NO IMPACT TO WILDLIFE WAS OBSERVED.  
RP.

03/23/20 12:18 >>>>>TRAINING SANITARY WASTE TREATMENT SYSTEM - WORK SUMMARY

- CLEANED BAR SCREEN.
- RINSED AIR HEADERS IN AERATION BASINS.
- PROCESSED APPROX. 1,000 GALLONS OF SANITARY SLUDGE INTO DESIGNATED  
DEWATERING ROLL OFF.
- 30 MINUTE SLUDGE WASTING FROM CLARIFIER TO ACTIVATED SLUDGE  
HOLDING TANK (ASH TANK)

RP.

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>>>>>>>>>>>>>>>>>>>LIFT STATION FUNCTIONABILITY CHECKS  
- ALL SAT - TRAINING, BLDG 60, NSC, WEST, WHSE. E, BLDG. 31, BLDG.  
20.  
RP.
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03/30/20 09:00 >>>>>>>>>>>>>>>>>>>>>>LIFT STATION FUNCTIONABILITY CHECKS  
- ALL SAT - TRAINING, BLDG 60, NSC, WEST, WHSE. E, BLDG. 31, BLDG.  
20.  
RP.

03/30/20 10:08 CIRC WATER INTAKE STRUCTURE WEEKLY WALK DOWN

PERFORMED WEEKLY WALK DOWN OF THE CIRC WATER INTAKE STRUCTURE,  
INSPECTING FOR PRESENCE OF FOAM, FISH OR WILDLIFE MORTALITIES,  
UNUSUAL INDICATIONS OF FLORA OR FAUNA, ETC. NO ABNORMAL CONDITIONS  
WERE OBSERVED, NO FOAM WAS OBSERVED.  
RP.

03/30/20 10:15 +++++++RESERVOIR MAKEUP PUMPING FACILITY WEEKLY WALKDOWN

RESERVOIR MAKEUP PUMPING FACILITY WEEKLY WALKDOWN  
OBSERVATION DATE- 3/23/2020  
TIME OF OBSERVATION- 10:15  
WEATHER- OVERCAST, 72.8 DEGREES FAHRENHEIT  
RIVER STREAM FLOW- NORMAL  
GENERAL COMMENTS- STP WAS NOT DIVERTING DURING THE TIME OF THE  
OBSERVATION. THE RMPF TRAVELING SCREENS WERE IN GOOD CONDITION.  
THE FISH RETURN SYSTEM WAS IN PLACE. THE RMPF PUMPS AND ELECTRICAL  
COMPONENTS APPEARED IN GOOD CONDITION. NO INDICATIONS OF FOAM,  
FISH OR WILDLIFE MORTALITIES, UNUSUAL INDICATION OF FLORA OR FAUNA,  
ETC IN THE FOREBAY AREA. NO ABNORMAL CONDITIONS WERE OBSERVED  
DURING THE WEEKLY WALKDOWN.

NOTE:  
DREDGING ACTIVITIES WERE TAKING PLACE IN THE COLORADO RIVER DURING  
THE TIME OF THE OBSERVATION. NO IMPACT TO WILDLIFE WAS OBSERVED.  
RP.

03/30/20 10:20 WEEKLY RIVER CONDUCTIVITY SAMPLE

COLLECTED WEEKLY RIVER CONDUCTIVITY SAMPLE.  
RP.

03/30/20 16:00 SYSTEMS WALKDOWN-MAIN AND NSC/NTF POTABLE WATER SYSTEMS, WEST AND  
TRAINING SANITARY WASTE TREATMENT SYSTEMS.

ALL SYSTEMS WERE SAT. ADJUSTED AS NEEDED. PRIMED HYPO INJECTION  
PUMPS.  
RP.

04/06/20 09:53 PEREZ, RODOLFO (RUDY) relieved the ENVIRONMENTAL CHEMIST  
Environmental Shift Log commenced for Monday 04/06/2020

04/06/20 10:25 CIRC WATER INTAKE STRUCTURE WEEKLY WALK DOWN

PERFORMED WEEKLY WALK DOWN OF THE CIRC WATER INTAKE STRUCTURE,  
INSPECTING FOR PRESENCE OF FOAM, FISH OR WILDLIFE MORTALITIES,  
UNUSUAL INDICATIONS OF FLORA OR FAUNA, ETC. NO ABNORMAL CONDITIONS  
WERE OBSERVED, NO FOAM WAS OBSERVED.  
RP.

04/06/20 10:40 WEEKLY RIVER CONDUCTIVITY SAMPLE

COLLECTED WEEKLY RIVER CONDUCTIVITY SAMPLE.  
RP.

04/06/20 11:00 +++++++RESERVOIR MAKEUP PUMPING FACILITY WEEKLY WALKDOWN

RESERVOIR MAKEUP PUMPING FACILITY WEEKLY WALKDOWN  
OBSERVATION DATE- 4/06/2020  
TIME OF OBSERVATION- 11:00  
WEATHER- OVERCAST, 73 DEGREES FAHRENHEIT  
RIVER STREAM FLOW- NORMAL  
GENERAL COMMENTS- STP WAS NOT DIVERTING DURING THE TIME OF THE  
OBSERVATION. THE RMPF TRAVELING SCREENS WERE IN GOOD CONDITION.  
THE FISH RETURN SYSTEM WAS IN PLACE. THE RMPF PUMPS AND ELECTRICAL  
COMPONENTS APPEARED IN GOOD CONDITION. NO INDICATIONS OF FOAM,  
FISH OR WILDLIFE MORTALITIES, UNUSUAL INDICATION OF FLORA OR FAUNA,  
ETC IN THE FOREBAY AREA. NO ABNORMAL CONDITIONS WERE OBSERVED  
DURING THE WEEKLY WALKDOWN.

NOTE:  
DREDGING ACTIVITIES WERE TAKING PLACE IN THE COLORADO RIVER DURING  
THE TIME OF THE OBSERVATION. NO IMPACT TO WILDLIFE WAS OBSERVED.  
RP.

04/06/20 12:20 >>>>>>>>>>>>>>>>LIFT STATION FUNCTIONABILITY CHECKS  
- ALL SAT - TRAINING, BLDG 60, NSC, WEST, WHSE. E, BLDG. 31, BLDG.  
20.  
RP.

04/13/20 09:16 CIRC WATER INTAKE STRUCTURE WEEKLY WALK DOWN

PERFORMED WEEKLY WALK DOWN OF THE CIRC WATER INTAKE STRUCTURE, INSPECTING FOR PRESENCE OF FOAM, FISH OR WILDLIFE MORTALITIES, UNUSUAL INDICATIONS OF FLORA OR FAUNA, ETC. NO ABNORMAL CONDITIONS WERE OBSERVED, NO FOAM WAS OBSERVED.

RP.

04/13/20 09:28 WEEKLY RIVER CONDUCTIVITY SAMPLE

COLLECTED WEEKLY RIVER CONDUCTIVITY SAMPLE.

RP.

04/13/20 09:32 +++++++RESERVOIR MAKEUP PUMPING FACILITY WEEKLY WALKDOWN

RESERVOIR MAKEUP PUMPING FACILITY WEEKLY WALKDOWN

OBSERVATION DATE- 4/13/2020

TIME OF OBSERVATION- 09:32

WEATHER- OVERCAST, 55.8 DEGREES FAHRENHEIT

RIVER STREAM FLOW- NORMAL

GENERAL COMMENTS- STP WAS NOT DIVERTING DURING THE TIME OF THE OBSERVATION. THE RMPF TRAVELING SCREENS WERE IN GOOD CONDITION. THE FISH RETURN SYSTEM WAS IN PLACE. THE RMPF PUMPS AND ELECTRICAL COMPONENTS APPEARED IN GOOD CONDITION. NO INDICATIONS OF FOAM, FISH OR WILDLIFE MORTALITIES, UNUSUAL INDICATION OF FLORA OR FAUNA, ETC IN THE FOREBAY AREA. NO ABNORMAL CONDITIONS WERE OBSERVED DURING THE WEEKLY WALKDOWN.

RP.

04/13/20 13:00 >>>>>TRAINING SANITARY WASTE TREATMENT SYSTEM- DAILY OPS

GENERAL MAINT. - CLEANED AND WASHED DOWN CLARIFIER WEIRS AND TROUGHS. APPLIED SODIUM HYPOCHLORITE (SPRAYER) FOR ALGAE CONTROL. NETTED CLARIFIER.

RP.

04/13/20 16:15 >>>>>WEST SANITARY WASTE TREATMENT SYSTEM- DAILY OPS

GENERAL MAINT. - WASHED DOWN EAST AND WEST CLARIFIER WEIRS AND TROUGHS. APPLIED (SPRAYER) SODIUM HYPOCHLORITE FOR ALGAE CONTROL. NETTED EAST AND WEST CLARIFIERS. ADJUSTED SODIUM HYPOCHLORITE INJECTION.

RP.

04/20/20 08:15 PEREZ, RODOLFO (RUDY) relieved the ENVIRONMENTAL CHEMIST  
Environmental Shift Log commenced for Monday 04/20/2020

04/20/20 09:15 >>>>>>>>>>>>>>>>>>LIFT STATION FUNCTIONABILITY CHECKS  
- ALL SAT - TRAINING, BLDG 60, NSC, WEST, WHSE. E, BLDG. 31, BLDG.  
20.  
RP.

04/20/20 12:40 WEEKLY RIVER CONDUCTIVITY SAMPLE  
  
COLLECTED WEEKLY RIVER CONDUCTIVITY SAMPLE.  
RP.

04/20/20 12:50 ++++++++RESERVOIR MAKEUP PUMPING FACILITY WEEKLY WALKDOWN  
  
RESERVOIR MAKEUP PUMPING FACILITY WEEKLY WALKDOWN  
OBSERVATION DATE- 4/20/2020  
TIME OF OBSERVATION- 12:50  
WEATHER- SUNNY, 85 DEGREES FAHRENHEIT  
RIVER STREAM FLOW- NORMAL  
GENERAL COMMENTS- STP WAS NOT DIVERTING DURING THE TIME OF THE  
OBSERVATION. THE RMPF TRAVELING SCREENS WERE IN GOOD CONDITION.  
THE FISH RETURN SYSTEM WAS IN PLACE. THE RMPF PUMPS AND ELECTRICAL  
COMPONENTS APPEARED IN GOOD CONDITION. NO INDICATIONS OF FOAM,  
FISH OR WILDLIFE MORTALITIES, UNUSUAL INDICATION OF FLORA OR FAUNA,  
ETC IN THE FOREBAY AREA. NO ABNORMAL CONDITIONS WERE OBSERVED  
DURING THE WEEKLY WALKDOWN.  
RP.

04/20/20 13:50 CIRC WATER INTAKE STRUCTURE WEEKLY WALK DOWN  
  
PERFORMED WEEKLY WALK DOWN OF THE CIRC WATER INTAKE STRUCTURE,  
INSPECTING FOR PRESENCE OF FOAM, FISH OR WILDLIFE MORTALITIES,  
UNUSUAL INDICATIONS OF FLORA OR FAUNA, ETC. NO ABNORMAL CONDITIONS  
WERE OBSERVED, NO FOAM WAS OBSERVED.  
RP.

04/20/20 16:00 >>>>>>>>WASTE CONTAINER TRACKING - WEST SANITARY WASTE TREATMENT  
SYSTEM- PROCESSED SEWER SLUDGE  
ID - 005536  
  
COLLECTED AND DELIVERED 1 MARINELLI SAMPLE OF SEWER SLUDGE FOR GAMMA  
AND TRITIUM ANALYSIS FOR SHIPPING PREPS FOR 25 YARD ROLL OFF TO RAD  
LAB FOR ANALYSIS.  
RP.

04/20/20 16:59        dumped oily waste into oily waste box.  
obtained NSC cooling tower totalizer readings and logged them.  
Stored temporary berms that were brought out in Warehouse E.  
Placed sealants in metal drum.  
Obtained used oil sample and took it to Metlab.  
RG

04/27/20 08:45 PEREZ, RODOLFO (RUDY) relieved the ENVIRONMENTAL CHEMIST  
Environmental Shift Log commenced for Monday 04/27/2020

04/27/20 09:14 SYSTEMS WALKDOWN-MAIN AND NSC/NTF POTABLE WATER SYSTEMS, WEST AND TRAINING SANITARY WASTE TREATMENT SYSTEMS.

ALL SYSTEMS WERE SAT. ADJUSTED AS NEEDED. PRIMED HYPO INJECTION PUMPS.  
RP.

04/27/20 10:00 >>>>>>>>>>>>>>>>>>>LIFT STATION FUNCTIONABILITY CHECKS  
- ALL SAT - TRAINING, BLDG 60, NSC, WEST, WHSE. E, BLDG. 31, BLDG. 20.  
RP.

04/27/20 10:23 CIRC WATER INTAKE STRUCTURE WEEKLY WALK DOWN

PERFORMED WEEKLY WALK DOWN OF THE CIRC WATER INTAKE STRUCTURE, INSPECTING FOR PRESENCE OF FOAM, FISH OR WILDLIFE MORTALITIES, UNUSUAL INDICATIONS OF FLORA OR FAUNA, ETC. NO ABNORMAL CONDITIONS WERE OBSERVED, NO FOAM WAS OBSERVED.  
RP.

04/27/20 11:03 MAIN POTABLE WATER SYSTEM- TUBE REPAIR

REPAIRED SODIUM HYPO CHLORITE INJECTION DISCHARGE TUBING. THERE WAS A SMALL HAIRLINED LEAK.  
RP.

04/27/20 12:34 ++++++RESERVOIR MAKEUP PUMPING FACILITY WEEKLY WALKDOWN

RESERVOIR MAKEUP PUMPING FACILITY WEEKLY WALKDOWN  
OBSERVATION DATE- 4/27/2020  
TIME OF OBSERVATION- 12:34  
WEATHER- PARTLY SUNNY, 82 DEGREES FAHRENHEIT  
RIVER STREAM FLOW- NORMAL  
GENERAL COMMENTS- STP WAS NOT DIVERTING DURING THE TIME OF THE OBSERVATION. THE RMPF TRAVELING SCREENS WERE IN GOOD CONDITION. THE FISH RETURN SYSTEM WAS IN PLACE. THE RMPF PUMPS AND ELECTRICAL COMPONENTS APPEARED IN GOOD CONDITION. NO INDICATIONS OF FOAM, FISH OR WILDLIFE MORTALITIES, UNUSUAL INDICATION OF FLORA OR FAUNA, ETC IN THE FOREBAY AREA. NO ABNORMAL CONDITIONS WERE OBSERVED DURING THE WEEKLY WALKDOWN.  
RP.

04/27/20 17:28

Prepared oily waste box for shipment.

Did yard walkdown with Environmental coordinator.

Prepared spill kit for the dredging crew and transported it to the RMPF.

Weighed 10 drums and prepared them for hazardous shipment.

RG

05/04/20 07:13 PEREZ, RODOLFO (RUDY) relieved the ENVIRONMENTAL CHEMIST  
Environmental Shift Log commenced for Monday 05/04/2020

05/04/20 09:00 SYSTEMS WALKDOWN-MAIN AND NSC/NTF POTABLE WATER SYSTEMS, WEST AND  
TRAINING SANITARY WASTE TREATMENT SYSTEMS.

ALL SYSTEMS WERE SAT. ADJUSTED AS NEEDED. PRIMED HYPO INJECTION  
PUMPS.  
RP.

05/04/20 10:15 >>>>>>>>WEEKLY OUTFALL SAMPLES - COURIER PICK UP

OUTFALL SAMPLES - 101,201, 401 AND 601 WERE PACKAGED AND SHIPPED VIA  
WEEKLY COURIER FOR ANALYSIS AT HOUSTON TX. LAB. 101,201,401,601  
SAMPLES LOOKED CLEAR.  
RP.

05/04/20 13:05 CIRC WATER INTAKE STRUCTURE WEEKLY WALK DOWN

PERFORMED WEEKLY WALK DOWN OF THE CIRC WATER INTAKE STRUCTURE,  
INSPECTING FOR PRESENCE OF FOAM, FISH OR WILDLIFE MORTALITIES,  
UNUSUAL INDICATIONS OF FLORA OR FAUNA, ETC. NO ABNORMAL CONDITIONS  
WERE OBSERVED, NO FOAM WAS OBSERVED.  
RP.

05/04/20 13:10 WEEKLY RIVER CONDUCTIVITY SAMPLE

COLLECTED WEEKLY RIVER CONDUCTIVITY SAMPLE.  
RP.

05/04/20 13:20 +++++++RESERVOIR MAKEUP PUMPING FACILITY WEEKLY WALKDOWN

RESERVOIR MAKEUP PUMPING FACILITY WEEKLY WALKDOWN  
OBSERVATION DATE- 5/04/2020  
TIME OF OBSERVATION- 13:20  
WEATHER- PARTLY SUNNY, 82 DEGREES FAHRENHEIT  
RIVER STREAM FLOW- NORMAL  
GENERAL COMMENTS- STP WAS NOT DIVERTING DURING THE TIME OF THE  
OBSERVATION. THE RMPF TRAVELING SCREENS WERE IN GOOD CONDITION.  
THE FISH RETURN SYSTEM WAS IN PLACE. THE RMPF PUMPS AND ELECTRICAL  
COMPONENTS APPEARED IN GOOD CONDITION. NO INDICATIONS OF FOAM,  
FISH OR WILDLIFE MORTALITIES, UNUSUAL INDICATION OF FLORA OR FAUNA,  
ETC IN THE FOREBAY AREA. NO ABNORMAL CONDITIONS WERE OBSERVED  
DURING THE WEEKLY WALKDOWN.

NOTE:  
DREDGING ACTIVITIES WERE TAKING PLACE WEST OF RMPF (NOT ON RIVER)  
INSIDE BAY AREA DURING THE TIME OF THE OBSERVATION. NO IMPACT TO  
WILDLIFE WAS OBSERVED.  
RP.



05/04/20 17:00 >>>>>>>>>>>>>>>>>>>LIFT STATION FUNCTIONABILITY CHECKS  
- ALL SAT - TRAINING, BLDG 60, NSC, WEST, WHSE. E, BLDG. 31, BLDG.  
20.  
RP.

05/04/20 17:21 Performed walk down of Environmental Yard with Environmental Supervisor.

Prepared RCRA Box for shipping.

Obtained NSC Cooling water totalizer readings.

Offloaded approximately 1500 gallons of oily sludge from vacuum truck in to oily sludge box #1.

RG

05/12/20 05:00 >>>>>>>>>WEEKLY EFFLUENT SAMPLING - OUTFALL 401 (WEST SANITARY WASTE TREATMENT SYSTEM)

COLLECTED SAMPLES FOR TOTAL SUSPENDED SOLIDS (TSS) AND BIOCHEMICAL OXYGEN DEMAND ANALYSIS (BOD)

RP.

05/12/20 05:30 >>>>>>>>>WEEKLY EFFLUENT SAMPLING - OUTFALL 601 (TRAINING SANITARY WASTE TREATMENT SYSTEM)

COLLECTED SAMPLES FOR TOTAL SUSPENDED SOLIDS (TSS) AND BIOCHEMICAL OXYGEN DEMAND ANALYSIS (BOD)

RP.

05/12/20 06:30 +++++++RESERVOIR MAKEUP PUMPING FACILITY WEEKLY WALKDOWN

RESERVOIR MAKEUP PUMPING FACILITY WEEKLY WALKDOWN

OBSERVATION DATE- 5/12/2020

TIME OF OBSERVATION- 06:30

WEATHER- PARTLY SUNNY, 72 DEGREES FAHRENHEIT

RIVER STREAM FLOW- NORMAL

GENERAL COMMENTS- STP WAS NOT DIVERTING DURING THE TIME OF THE OBSERVATION. THE RMPF TRAVELING SCREENS WERE IN GOOD CONDITION. THE FISH RETURN SYSTEM WAS IN PLACE. THE RMPF PUMPS AND ELECTRICAL COMPONENTS APPEARED IN GOOD CONDITION. NO INDICATIONS OF FOAM, FISH OR WILDLIFE MORTALITIES, UNUSUAL INDICATION OF FLORA OR FAUNA, ETC IN THE FOREBAY AREA. NO ABNORMAL CONDITIONS WERE OBSERVED DURING THE WEEKLY WALKDOWN.

NOTE:

DREDGING ACTIVITIES WERE TAKING PLACE WEST OF RMPF (NOT ON RIVER) INSIDE BAY AREA DURING THE TIME OF THE OBSERVATION. NO IMPACT TO WILDLIFE WAS OBSERVED.

RP.

05/12/20 10:25 >>>>>>>>>WEEKLY OUTFALL SAMPLES - COURIER PICK UP

OUTFALL SAMPLES - 101,201, 401 AND 601 WERE PACKAGED AND SHIPPED VIA WEEKLY COURIER FOR ANALYSIS AT HOUSTON TX. LAB. 101,201,401,601 SAMPLES LOOKED CLEAR.

RP.

05/12/20 11:43 CIRC WATER INTAKE STRUCTURE WEEKLY WALK DOWN

PERFORMED WEEKLY WALK DOWN OF THE CIRC WATER INTAKE STRUCTURE, INSPECTING FOR PRESENCE OF FOAM, FISH OR WILDLIFE MORTALITIES, UNUSUAL INDICATIONS OF FLORA OR FAUNA, ETC. NO ABNORMAL CONDITIONS WERE OBSERVED, NO FOAM WAS OBSERVED.

RP.

05/12/20 16:57      Transferred approximately 2000 gallons of used oil from metal drums  
to used oil storage tank using the vacuum truck.

emptied oily waste hopper into oily waste box.

worked on computer based training.

05/18/20 07:09 PEREZ, RODOLFO (RUDY) relieved the ENVIRONMENTAL CHEMIST  
Environmental Shift Log commenced for Monday 05/18/2020

05/18/20 09:00 \*\*\*\*\*MAIN POTABLE WATER SYSTEM - REPLACED HYPO SUCTION TUBING  
REPLACED SODIUM HYPOCHLORITE SUCTION TUBING DUE TO A SMALL PIN HOLE.  
RP.

05/18/20 09:23 \*\*\*\*\*WEST SANITARY WASTE TREATMENT SYSTEM  
AS FOUND:  
  
WEST CLARIFIER TROUGH EFFLUENT LINE TO CHLORINE CONTACT CHAMBER  
CLOGGED.  
WATER LEVEL IN WEST CLARIFIER WAS HIGHER THAN NORMAL. WEST AERATION  
BASIN LEVEL WAS HIGHER THAN NORMAL.  
EAST CLARIFIER WAS OPERATING NORMAL.  
WEST CLARIFIER SKIMMER ARM WAS NOT OPERATING NORMAL, DETACHED FROM  
STILLWELL BUT WAS STILL VISIBLE AND SECURED..  
  
ACTION TAKEN:  
  
SECURED MOTOR DRIVE TO WEST CLARIFIER SKIMMER ARM.  
SECURED INFLUENT TO WSWTS (SECURED WEST LIFT STATION TEMPORARILY.  
SECURED WEST AERATION BASIN TO WEST CLARIFIER. REROUTED WEST  
AERATION BASIN TO EAST CLARIFIER. CONFIGURATION IS AS FOLLOWS:  
WEST AND EAST AERATION BASINS ARE ROUTED TO EAST CLARIFIER. WEST  
CLARIFIER RETURN WAS SLIGHTLY OPEN TO BRING WATER LEVEL DOWN TO SEE  
THE SKIMMER ARM ASSEMBLY.  
FACILITIES EVALUATED TO UNCLOG CLARIFIER LINE.  
PMI ASSESSED THE SKIMMER ARM ASSEMBLY FOR REPAIR.  
  
RP.

05/18/20 10:25 CIRC WATER INTAKE STRUCTURE WEEKLY WALK DOWN  
  
PERFORMED WEEKLY WALK DOWN OF THE CIRC WATER INTAKE STRUCTURE,  
INSPECTING FOR PRESENCE OF FOAM, FISH OR WILDLIFE MORTALITIES,  
UNUSUAL INDICATIONS OF FLORA OR FAUNA, ETC. NO ABNORMAL CONDITIONS  
WERE OBSERVED, NO FOAM WAS OBSERVED.  
RP.

05/18/20 11:52 >>>>>>401 EFFLUENT SAMPLE  
  
COLLECTED 401 EFFLUENT ROUTINE SAMPLE FOR GAMMA AND TRITIUM ANALYSIS  
FOR CHEMISTRY.  
RP.

05/18/20 12:00 WEEKLY RIVER CONDUCTIVITY SAMPLE  
  
COLLECTED WEEKLY RIVER CONDUCTIVITY SAMPLE.  
RP.

05/18/20 12:15

++++++RESERVOIR MAKEUP PUMPING FACILITY WEEKLY WALKDOWN

RESERVOIR MAKEUP PUMPING FACILITY WEEKLY WALKDOWN

OBSERVATION DATE- 5/18/2020

TIME OF OBSERVATION- 12:15

WEATHER- PARTLY SUNNY, 82 DEGREES FAHRENHEIT

RIVER STREAM FLOW- NORMAL

GENERAL COMMENTS- STP WAS NOT DIVERTING DURING THE TIME OF THE OBSERVATION. THE RMPF TRAVELING SCREENS WERE IN GOOD CONDITION. THE FISH RETURN SYSTEM WAS IN PLACE. THE RMPF PUMPS AND ELECTRICAL COMPONENTS APPEARED IN GOOD CONDITION. NO INDICATIONS OF FOAM, FISH OR WILDLIFE MORTALITIES, UNUSUAL INDICATION OF FLORA OR FAUNA, ETC IN THE FOREBAY AREA. NO ABNORMAL CONDITIONS WERE OBSERVED DURING THE WEEKLY WALKDOWN.

NOTE :

NO DREDGING ACTIVITIES WERE TAKING PLACE WEST OF RMPF (NOT ON RIVER)  
INSIDE BAY AREA DURING THE TIME OF THE OBSERVATION. NO IMPACT TO  
WILDLIFE WAS OBSERVED.

RP.

05/18/20 12:50

SYSTEMS WALKDOWN-MAIN AND NSC/NTF POTABLE WATER SYSTEMS, WEST AND TRAINING SANITARY WASTE TREATMENT SYSTEMS.

ALL SYSTEMS WERE SAT. ADJUSTED AS NEEDED. PRIMED HYPO INJECTION PUMPS.

RP.

05/18/20 16:00

[illegible]

- ALL SAT - TRAINING, BLDG 60, NSC, WEST, WHSE. E, BLDG. 31, BLDG. 20.

RP.

05/26/20 05:30 >>>>>>>WEEKLY EFFLUENT SAMPLING - OUTFALL 601 (TRAINING SANITARY WASTE TREATMENT SYSTEM)

COLLECTED SAMPLES FOR TOTAL SUSPENDED SOLIDS (TSS) AND BIOCHEMICAL OXYGEN DEMAND ANALYSIS (BOD)  
RP.

05/26/20 06:00 >>>>>>>>WEEKLY EFFLUENT SAMPLING - OUTFALL 401 (WEST SANITARY WASTE TREATMENT SYSTEM)

COLLECTED SAMPLES FOR TOTAL SUSPENDED SOLIDS (TSS) AND BIOCHEMICAL OXYGEN DEMAND ANALYSIS (BOD)  
RP.

05/26/20 06:40 WEEKLY RIVER CONDUCTIVITY SAMPLE

COLLECTED WEEKLY RIVER CONDUCTIVITY SAMPLE.  
RP.

05/26/20 06:45 +++++++RESERVOIR MAKEUP PUMPING FACILITY WEEKLY WALKDOWN

RESERVOIR MAKEUP PUMPING FACILITY WEEKLY WALKDOWN  
OBSERVATION DATE- 5/26/2020  
TIME OF OBSERVATION- 06:45  
WEATHER- CLOUDY AND RAINING, 72 DEGREES FAHRENHEIT  
RIVER STREAM FLOW- HIGHER THAN NORMAL  
GENERAL COMMENTS- STP WAS NOT DIVERTING DURING THE TIME OF THE OBSERVATION. THE RMPF TRAVELING SCREENS WERE IN GOOD CONDITION. THE FISH RETURN SYSTEM WAS IN PLACE. THE RMPF PUMPS AND ELECTRICAL COMPONENTS APPEARED IN GOOD CONDITION. NO INDICATIONS OF FOAM, FISH OR WILDLIFE MORTALITIES, UNUSUAL INDICATION OF FLORA OR FAUNA, ETC IN THE FOREBAY AREA. NO ABNORMAL CONDITIONS WERE OBSERVED DURING THE WEEKLY WALKDOWN.

NOTE:  
NO DREDGING ACTIVITIES.  
RP.

05/26/20 09:05 >>>>>>>WEEKLY OUTFALL SAMPLES - COURIER PICK UP

OUTFALL SAMPLES - 101,201, 401 AND 601 WERE PACKAGED AND SHIPPED VIA WEEKLY COURIER FOR ANALYSIS AT HOUSTON TX. LAB. 101,201,401,601 SAMPLES LOOKED CLEAR.  
RP.

05/26/20 10:22 STANDY DIESEL GENERATOR #21 OBSERVATION

COMPLETED EMISSION OBSERVATION FOR SDG #21.  
RP.

05/26/20 11:09	CIRC WATER INTAKE STRUCTURE WEEKLY WALK DOWN  PERFORMED WEEKLY WALK DOWN OF THE CIRC WATER INTAKE STRUCTURE, INSPECTING FOR PRESENCE OF FOAM, FISH OR WILDLIFE MORTALITIES, UNUSUAL INDICATIONS OF FLORA OR FAUNA, ETC. NO ABNORMAL CONDITIONS WERE OBSERVED, NO FOAM WAS OBSERVED. RP.
05/26/20 14:13	SYSTEMS WALKDOWN-MAIN AND NSC/NTF POTABLE WATER SYSTEMS, WEST AND TRAINING SANITARY WASTE TREATMENT SYSTEMS.  ALL SYSTEMS WERE SAT. ADJUSTED AS NEEDED. PRIMED HYPO INJECTION PUMPS. RP.
05/26/20 14:14	>>> LIFT STATION FUNCTIONABILITY CHECKS - ALL SAT - TRAINING, BLDG 60, NSC, WEST, WHSE. E, BLDG. 31, BLDG. 20. RP.

06/08/20 14:50

WEEKLY RIVER CONDUCTIVITY SAMPLE

COLLECTED WEEKLY RIVER CONDUCTIVITY SAMPLE.  
RP.

06/08/20 14:55

++++++RESERVOIR MAKEUP PUMPING FACILITY WEEKLY WALKDOWN

RESERVOIR MAKEUP PUMPING FACILITY WEEKLY WALKDOWN

OBSERVATION DATE- 6/08/2020

TIME OF OBSERVATION- 14:55

WEATHER- PARTLY SUNNY, 91 DEGREES FAHRENHEIT

RIVER STREAM FLOW- NORMAL

GENERAL COMMENTS- STP WAS NOT DIVERTING DURING THE TIME OF THE OBSERVATION. THE RMPF TRAVELING SCREENS WERE IN GOOD CONDITION. THE FISH RETURN SYSTEM WAS IN PLACE. THE RMPF PUMPS AND ELECTRICAL COMPONENTS APPEARED IN GOOD CONDITION. NO INDICATIONS OF FOAM, FISH OR WILDLIFE MORTALITIES, UNUSUAL INDICATION OF FLORA OR FAUNA, ETC IN THE FOREBAY AREA. NO ABNORMAL CONDITIONS WERE OBSERVED DURING THE WEEKLY WALKDOWN.

NOTE :

DIVING ACTIVITIES WERE TAKING PLACE WEST OF RMPF (NOT ON RIVER)  
INSIDE BAY AREA DURING THE TIME OF THE OBSERVATION. NO IMPACT TO  
WILDLIFE WAS OBSERVED.

RP.

06/08/20 15:00

[illegible]

- ALL SAT - TRAINING, BLDG 60, NSC, WEST, WHSE. E, BLDG. 31, BLDG. 20.

RP.

06/08/20 17:00

SYSTEMS WALKDOWN-MAIN AND NSC/NTF POTABLE WATER SYSTEMS, WEST AND TRAINING SANITARY WASTE TREATMENT SYSTEMS.

ALL SYSTEMS WERE SAT. ADJUSTED AS NEEDED. PRIMED HYPO INJECTION PUMPS.

RP.

06/08/20 17:00

Took empty chiller cans to the Sally Port to be delivered to the MOF haz storage building.

Check out the blowdown valve and totalizer. Spoke with Julie Deckard about the work order and asked her to rush the job to have the totalizer fixed promptly.

emailed GCA to remove oily sludge from the oily waste separated storage tank and have it brought it out the yard.

set up a 12x50 berm at Fab shop 20 for the dredge to sit in while they work on it.

Ordered 4 empty open head poly drums to be taken inside to help with spill cleanup.



06/16/20 05:00 >>>>>>>>>WEEKLY EFFLUENT SAMPLING - OUTFALL 401 (WEST SANITARY WASTE TREATMENT SYSTEM)

COLLECTED SAMPLES FOR TOTAL SUSPENDED SOLIDS (TSS) AND BIOCHEMICAL OXYGEN DEMAND ANALYSIS (BOD)

RP.

06/16/20 05:35 >>>>>>>>>WEEKLY EFFLUENT SAMPLING - OUTFALL 601 (TRAINING SANITARY WASTE TREATMENT SYSTEM)

COLLECTED SAMPLES FOR TOTAL SUSPENDED SOLIDS (TSS) AND BIOCHEMICAL OXYGEN DEMAND ANALYSIS (BOD)

RP.

06/16/20 10:27 >>>>>>>>>WEEKLY OUTFALL SAMPLES - COURIER PICK UP

OUTFALL SAMPLES - 101,201, 401 AND 601 WERE PACKAGED AND SHIPPED VIA WEEKLY COURIER FOR ANALYSIS AT HOUSTON TX. LAB. 101,201,401,601 SAMPLES LOOKED CLEAR.

RP.

06/16/20 10:50 >>>>>>>>>WEST SANITARY WASTE TREATMENT SYSTEM- HYPO PUMP TUBING REPLACEMENT

REPLACED SODIUM HYPO PUMP INNER TUBING.

RP.

06/16/20 11:35 ++++++RESERVOIR MAKEUP PUMPING FACILITY WEEKLY WALKDOWN

RESERVOIR MAKEUP PUMPING FACILITY WEEKLY WALKDOWN

OBSERVATION DATE- 6/16/2020

TIME OF OBSERVATION- 11:35

WEATHER- PARTLY SUNNY, 87 DEGREES FAHRENHEIT

RIVER STREAM FLOW- NORMAL

GENERAL COMMENTS- STP WAS NOT DIVERTING DURING THE TIME OF THE OBSERVATION. THE RMPF TRAVELING SCREENS WERE IN GOOD CONDITION. THE FISH RETURN SYSTEM WAS IN PLACE. THE RMPF PUMPS AND ELECTRICAL COMPONENTS APPEARED IN GOOD CONDITION. NO INDICATIONS OF FOAM, FISH OR WILDLIFE MORTALITIES, UNUSUAL INDICATION OF FLORA OR FAUNA, ETC IN THE FOREBAY AREA. NO ABNORMAL CONDITIONS WERE OBSERVED DURING THE WEEKLY WALKDOWN.

NOTE:

DREDGING ACTIVITIES WERE TAKING PLACE WEST OF RMPF (NOT ON RIVER) INSIDE BAY AREA DURING THE TIME OF THE OBSERVATION. NO IMPACT TO WILDLIFE WAS OBSERVED.

RP..

06/16/20 12:18 >>>>>>>>>TRAINING SANITARY WASTE TREATMENT SYSTEM- SLUDGE WASTING

PERFORMED 15 MINUTE SLUDGE WASTING FROM CLARIFIER TO ACTIVATED SLUDGE HOLDING TANK.

RP.

06/16/20 12:43

\*\*\*\*\*WELL 8- NSC/NTF POTABLE WATER SYSTEM - HYPO PUMP TUBING  
REPLACEMENT

REPLACED INNER SODIUM HYPO PUMP TUBING.  
RP.

06/22/20 06:48 PEREZ, RODOLFO (RUDY) relieved the ENVIRONMENTAL CHEMIST  
Environmental Shift Log commenced for Monday 06/22/2020

06/22/20 09:00 >>>>>>>>>>>>>>>>>>>LIFT STATION FUNCTIONABILITY CHECKS  
- ALL SAT - TRAINING, BLDG 60, NSC, WEST, WHSE. E, BLDG. 31, BLDG.  
20.  
RP.

06/22/20 09:20 \*\*\*\*NSC/ NTF POTABLE WATER SYSTEM - SODIUM HYPO TUBING  
  
REPLACED SODIUM HYPO DISCHARGE TUBING. HAD A SMALL LEAK.  
RP.

06/22/20 11:02 \*\*\*\*\*WEEKLY RIVER SAMPLE  
  
COLLECTED WEEKLY RIVER SAMPLE.  
RP.

06/22/20 11:06 ++++++RESERVOIR MAKEUP PUMPING FACILITY WEEKLY WALKDOWN  
  
RESERVOIR MAKEUP PUMPING FACILITY WEEKLY WALKDOWN  
OBSERVATION DATE- 6/22/2020  
TIME OF OBSERVATION- 11:06  
WEATHER- PARTLY SUNNY, 87 DEGREES FAHRENHEIT  
RIVER STREAM FLOW- NORMAL  
GENERAL COMMENTS- STP WAS NOT DIVERTING DURING THE TIME OF THE  
OBSERVATION. THE RMPF TRAVELING SCREENS WERE IN GOOD CONDITION.  
THE FISH RETURN SYSTEM WAS IN PLACE. THE RMPF PUMPS AND ELECTRICAL  
COMPONENTS APPEARED IN GOOD CONDITION. NO INDICATIONS OF FOAM,  
FISH OR WILDLIFE MORTALITIES, UNUSUAL INDICATION OF FLORA OR FAUNA,  
ETC IN THE FOREBAY AREA. NO ABNORMAL CONDITIONS WERE OBSERVED  
DURING THE WEEKLY WALKDOWN.  
  
NOTE:  
DREDGING ACTIVITIES WERE TAKING PLACE WEST OF RMPF (NOT ON RIVER)  
INSIDE BAY AREA DURING THE TIME OF THE OBSERVATION. NO IMPACT TO  
WILDLIFE WAS OBSERVED.  
RP..

06/22/20 12:40 \*\*\*\*\*WEST SANITARY WASTE TREATMENT SYSTEM -  
SANITARY PROCESSED SLUDGE SAMPLING- TEMPORARY DEWATERING ROLLOFF BOX  
ID#- 005537  
(EN-0003 ENVIRONMENTAL SAMPLING GUIDELINES)  
  
COLLECTED SLUDGE SAMPLE (MARINELLI) FROM DEWATERING ROLL OFF FOR THE  
FOLLOWING ANALYSIS:  
- TRITIUM  
- GAMMA  
THESE ANALYSIS ARE FOR FREE RELEASE OR EXEMPT WASTE SHIPPING PREPS.  
THE ANALYTICAL DATA WILL BE REVIEWED BY RADIATION PROTECTION PRIOR  
TO SHIPPING.  
RP.

06/22/20 13:00 WEST SANITARY WASTE TREATMENT SYSTEM  
SLUDGE PROCESSING

PROCESSED APPROX. 2,900 GALLONS OF SANITARY WASTE SLUDGE FROM ASH  
TANK TO DEWATERING ROLL OFF.  
RP.

06/22/20 13:05 CIRC WATER INTAKE STRUCTURE WEEKLY WALK DOWN

PERFORMED WEEKLY WALK DOWN OF THE CIRC WATER INTAKE STRUCTURE,  
INSPECTING FOR PRESENCE OF FOAM, FISH OR WILDLIFE MORTALITIES,  
UNUSUAL INDICATIONS OF FLORA OR FAUNA, ETC. NO ABNORMAL CONDITIONS  
WERE OBSERVED, NO FOAM WAS OBSERVED.  
RP.

06/22/20 17:01 SYSTEMS WALKDOWN-MAIN AND NSC/NTF POTABLE WATER SYSTEMS, WEST AND  
TRAINING SANITARY WASTE TREATMENT SYSTEMS.

ALL SYSTEMS WERE SAT. ADJUSTED AS NEEDED. PRIMED HYPO INJECTION  
PUMPS.  
RP.

06/29/20 07:00 PEREZ, RODOLFO (RUDY) relieved the ENVIRONMENTAL CHEMIST  
Environmental Shift Log commenced for Monday 06/29/2020

06/29/20 07:13 LATE ENTRY: DUPLICATE ENVIRONMENTAL LOG ENTRIES.  
ENVIRONMENTAL LOG 1683620 (12:38) AND ENVIRONMENTAL LOG 1683619  
(11:40) ARE THE SAME EVENT.  
RP.

06/29/20 09:00 >>>>>>>>>>>>>>>LIFT STATION FUNCTIONABILITY CHECKS  
- ALL SAT - TRAINING, BLDG 60, NSC, WEST, WHSE. E, BLDG. 31, BLDG.  
20.  
RP.

06/29/20 10:20 SYSTEMS WALKDOWN-MAIN AND NSC/NTF POTABLE WATER SYSTEMS, WEST AND  
TRAINING SANITARY WASTE TREATMENT SYSTEMS.  
  
ALL SYSTEMS WERE SAT. ADJUSTED AS NEEDED. PRIMED HYPO INJECTION  
PUMPS.  
RP.

06/29/20 12:30 RIVER CONDUCTIVITY SAMPLE  
  
COLLECTED AND DELIVERED RIVER CONDUCTIVITY SAMPLE.  
RP.

06/29/20 12:35 ++++++RESERVOIR MAKEUP PUMPING FACILITY WEEKLY WALKDOWN  
  
RESERVOIR MAKEUP PUMPING FACILITY WEEKLY WALKDOWN  
OBSERVATION DATE- 6/29/2020  
TIME OF OBSERVATION- 12:35  
WEATHER- PARTLY CLOUDY, 87 DEGREES FAHRENHEIT  
RIVER STREAM FLOW- NORMAL  
GENERAL COMMENTS- STP WAS NOT DIVERTING DURING THE TIME OF THE  
OBSERVATION. THE RMPF TRAVELING SCREENS WERE IN GOOD CONDITION.  
THE FISH RETURN SYSTEM WAS IN PLACE. THE RMPF PUMPS AND ELECTRICAL  
COMPONENTS APPEARED IN GOOD CONDITION. NO INDICATIONS OF FOAM,  
FISH OR WILDLIFE MORTALITIES, UNUSUAL INDICATION OF FLORA OR FAUNA,  
ETC IN THE FOREBAY AREA. NO ABNORMAL CONDITIONS WERE OBSERVED  
DURING THE WEEKLY WALKDOWN.  
  
NOTE:  
DREDGING ACTIVITIES WERE TAKING PLACE WEST OF RMPF (NOT ON RIVER)  
INSIDE BAY AREA DURING THE TIME OF THE OBSERVATION. NO IMPACT TO  
WILDLIFE WAS OBSERVED.  
RP..

06/29/20 13:55

CIRC WATER INTAKE STRUCTURE WEEKLY WALK DOWN

PERFORMED WEEKLY WALK DOWN OF THE CIRC WATER INTAKE STRUCTURE, INSPECTING FOR PRESENCE OF FOAM, FISH OR WILDLIFE MORTALITIES, UNUSUAL INDICATIONS OF FLORA OR FAUNA, ETC. NO ABNORMAL CONDITIONS WERE OBSERVED, NO FOAM WAS OBSERVED.  
RP.

06/29/20 16:57

Loaded approximately 1500 gallons of water from Used oil storage tank into vaccuum truck.

Processed approximately 1000 galllons of water from oily sludge box #1 into used oil storage tank

Removed both used oil drum and used filter drum from the berm at fab shop 20 and brouth them to the environmental yard and store in proper location.

Placed new used oil drum and used filter drum at fab shop 20.

Placed empty RCRA items into RCRA box.

RG.

07/07/20 05:30 >>>>>>>>WEEKLY EFFLUENT SAMPLING - OUTFALL 401 (WEST SANITARY WASTE TREATMENT SYSTEM)

COLLECTED SAMPLES FOR TOTAL SUSPENDED SOLIDS (TSS) AND BIOCHEMICAL OXYGEN DEMAND ANALYSIS (BOD). SAMPLES LOOKED CLEAR.  
RP.

07/07/20 05:53 >>>>>>>>WEEKLY EFFLUENT SAMPLING - OUTFALL 601 (TRAINING SANITARY WASTE TREATMENT SYSTEM)

COLLECTED SAMPLES FOR TOTAL SUSPENDED SOLIDS (TSS) AND BIOCHEMICAL OXYGEN DEMAND ANALYSIS (BOD). SAMPLES LOOKED CLEAR.  
RP.

07/07/20 10:23 >>>>>>>>WEEKLY OUTFALL SAMPLES - COURIER PICK UP

OUTFALL SAMPLES - 101, 201, 401 AND 601 WERE PACKAGED AND SHIPPED VIA WEEKLY COURIER FOR ANALYSIS AT HOUSTON TX. LAB. 101,401,601 SAMPLES LOOKED CLEAR.  
RP.

07/07/20 10:23 ^^^^^^^^^^^^ROUTINE MONTHLY BACTI POTABLE WATER SAMPLES

MAIN POTABLE WATER SYTEM AND NSC/NTF POTABLE WATER SYSTEM SAMPLES WERE PICKED UP BY COURIER AND TRANSPORTED TO HOUSTON LAB FOR ANALYSIS.

SAMPLE POINTS AND COLLECTION TIMES ARE AS FOLLOWS:

\* 08:50 -NSC RM 3511 SINK, 3RD FLOOR (NSC/NTF POTABLE WATER SYSTEM 1610103)  
\* 09:03- NSC RM 5492 SINK, 5TH FLOOR (NSC/NTF POTABLE WATER SYSTEM 1610103)

\* 05:00 ENVIRONMENTAL YARD (MAIN POTABLE WATER SYSTEM 1610051)  
\* 05:15 BLDG. 20 FAB SHOP WEST HOSE BIB. (MAIN POTABLE WATER SYSTEM 1610051)  
RP.

07/07/20 14:02 CIRC WATER INTAKE STRUCTURE WEEKLY WALK DOWN

PERFORMED WEEKLY WALK DOWN OF THE CIRC WATER INTAKE STRUCTURE, INSPECTING FOR PRESENCE OF FOAM, FISH OR WILDLIFE MORTALITIES, UNUSUAL INDICATIONS OF FLORA OR FAUNA, ETC. NO ABNORMAL CONDITIONS WERE OBSERVED, NO FOAM WAS OBSERVED.  
RP.

07/07/20 14:10

++++++RESERVOIR MAKEUP PUMPING FACILITY WEEKLY WALKDOWN

RESERVOIR MAKEUP PUMPING FACILITY WEEKLY WALKDOWN

OBSERVATION DATE- 6/29/2020

TIME OF OBSERVATION- 14:10

WEATHER- SUNNY, 91 DEGREES FAHRENHEIT

RIVER STREAM FLOW- NORMAL

GENERAL COMMENTS- STP WAS NOT DIVERTING DURING THE TIME OF THE OBSERVATION. THE RMPF TRAVELING SCREENS WERE IN GOOD CONDITION. THE FISH RETURN SYSTEM WAS IN PLACE. THE RMPF PUMPS AND ELECTRICAL COMPONENTS APPEARED IN GOOD CONDITION. NO INDICATIONS OF FOAM, FISH OR WILDLIFE MORTALITIES, UNUSUAL INDICATION OF FLORA OR FAUNA, ETC IN THE FOREBAY AREA. NO ABNORMAL CONDITIONS WERE OBSERVED DURING THE WEEKLY WALKDOWN.

NOTE:

DREDGING ACTIVITIES WERE TAKING PLACE WEST OF RMPF (NOT ON RIVER) INSIDE BAY AREA DURING THE TIME OF THE OBSERVATION. NO IMPACT TO WILDLIFE WAS OBSERVED.

RP..

07/07/20 17:04

Shipped 3000 gallons of used oil and 4 drums of used filters with Select Environmental.

Transferred approximately 2000 gallons of used oil from drums to the used oil storage tank.

Worked on air diaphragm pump as it wasn't working properly.

Cleaned up environmental yard.

RG.



07/13/20 07:21 PEREZ, RODOLFO (RUDY) relieved the ENVIRONMENTAL CHEMIST  
Environmental Shift Log commenced for Monday 07/13/2020

07/13/20 15:20 RIVER CONDUCTIVITY SAMPLE

COLLECTED AND DELIVERED RIVER CONDUCTIVITY SAMPLE.  
RP.

07/13/20 15:25 ++++++RESERVOIR MAKEUP PUMPING FACILITY WEEKLY WALKDOWN

RESERVOIR MAKEUP PUMPING FACILITY WEEKLY WALKDOWN  
OBSERVATION DATE- 7/13/2020  
TIME OF OBSERVATION- 15:25  
WEATHER- SUNNY, 92 DEGREES FAHRENHEIT  
RIVER STREAM FLOW- NORMAL  
GENERAL COMMENTS- STP WAS NOT DIVERTING DURING THE TIME OF THE  
OBSERVATION. THE RMPF TRAVELING SCREENS WERE IN GOOD CONDITION.  
THE FISH RETURN SYSTEM WAS IN PLACE. THE RMPF PUMPS AND ELECTRICAL  
COMPONENTS APPEARED IN GOOD CONDITION. NO INDICATIONS OF FOAM,  
FISH OR WILDLIFE MORTALITIES, UNUSUAL INDICATION OF FLORA OR FAUNA,  
ETC IN THE FOREBAY AREA. NO ABNORMAL CONDITIONS WERE OBSERVED  
DURING THE WEEKLY WALKDOWN.

NOTE:  
NO DREDGING ACTIVITIES.  
RP..

07/13/20 17:00 >>>>>>>>>>>>>>>>LIFT STATION FUNCTIONABILITY CHECKS  
- ALL SAT - TRAINING, BLDG 60, NSC, WEST (PUMP #1 SOUTH BASIN OUT OF  
SERVICE/ PUMP #2 SOUTH BASIN OUT OF SERVICE), WHSE. E, BLDG. 31,  
BLDG. 20.  
RP.

07/20/20 10:58

+++++RESERVOIR MAKEUP PUMPING FACILITY WEEKLY WALKDOWN

RESERVOIR MAKEUP PUMPING FACILITY WEEKLY WALKDOWN

OBSERVATION DATE- 7/20/2020

TIME OF OBSERVATION- 10:58

WEATHER- PARTLY CLOUDY, 86 DEGREES FAHRENHEIT

RIVER STREAM FLOW- NORMAL

GENERAL COMMENTS- STP WAS NOT DIVERTING DURING THE TIME OF THE OBSERVATION. THE RMPF TRAVELING SCREENS WERE IN GOOD CONDITION. THE FISH RETURN SYSTEM WAS IN PLACE. THE RMPF PUMPS AND ELECTRICAL COMPONENTS APPEARED IN GOOD CONDITION. NO INDICATIONS OF FOAM, FISH OR WILDLIFE MORTALITIES, UNUSUAL INDICATION OF FLORA OR FAUNA, ETC IN THE FOREBAY AREA. NO ABNORMAL CONDITIONS WERE OBSERVED DURING THE WEEKLY WALKDOWN.

RP..

07/20/20 16:42

SR. ENVIRONMENTAL TECHNICIAN WORK SUMMARY

5/50 LIFTSTATION- HOUSEKEEPING- ROLLED UP HOSES, PUMPS, BUCKLED DOWN ROLL OFF TARP.

- REPAIRED SMALL HYPO TUBE DRIP AT MAIN POTABLE WATER SYSTEM

-WASHED AND CLEANED WEST PLANT CLARIFIERS- WEIRS, TROUGHS, SKIMMER BOXES.

- TRANSFERRED SODIUM HYPO (1 DRUM TO WEST PLANT)

- SYSTEM WALKDOWNS

- COLLECTED 401 EFFLUENT SAMPLE FOR CHEMISTRY.

RP.

07/27/20 07:21 PEREZ, RODOLFO (RUDY) relieved the ENVIRONMENTAL CHEMIST  
Environmental Shift Log commenced for Monday 07/27/2020

07/27/20 09:07 \*\*\*\*\*WATER WELL 7 - BACTI SAMPLE COLLECTION

COLLECTED BACTI SAMPLE FROM WATER WELL 7. SUPPORT FROM OPERATIONS  
AND MECHANICAL MAINT. (ADDRESSED A SMALL DROP LEAK).  
THIS SAMPLE WILL BE HANDED OFF TO COURIER TO DELIVER TO HOUSTON LAB  
FOR ANALYSIS.  
RP.

07/27/20 09:47 \*\*\*\*\*COLLECTED WEEKLY RIVER CONDUCTIVITY SAMPLE

2,729 uScm.  
RP.

07/27/20 10:00 +++++RESERVOIR MAKEUP PUMPING FACILITY WEEKLY WALKDOWN

RESERVOIR MAKEUP PUMPING FACILITY WEEKLY WALKDOWN  
OBSERVATION DATE- 7/27/2020  
TIME OF OBSERVATION- 10:00  
WEATHER- PARTLY CLOUDY, 80 DEGREES FAHRENHEIT  
RIVER STREAM FLOW- SLIGHT FLOW  
GENERAL COMMENTS- STP WAS NOT DIVERTING DURING THE TIME OF THE  
OBSERVATION. THE RMPF TRAVELING SCREENS WERE IN GOOD CONDITION.  
THE FISH RETURN SYSTEM WAS IN PLACE. THE RMPF PUMPS AND ELECTRICAL  
COMPONENTS APPEARED IN GOOD CONDITION. NO INDICATIONS OF FOAM,  
FISH OR WILDLIFE MORTALITIES, UNUSUAL INDICATION OF FLORA OR FAUNA,  
ETC IN THE FOREBAY AREA. NO ABNORMAL CONDITIONS WERE OBSERVED  
DURING THE WEEKLY WALKDOWN.  
RP..

07/27/20 12:12 \*\*\*\*\*WATER WELL 7 BACTI SAMPLE- COURIER HAND OFF  
(REFERENCE ENVIRONMENTAL LOG # 1691375)

COURIER PICKED UP BACTI SAMPLE (WATER WELL 7) AT 12:12. THIS SAMPLE  
WILL BE DELIVERED TO HOUSTON LAB IN HOUSTON.  
RP.

08/03/20 10:40        \*\*\*\*COLLECTED RIESERVOIR INLET CONDUCTIVITY SAMPLE

1004 uScm.  
RP.

08/03/20 11:13        \*\*\*\*COLLECTED RIVER CONDUCTIVITY SAMPLE

712.2 uScm.  
RP.

08/03/20 11:32        +++++RESERVOIR MAKEUP PUMPING FACILITY WEEKLY WALKDOWN

RESERVOIR MAKEUP PUMPING FACILITY WEEKLY WALKDOWN  
OBSERVATION DATE- 8/03//2020  
TIME OF OBSERVATION- 11:32  
WEATHER- PARTLY CLOUDY, 86 DEGREES FAHRENHEIT  
RIVER STREAM FLOW- SLIGHT FLOW  
GENERAL COMMENTS-    STP WAS NOT DIVERTING DURING THE TIME OF THE  
OBSERVATION. THE RMPF TRAVELING SCREENS WERE IN GOOD CONDITION.  
THE FISH RETURN SYSTEM WAS IN PLACE. THE RMPF PUMPS AND ELECTRICAL  
COMPONENTS APPEARED IN GOOD CONDITION. NO INDICATIONS OF FOAM,  
FISH OR WILDLIFE MORTALITIES, UNUSUAL INDICATION OF FLORA OR FAUNA,  
ETC IN THE FOREBAY AREA. NO ABNORMAL CONDITIONS WERE OBSERVED  
DURING THE WEEKLY WALKDOWN.  
RP..

08/03/20 11:40        CIRC WATER INTAKE STRUCTURE WEEKLY WALK DOWN

PERFORMED WEEKLY WALK DOWN OF THE CIRC WATER INTAKE STRUCTURE,  
INSPECTING FOR PRESENCE OF FOAM, FISH OR WILDLIFE MORTALITIES,  
UNUSUAL INDICATIONS OF FLORA OR FAUNA, ETC. NO ABNORMAL CONDITIONS  
WERE OBSERVED, NO FOAM WAS OBSERVED.  
RP..

08/11/20 06:00 >>>>>>>WEEKLY EFFLUENT SAMPLING - OUTFALL 401 (WEST SANITARY WASTE TREATMENT SYSTEM)

COLLECTED SAMPLES FOR TOTAL SUSPENDED SOLIDS (TSS) AND BIOCHEMICAL OXYGEN DEMAND ANALYSIS (BOD). SAMPLES LOOKED CLEAR.  
RP.

08/11/20 06:45 >>>>>WEEKLY EFFLUENT SAMPLING - OUTFALL 601 (TRAINING SANITARY WASTE TREATMENT SYSTEM)

COLLECTED SAMPLES FOR TOTAL SUSPENDED SOLIDS (TSS) AND BIOCHEMICAL OXYGEN DEMAND ANALYSIS (BOD). SAMPLES LOOKED CLEAR.  
RP.

08/11/20 09:40 >>>>>WEEKLY OUTFALL SAMPLES - COURIER PICK UP

OUTFALL SAMPLES - 101, 201, 401 AND 601 WERE PACKAGED AND SHIPPED VIA WEEKLY COURIER FOR ANALYSIS AT HOUSTON TX. LAB. 101,201,401 AND 601 SAMPLES LOOKED CLEAR.  
RP.

08/11/20 10:17 CIRC WATER INTAKE STRUCTURE WEEKLY WALK DOWN

PERFORMED WEEKLY WALK DOWN OF THE CIRC WATER INTAKE STRUCTURE, INSPECTING FOR PRESENCE OF FOAM, FISH OR WILDLIFE MORTALITIES, UNUSUAL INDICATIONS OF FLORA OR FAUNA, ETC. NO ABNORMAL CONDITIONS WERE OBSERVED, NO FOAM WAS OBSERVED.  
RP..

08/11/20 11:15 ++++RESERVOIR MAKEUP PUMPING FACILITY WEEKLY WALKDOWN

RESERVOIR MAKEUP PUMPING FACILITY WEEKLY WALKDOWN  
OBSERVATION DATE- 8/11//2020  
TIME OF OBSERVATION- 11:15  
WEATHER- PARTLY CLOUDY, 84 DEGREES FAHRENHEIT  
RIVER STREAM FLOW- VERY SLIGHT FLOW  
GENERAL COMMENTS- STP WAS NOT DIVERTING DURING THE TIME OF THE OBSERVATION. THE RMPF TRAVELING SCREENS WERE IN GOOD CONDITION. THE FISH RETURN SYSTEM WAS IN PLACE. THE RMPF PUMPS AND ELECTRICAL COMPONENTS APPEARED IN GOOD CONDITION. NO INDICATIONS OF FOAM, FISH OR WILDLIFE MORTALITIES, UNUSUAL INDICATION OF FLORA OR FAUNA, ETC IN THE FOREBAY AREA. NO ABNORMAL CONDITIONS WERE OBSERVED DURING THE WEEKLY WALKDOWN.  
RP..

08/17/20 07:29 PEREZ, RODOLFO (RUDY) relieved the ENVIRONMENTAL CHEMIST  
Environmental Shift Log commenced for Monday 08/17/2020

08/17/20 12:02 CIRC WATER INTAKE STRUCTURE WEEKLY WALK DOWN  
  
PERFORMED WEEKLY WALK DOWN OF THE CIRC WATER INTAKE STRUCTURE,  
INSPECTING FOR PRESENCE OF FOAM, FISH OR WILDLIFE MORTALITIES,  
UNUSUAL INDICATIONS OF FLORA OR FAUNA, ETC. NO ABNORMAL CONDITIONS  
WERE OBSERVED, NO FOAM WAS OBSERVED.  
RP..

08/17/20 12:35 COLLECTED 401 EFFLUENT FOR CHEMISTRY ROUTINE ANALYSIS.  
  
RP.

08/17/20 12:55 \*\*\*\*\*COLLECTED RIVER CONDUCTIVITY SAMPLE  
  
6713 uScm.  
RP.

08/17/20 12:58 ++++RESERVOIR MAKEUP PUMPING FACILITY WEEKLY WALKDOWN  
  
RESERVOIR MAKEUP PUMPING FACILITY WEEKLY WALKDOWN  
OBSERVATION DATE- 8/17//2020  
TIME OF OBSERVATION- 12:58  
WEATHER- PARTLY SUNNY, 91 DEGREES FAHRENHEIT  
RIVER STREAM FLOW- VERY SLIGHT FLOW  
GENERAL COMMENTS- STP WAS NOT DIVERTING DURING THE TIME OF THE  
OBSERVATION. THE RMPF TRAVELING SCREENS WERE IN GOOD CONDITION.  
THE FISH RETURN SYSTEM WAS IN PLACE. THE RMPF PUMPS AND ELECTRICAL  
COMPONENTS APPEARED IN GOOD CONDITION. NO INDICATIONS OF FOAM,  
FISH OR WILDLIFE MORTALITIES, UNUSUAL INDICATION OF FLORA OR FAUNA,  
ETC IN THE FOREBAY AREA. NO ABNORMAL CONDITIONS WERE OBSERVED  
DURING THE WEEKLY WALKDOWN.  
RP..

08/17/20 17:20 SYSTEMS WALKDOWN  
  
LIFTSTATION FUNCTIONABILITY CHECKS ON BLD. 20, WHSE. E, WHSE. 31,  
5/50, NSC, NTF, BLDG. 60 LIFT STATIONS. ALL SAT.  
  
SANITARY WASTE TREATMENT SYSTEMS WALKDOWN- ALL SAT.  
POTABLE WATER SYSTEMS WALKDOWN- ALL SAT. (ADJUSTED AS NEEDED.  
RP

08/24/20 07:39 PEREZ, RODOLFO (RUDY) relieved the ENVIRONMENTAL CHEMIST  
Environmental Shift Log commenced for Monday 08/24/2020

08/24/20 09:43 \*\*\*COLLECTED RIVER CONDUCTIVITY WEEKLY SAMPLE  
  
24.93 mScm.  
RP.

08/24/20 09:50 ++++RESERVOIR MAKEUP PUMPING FACILITY WEEKLY WALKDOWN  
  
RESERVOIR MAKEUP PUMPING FACILITY WEEKLY WALKDOWN  
OBSERVATION DATE- 8/24//2020  
TIME OF OBSERVATION- 09:50  
WEATHER- PARTLY CLOUDY, 78 DEGREES FAHRENHEIT  
RIVER STREAM FLOW- NO FLOW  
GENERAL COMMENTS- STP WAS NOT DIVERTING DURING THE TIME OF THE  
OBSERVATION. THE RMPF TRAVELING SCREENS WERE IN GOOD CONDITION.  
THE FISH RETURN SYSTEM WAS IN PLACE. THE RMPF PUMPS AND ELECTRICAL  
COMPONENTS APPEARED IN GOOD CONDITION. NO INDICATIONS OF FOAM,  
FISH OR WILDLIFE MORTALITIES, UNUSUAL INDICATION OF FLORA OR FAUNA,  
ETC IN THE FOREBAY AREA. NO ABNORMAL CONDITIONS WERE OBSERVED  
DURING THE WEEKLY WALKDOWN.  
RP..

08/31/20 08:36 PEREZ, RODOLFO (RUDY) relieved the ENVIRONMENTAL CHEMIST  
Environmental Shift Log commenced for Monday 08/31/2020

08/31/20 09:00 SYSTEMS WALKDOWN

LIFTSTATION FUNCTIONABILITY CHECKS ON BLD. 20, WHSE. E, WHSE. 31,  
5/50, NSC, NTF, BLDG. 60 LIFT STATIONS. ALL SAT.

SANITARY WASTE TREATMENT SYSTEMS WALKDOWN- ALL SAT.  
POTABLE WASTER SYSTEMS WALKDOWN- ALL SAT. (ADJUSTED AS NEEDED.

RP

08/31/20 09:30 \*\*COLLECTED RIVER CONDUCTIVITY WEEKLY SAMPLE

18,980 uScm.  
RP.

08/31/20 09:35 +++RESERVOIR MAKEUP PUMPING FACILITY WEEKLY WALKDOWN

RESERVOIR MAKEUP PUMPING FACILITY WEEKLY WALKDOWN  
OBSERVATION DATE- 8/31//2020  
TIME OF OBSERVATION- 09:35  
WEATHER- SUNNY, 90 DEGREES FAHRENHEIT  
RIVER STREAM FLOW- VERY SLIGHT FLOW  
GENERAL COMMENTS- STP WAS NOT DIVERTING DURING THE TIME OF THE  
OBSERVATION. THE RMPF TRAVELING SCREENS WERE IN GOOD CONDITION.  
THE FISH RETURN SYSTEM WAS IN PLACE. THE RMPF PUMPS AND ELECTRICAL  
COMPONENTS APPEARED IN GOOD CONDITION. NO INDICATIONS OF FOAM,  
FISH OR WILDLIFE MORTALITIES, UNUSUAL INDICATION OF FLORA OR FAUNA,  
ETC IN THE FOREBAY AREA. NO ABNORMAL CONDITIONS WERE OBSERVED  
DURING THE WEEKLY WALKDOWN.  
RP..

08/31/20 13:30 >>>>>WEST SANITARY WASTE TREATMENT SYSTEM- EAST CLARIFIER  
POWER LOSS

DISCOVERED CLARIFIER ON EAST SIDE, LOSS OF POWER.

ACTION TAKEN:  
CONTACTED FAC. ELECTRICIANS CAME OUT AND FOUND A SWITCH HAD TRIPPED.

EAST CLARIFIER BACK IN NORMAL CONFIGURATION AND IS SAT.  
RP.



08/31/20 16:32      Processed approximately 500 gallons of water from oily sludge box #1.

Delivered a 10x10 berm w/ brackets to the sally port for Kelly Huerta.

Did some organizing at the environmental yard.

Worked on getting together the drums for the Hazardous shipment.

Met with Chris Mouton and O'Day drilling to give an Environmental Brief regarding the work to be done at the relief wells.

RG

09/08/20 05:30 >>>>>WEEKLY EFFLUENT SAMPLING - OUTFALL 401 (WEST SANITARY WASTE TREATMENT SYSTEM)

COLLECTED SAMPLES FOR TOTAL SUSPENDED SOLIDS (TSS) AND BIOCHEMICAL OXYGEN DEMAND ANALYSIS (BOD). SAMPLES LOOKED CLEAR.  
RP.

09/08/20 06:00 >>>>WEEKLY EFFLUENT SAMPLING - OUTFALL 601 (TRAINING SANITARY WASTE TREATMENT SYSTEM)

COLLECTED SAMPLES FOR TOTAL SUSPENDED SOLIDS (TSS) AND BIOCHEMICAL OXYGEN DEMAND ANALYSIS (BOD). SAMPLES LOOKED CLEAR.  
RP.

09/08/20 09:30 >>>>WEEKLY OUTFALL SAMPLES - COURIER PICK UP

OUTFALL SAMPLES - 101, 201, 401 AND 601 WERE PACKAGED AND SHIPPED VIA WEEKLY COURIER FOR ANALYSIS AT HOUSTON TX. LAB. 101,201,401 AND 601 SAMPLES LOOKED CLEAR.  
RP.

09/08/20 12:43 \*\*COLLECTED RIVER CONDUCTIVITY WEEKLY SAMPLE

10,830 uScm.  
RP.

09/08/20 12:43 RIVER CONDUCTIVITY SAMPLE

10,830 uS/cm  
RP.

09/08/20 12:50 +++++++RESERVOIR MAKEUP PUMPING FACILITY WEEKLY WALKDOWN

RESERVOIR MAKEUP PUMPING FACILITY WEEKLY WALKDOWN  
OBSERVATION DATE- 9/08//2020  
TIME OF OBSERVATION- 12:50  
WEATHER- CLOUDY WITH OVERCAST, 75 DEGREES FAHRENHEIT  
RIVER STREAM FLOW- VERY SLIGHT FLOW  
GENERAL COMMENTS- STP WAS NOT DIVERTING DURING THE TIME OF THE OBSERVATION. THE RMPF TRAVELING SCREENS WERE IN GOOD CONDITION. THE FISH RETURN SYSTEM WAS IN PLACE. THE RMPF PUMPS AND ELECTRICAL COMPONENTS APPEARED IN GOOD CONDITION. NO INDICATIONS OF FOAM, FISH OR WILDLIFE MORTALITIES, UNUSUAL INDICATION OF FLORA OR FAUNA, ETC IN THE FOREBAY AREA. NO ABNORMAL CONDITIONS WERE OBSERVED DURING THE WEEKLY WALKDOWN.  
RP..

09/14/20 08:19 PEREZ, RODOLFO (RUDY) relieved the ENVIRONMENTAL CHEMIST  
Environmental Shift Log commenced for Monday 09/14/2020

09/14/20 09:25 RESERVOIR INLET CONDUCTIVITY SAMPLE  
  
8406 uS/cm  
  
RP.

09/14/20 09:45 RIVER CONDUCTIVITY SAMPLE  
5017 uS/cm  
  
RP.

09/14/20 09:50 +++RESERVOIR MAKEUP PUMPING FACILITY WEEKLY WALKDOWN  
  
RESERVOIR MAKEUP PUMPING FACILITY WEEKLY WALKDOWN  
OBSERVATION DATE- 9/14//2020  
TIME OF OBSERVATION- 09:50  
WEATHER- CLOUDY, 80 DEGREES FAHRENHEIT  
RIVER STREAM FLOW- SLIGHT FLOW  
GENERAL COMMENTS- STP WAS NOT DIVERTING DURING THE TIME OF THE  
OBSERVATION. THE RMPF TRAVELING SCREENS WERE IN GOOD CONDITION.  
THE FISH RETURN SYSTEM WAS IN PLACE. THE RMPF PUMPS AND ELECTRICAL  
COMPONENTS APPEARED IN GOOD CONDITION. NO INDICATIONS OF FOAM,  
FISH OR WILDLIFE MORTALITIES, UNUSUAL INDICATION OF FLORA OR FAUNA,  
ETC IN THE FOREBAY AREA. NO ABNORMAL CONDITIONS WERE OBSERVED  
DURING THE WEEKLY WALKDOWN.  
RP..

09/14/20 12:55 CIRC WATER INTAKE STRUCTURE WEEKLY WALK DOWN  
  
PERFORMED WEEKLY WALK DOWN OF THE CIRC WATER INTAKE STRUCTURE,  
INSPECTING FOR PRESENCE OF FOAM, FISH OR WILDLIFE MORTALITIES,  
UNUSUAL INDICATIONS OF FLORA OR FAUNA, ETC. NO ABNORMAL CONDITIONS  
WERE OBSERVED, NO FOAM WAS OBSERVED.  
RP..

09/14/20 17:31 SYSTEMS WALKDOWN  
  
LIFTSTATION FUNCTIONABILITY CHECKS ON BLD. 20, WHSE. E, WHSE. 31,  
5/50, NSC, NTF, BLDG. 60 LIFT STATIONS. ALL SAT.  
  
SANITARY WASTE TREATMENT SYSTEMS WALKDOWN- ALL SAT.  
POTABLE WASTER SYSTEMS WALKDOWN- ALL SAT. (ADJUSTED AS NEEDED.  
  
RP

09/21/20 08:15 >>>>>WEST SANITARY WASTE TREATMENT SYSTEM- TUBING REPLACEMENT  
REPLACED SODIUM HYPO TUBING (SUCTION LINE) AND HYPO PUMP INNER TUBING.  
RP.

09/21/20 08:20 CIRC WATER INTAKE STRUCTURE WEEKLY WALK DOWN  
PERFORMED WEEKLY WALK DOWN OF THE CIRC WATER INTAKE STRUCTURE, INSPECTING FOR PRESENCE OF FOAM, FISH OR WILDLIFE MORTALITIES, UNUSUAL INDICATIONS OF FLORA OR FAUNA, ETC. NO ABNORMAL CONDITIONS WERE OBSERVED, NO FOAM WAS OBSERVED.  
RP..

09/21/20 08:30 WEEKLY RIVER CONDUCTIVITY SAMPLE  
16,500 uS/cm  
RP.

09/21/20 08:35 +++RESERVOIR MAKEUP PUMPING FACILITY WEEKLY WALKDOWN  
RESERVOIR MAKEUP PUMPING FACILITY WEEKLY WALKDOWN  
OBSERVATION DATE- 9/21//2020  
TIME OF OBSERVATION- 08:35  
WEATHER- CLOUDY WITH RAIN DUE TO STORM IN GULF , 72 DEGREES FAHRENHEIT  
RIVER STREAM FLOW- FLOW  
GENERAL COMMENTS- STP WAS NOT DIVERTING DURING THE TIME OF THE OBSERVATION. THE RMPF TRAVELING SCREENS WERE IN GOOD CONDITION. THE FISH RETURN SYSTEM WAS IN PLACE. THE RMPF PUMPS AND ELECTRICAL COMPONENTS APPEARED IN GOOD CONDITION. NO INDICATIONS OF FOAM, FISH OR WILDLIFE MORTALITIES, UNUSUAL INDICATION OF FLORA OR FAUNA, ETC IN THE FOREBAY AREA. NO ABNORMAL CONDITIONS WERE OBSERVED DURING THE WEEKLY WALKDOWN.  
RP..

09/21/20 10:06 SYSTEMS WALKDOWN  
SANITARY WASTE TREATMENT SYSTEMS WALKDOWN- ALL SAT.  
POTABLE WASTER SYSTEMS WALKDOWN- ALL SAT. (ADJUSTED AS NEEDED.  
RP

09/21/20 10:10 PEREZ,RODOLFO (RUDY) relieved the ENVIRONMENTAL CHEMIST  
Environmental Shift Log commenced for Monday 09/21/2020

09/21/20 10:16

Drained the temporary berms at the environmental yard.

Checked lift statoins at building 31, Shop 20, and Warehouse E. Lift station #1 at Building 31 alarm was sounding. All other lift stations are in normal condition.

Picked up miscellaneous stuff around the enviornmental yard in preparation for the storm.

09/28/20 07:20 PEREZ, RODOLFO (RUDY) relieved the ENVIRONMENTAL CHEMIST  
Environmental Shift Log commenced for Monday 09/28/2020

09/28/20 08:00 +++++NSC/NTF POTABLE WATER SYSTEM- WELL 8 GROUND WATER STORAGE TANK  
WORK  
DAY 1  
  
COMMENCED SAND AND DEBRIS REMOVAL FROM GROUND WATER STORAGE TANK.  
RP.

09/28/20 09:20 RESERVOIR MAKEUP CONDUCTIVITY SAMPLE  
1445 uS/cm  
  
RP.

09/28/20 09:30 RIVER CONDUCTIVITY SAMPLE  
555.6 uS/cm  
  
RP.

09/28/20 09:40 +++RESERVOIR MAKEUP PUMPING FACILITY WEEKLY WALKDOWN  
  
RESERVOIR MAKEUP PUMPING FACILITY WEEKLY WALKDOWN  
OBSERVATION DATE- 9/28//2020  
TIME OF OBSERVATION- 09:40  
WEATHER- partly CLOUDY , 71 DEGREES FAHRENHEIT  
RIVER STREAM FLOW- MODERATE FLOW  
GENERAL COMMENTS- STP WAS NOT DIVERTING DURING THE TIME OF THE  
OBSERVATION. THE RMPF TRAVELING SCREENS WERE IN GOOD CONDITION.  
THE FISH RETURN SYSTEM WAS IN PLACE. THE RMPF PUMPS AND ELECTRICAL  
COMPONENTS APPEARED IN GOOD CONDITION. NO INDICATIONS OF FOAM,  
FISH OR WILDLIFE MORTALITIES, UNUSUAL INDICATION OF FLORA OR FAUNA,  
ETC IN THE FOREBAY AREA. NO ABNORMAL CONDITIONS WERE OBSERVED  
DURING THE WEEKLY WALKDOWN.  
RP..

09/28/20 10:00 SYSTEMS WALKDOWN  
  
SANITARY WASTE TREATMENT SYSTEMS WALKDOWN- ALL SAT.  
POTABLE WASTER SYSTEMS WALKDOWN- ALL SAT. (ADJUSTED AS NEEDED.  
  
RP

10/05/20 08:56

++++++RESERVOIR MAKEUP PUMPING FACILITY WEEKLY WALKDOWN  
RESERVOIR MAKEUP PUMPING FACILITY WEEKLY WALKDOWN  
OBSERVATION DATE- 10/05/2020  
TIME OF OBSERVATION- 10:00  
WEATHER- CLOUDY WITH OVERCAST, 75 DEGREES FAHRENHEIT  
RIVER STREAM FLOW- VERY SLIGHT FLOW  
GENERAL COMMENTS- STP WAS NOT DIVERTING DURING THE TIME OF THE  
OBSERVATION. THE RMPF TRAVELING SCREENS WERE IN GOOD CONDITION.  
THE FISH RETURN SYSTEM WAS IN PLACE. THE RMPF PUMPS AND ELECTRICAL  
COMPONENTS APPEARED IN GOOD CONDITION. NO INDICATIONS OF FOAM,  
FISH OR WILDLIFE MORTALITIES, UNUSUAL INDICATION OF FLORA OR FAUNA,  
ETC IN THE FOREBAY AREA. NO ABNORMAL CONDITIONS WERE OBSERVED  
DURING THE WEEKLY WALKDOWN.

10/05/20 16:44

NSC/NTF PWS - performed walk down of temporary system. everything is  
working as expected. Chlorine level was low int temporary tanks. Ran  
pump for 10 minutes and brought chlorine level up.

Grabbed a river sample and sent the conductivity result to U2 cold  
chemistry lab.

TSWTS - Performed walk down of system and everything is in normal  
conditions. Perfomed settability test and logged in cdms. Returned  
supinate for 20 minutes. Did DO test on both aeration basins.

WSWTS - Performed waslk down of the system and everything is in  
normal conditions. Performed settability test and logged in cdms.  
Did DO test on both aeration basins.

Main PSW - performed walk down of system and found everything in  
normal conditions. Chlorine was a little low so ran pump for 15  
minutes to increase chlorine in storage tank.

RG

10/13/20 08:57

+++++++RESERVOIR MAKEUP PUMPING FACILITY WEEKLY WALKDOWN  
RESERVOIR MAKEUP PUMPING FACILITY WEEKLY WALKDOWN  
OBSERVATION DATE- 10/13//2020  
TIME OF OBSERVATION- 14:30  
WEATHER- Sunny, 85 DEGREES FAHRENHEIT  
RIVER STREAM FLOW- VERY SLIGHT FLOW  
GENERAL COMMENTS- STP WAS NOT DIVERTING DURING THE TIME OF THE  
OBSERVATION. THE RMPF TRAVELING SCREENS WERE IN GOOD CONDITION.  
THE FISH RETURN SYSTEM WAS IN PLACE. THE RMPF PUMPS AND ELECTRICAL  
COMPONENTS APPEARED IN GOOD CONDITION. NO INDICATIONS OF FOAM,  
FISH OR WILDLIFE MORTALITIES, UNUSUAL INDICATION OF FLORA OR FAUNA,  
ETC IN THE FOREBAY AREA. NO ABNORMAL CONDITIONS WERE OBSERVED  
DURING THE WEEKLY WALKDOWN.



10/19/20 13:00

+++++++RESERVOIR MAKEUP PUMPING FACILITY WEEKLY WALKDOWN  
RESERVOIR MAKEUP PUMPING FACILITY WEEKLY WALKDOWN  
OBSERVATION DATE- 10/19/2020  
TIME OF OBSERVATION- 13:00  
WEATHER- SUNNY, 80 DEGREES FAHRENHEIT  
RIVER STREAM FLOW- VERY SLIGHT FLOW  
GENERAL COMMENTS- STP WAS NOT DIVERTING DURING THE TIME OF THE  
OBSERVATION. THE RMPF TRAVELING SCREENS WERE IN GOOD CONDITION.  
THE FISH RETURN SYSTEM WAS IN PLACE. THE RMPF PUMPS AND ELECTRICAL  
COMPONENTS APPEARED IN GOOD CONDITION. NO INDICATIONS OF FOAM,  
FISH OR WILDLIFE MORTALITIES, UNUSUAL INDICATION OF FLORA OR FAUNA,  
ETC IN THE FOREBAY AREA. NO ABNORMAL CONDITIONS WERE OBSERVED  
DURING THE WEEKLY WALKDOWN.

10/26/20 17:20

+++++++RESERVOIR MAKEUP PUMPING FACILITY WEEKLY WALKDOWN  
RESERVOIR MAKEUP PUMPING FACILITY WEEKLY WALKDOWN  
OBSERVATION DATE- 10/26//2020  
TIME OF OBSERVATION- 12:00  
WEATHER- SUNNY, 80 DEGREES FAHRENHEIT  
RIVER STREAM FLOW- VERY SLIGHT FLOW  
GENERAL COMMENTS- STP WAS NOT DIVERTING DURING THE TIME OF THE  
OBSERVATION. THE RMPF TRAVELING SCREENS WERE IN GOOD CONDITION.  
THE FISH RETURN SYSTEM WAS IN PLACE. THE RMPF PUMPS AND ELECTRICAL  
COMPONENTS APPEARED IN GOOD CONDITION. NO INDICATIONS OF FOAM,  
FISH OR WILDLIFE MORTALITIES, UNUSUAL INDICATION OF FLORA OR FAUNA,  
ETC IN THE FOREBAY AREA. NO ABNORMAL CONDITIONS WERE OBSERVED  
DURING THE WEEKLY WALKDOWN

11/02/20 15:20

+++RESERVOIR MAKEUP PUMPING FACILITY WEEKLY WALKDOWN

RESERVOIR MAKEUP PUMPING FACILITY WEEKLY WALKDOWN

OBSERVATION DATE- 11/02//2020

TIME OF OBSERVATION- 15:20

WEATHER- partly CLOUDY , 72 DEGREES FAHRENHEIT

RIVER STREAM FLOW- SLOW FLOW

GENERAL COMMENTS- STP WAS NOT DIVERTING DURING THE TIME OF THE OBSERVATION. THE RMPF TRAVELING SCREENS WERE IN GOOD CONDITION. THE FISH RETURN SYSTEM WAS IN PLACE. THE RMPF PUMPS AND ELECTRICAL COMPONENTS APPEARED IN GOOD CONDITION. NO INDICATIONS OF FOAM, FISH OR WILDLIFE MORTALITIES, UNUSUAL INDICATION OF FLORA OR FAUNA, ETC IN THE FOREBAY AREA. NO ABNORMAL CONDITIONS WERE OBSERVED DURING THE WEEKLY WALKDOWN.

RP..

11/02/20 20:45

SR. ENVIRONMENTAL TECH WORK SUMMARY

SODIUM HYPO DELIVERY

MAIN POTABLE WATER SYSTEM

START TANK LEVEL- 185 GALLONS

NUMBER OF DRUMS ADDED- 3 DRUMS (55 GALLONS)

END TANK LEVEL- 350 GALLONS

WEST SANITARY WASTE TREATMENT SYSTEM

START TANK LEVEL- 165 GALLONS

NUMBER OF DRUMS ADDED- 2 DRUMS (55 GALLONS)

END TANK LEVEL- 300 GALLONS

TRAINING SANITARY WASTE TREATMENT SYSTEM

START TANK LEVEL- 25 GALLONS

NUMBER OF DRUMS ADDED- 1 DRUMS (55 GALLONS)

END TANK LEVEL- 75 GALLONS

NSC/NTF POTABLE WATER SYSTEM

START TANK LEVEL- 185 GALLONS

NUMBER OF DRUMS ADDED- 2 DRUMS (55 GALLONS)

END TANK LEVEL- 275 GALLONS

WEEKLY RIVER CONDUCTIVITY SAMPLE COLLECTED

15:15 - 7587 uS/cm

REPLACED SODIUM HYPOCHLORITE INJECTION PUMP AT WEST SANITARY WASTE TREATMENT

SYSTEM. ALSO, REPLACED SUCTION AND DISCHARGE TUBING.

POTABLE WATER SYSTEM CHECKS- ALL SAT. INCREASED HYPO INJECTION AT MAIN AND WELL 8.

TRANSPORTED AN OILY WASTE HOPPER FOR SHOP 20 MAINT. WORK AREA.. TRANSFERRED OILY WASTE AND BUCKETS INTO NEWLY PLACED HOPPER.

SET A BERM (6X9) FOLD UP BERM FOR MAINTENANCE WORK AT CWI.

RP.

11/09/20 16:59

+++++++RESERVOIR MAKEUP PUMPING FACILITY WEEKLY WALKDOWN  
RESERVOIR MAKEUP PUMPING FACILITY WEEKLY WALKDOWN  
OBSERVATION DATE- 11/09/2020  
TIME OF OBSERVATION- 11:30  
WEATHER- Sunny, 80 DEGREES FAHRENHEIT  
RIVER STREAM FLOW- VERY SLIGHT FLOW  
GENERAL COMMENTS- STP WAS NOT DIVERTING DURING THE TIME OF THE  
OBSERVATION. THE RMPF TRAVELING SCREENS WERE IN GOOD CONDITION.  
THE FISH RETURN SYSTEM WAS IN PLACE. THE RMPF PUMPS AND ELECTRICAL  
COMPONENTS APPEARED IN GOOD CONDITION. NO INDICATIONS OF FOAM,  
FISH OR WILDLIFE MORTALITIES, UNUSUAL INDICATION OF FLORA OR FAUNA,  
ETC IN THE FOREBAY AREA. NO ABNORMAL CONDITIONS WERE OBSERVED  
DURING THE WEEKLY WALKDOWN.

11/16/20 09:00        SYSTEMS WALKDOWN

LIFTSTATION FUNCTIONABILITY CHECKS ON BLD. 20, WHSE. E, WHSE. 31, 5/50, NSC, NTF, BLDG. 60 LIFT STATIONS. ALL SAT.

SANITARY WASTE TREATMENT SYSTEMS WALKDOWN- ALL SAT.

POTABLE WATER SYSTEMS WALKDOWN- ALL SAT. (ADJUSTED AS NEEDED).

RP

11/16/20 11:30        WELL 8 SODIUM HYPO SUCTION TUBING REPLACEMENT

REPLACED SUCTION TUBING AT WELL 8 HYPO TANK TO HYPO PUMP DUE TO SMALL HAIRLINE CRACK.

RP.

11/16/20 12:30        RIVER CONDUCTIVITY SAMPLE

8681 uS/cm

RP.

11/16/20 12:35        +++++++RESERVOIR MAKEUP PUMPING FACILITY WEEKLY WALKDOWN

RESERVOIR MAKEUP PUMPING FACILITY WEEKLY WALKDOWN

OBSERVATION DATE- 11/16//2020

TIME OF OBSERVATION- 12:35

WEATHER- CLEAR SKIES , 71 DEGREES FAHRENHEIT

RIVER STREAM FLOW- NO FLOW

GENERAL COMMENTS- STP WAS NOT DIVERTING DURING THE TIME OF THE OBSERVATION. THE RMPF TRAVELING SCREENS WERE IN GOOD CONDITION. THE FISH RETURN SYSTEM WAS IN PLACE. THE RMPF PUMPS AND ELECTRICAL COMPONENTS APPEARED IN GOOD CONDITION. NO INDICATIONS OF FOAM, FISH OR WILDLIFE MORTALITIES, UNUSUAL INDICATION OF FLORA OR FAUNA, ETC IN THE FOREBAY AREA. NO ABNORMAL CONDITIONS WERE OBSERVED DURING THE WEEKLY WALKDOWN.

RP..

11/16/20 17:20        PEREZ, RODOLFO (RUDY) relieved the ENVIRONMENTAL CHEMIST

Environmental Shift Log commenced for Monday 11/16/2020

11/23/20 07:59 PEREZ, RODOLFO (RUDY) relieved the ENVIRONMENTAL CHEMIST  
Environmental Shift Log commenced for Monday 11/23/2020

11/23/20 09:43 RIVER CONDUCTIVITY SAMPLE  
4926 uS/cm  
  
RP.

11/23/20 09:48 ++++++RESERVOIR MAKEUP PUMPING FACILITY WEEKLY WALKDOWN  
  
RESERVOIR MAKEUP PUMPING FACILITY WEEKLY WALKDOWN  
OBSERVATION DATE- 11/23//2020  
TIME OF OBSERVATION- 09:48  
WEATHER- PARTLY CLOUDY , 63 DEGREES FAHRENHEIT  
RIVER STREAM FLOW- NO FLOW  
GENERAL COMMENTS- STP WAS NOT DIVERTING DURING THE TIME OF THE  
OBSERVATION. THE RMPF TRAVELING SCREENS WERE IN GOOD CONDITION.  
THE FISH RETURN SYSTEM WAS IN PLACE. THE RMPF PUMPS AND ELECTRICAL  
COMPONENTS APPEARED IN GOOD CONDITION. NO INDICATIONS OF FOAM,  
FISH OR WILDLIFE MORTALITIES, UNUSUAL INDICATION OF FLORA OR FAUNA,  
ETC IN THE FOREBAY AREA. NO ABNORMAL CONDITIONS WERE OBSERVED  
DURING THE WEEKLY WALKDOWN.  
RP..

11/23/20 10:00 CIRC WATER INTAKE STRUCTURE WEEKLY WALK DOWN  
  
PERFORMED WEEKLY WALK DOWN OF THE CIRC WATER INTAKE STRUCTURE,  
INSPECTING FOR PRESENCE OF FOAM, FISH OR WILDLIFE MORTALITIES,  
UNUSUAL INDICATIONS OF FLORA OR FAUNA, ETC. NO ABNORMAL CONDITIONS  
WERE OBSERVED, NO FOAM WAS OBSERVED.  
RP...

11/23/20 15:19 SYSTEMS WALKDOWN  
  
LIFTSTATION FUNCTIONABILITY CHECKS ON BLD. 20, WHSE. E, WHSE. 31,  
5/50, NSC, NTF, BLDG. 60 LIFT STATIONS. ALL SAT.  
  
SANITARY WASTE TREATMENT SYSTEMS WALKDOWN- ALL SAT.  
POTABLE WASTER SYSTEMS WALKDOWN- ALL SAT. (ADJUSTED AS NEEDED).  
RP.

11/30/20 08:50 PEREZ, RODOLFO (RUDY) relieved the ENVIRONMENTAL CHEMIST  
Environmental Shift Log commenced for Monday 11/30/2020

11/30/20 12:30 WEEKLY RIVER CONDUCTIVITY SAMPLING  
  
1083 uS/cm  
  
RP.

11/30/20 12:35 +++++++RESERVOIR MAKEUP PUMPING FACILITY WEEKLY WALKDOWN  
  
RESERVOIR MAKEUP PUMPING FACILITY WEEKLY WALKDOWN  
OBSERVATION DATE- 11/30//2020  
TIME OF OBSERVATION- 12:35  
WEATHER- CLEAR SKIES , 52 DEGREES FAHRENHEIT  
RIVER STREAM FLOW- HIGH FLOW  
GENERAL COMMENTS- STP WAS NOT DIVERTING DURING THE TIME OF THE  
OBSERVATION. THE RMPF TRAVELING SCREENS WERE IN GOOD CONDITION.  
THE FISH RETURN SYSTEM WAS IN PLACE. THE RMPF PUMPS AND ELECTRICAL  
COMPONENTS APPEARED IN GOOD CONDITION. NO INDICATIONS OF FOAM,  
FISH OR WILDLIFE MORTALITIES, UNUSUAL INDICATION OF FLORA OR FAUNA,  
ETC IN THE FOREBAY AREA. NO ABNORMAL CONDITIONS WERE OBSERVED  
DURING THE WEEKLY WALKDOWN.  
RP..

11/30/20 13:00 \*\*\*\*\*WATER WELL 8 - CHECKVALVE INSTALLATIONS COMPLETED  
  
BOOSTER PUMPS 1,2,3,4 CHECKVALVES WERE REPLACED WITH NEW ONES BY  
PMI.  
SYSTEM WAS PLACED BACK IN NORMAL CONFIGURATION. (FMG-P-0001, NSC/NTF  
POTABLE WATER SYSTEM OPERATIONS)  
  
RP

11/30/20 14:18 CIRC WATER INTAKE STRUCTURE WEEKLY WALK DOWN  
  
PERFORMED WEEKLY WALK DOWN OF THE CIRC WATER INTAKE STRUCTURE,  
INSPECTING FOR PRESENCE OF FOAM, FISH OR WILDLIFE MORTALITIES,  
UNUSUAL INDICATIONS OF FLORA OR FAUNA, ETC. NO ABNORMAL CONDITIONS  
WERE OBSERVED, NO FOAM WAS OBSERVED.  
RP...

11/30/20 17:13 SYSTEMS WALKDOWN  
  
LIFTSTATION FUNCTIONABILITY CHECKS ON BLD. 20, WHSE. E, WHSE. 31,  
5/50, NSC, NTF, BLDG. 60 LIFT STATIONS. ALL SAT.  
  
SANITARY WASTE TREATMENT SYSTEMS WALKDOWN- ALL SAT.  
POTABLE WASTER SYSTEMS WALKDOWN- ALL SAT. (ADJUSTED AS NEEDED).  
RP.

12/07/20 09:25 PEREZ, RODOLFO (RUDY) relieved the ENVIRONMENTAL CHEMIST  
Environmental Shift Log commenced for Monday 12/07/2020

12/07/20 13:40 WEEKLY RIVER CONDUCTIVITY SAMPLING  
  
3093 uS/cm  
  
RP.

12/07/20 13:45 ++++++RESERVOIR MAKEUP PUMPING FACILITY WEEKLY WALKDOWN  
  
RESERVOIR MAKEUP PUMPING FACILITY WEEKLY WALKDOWN  
OBSERVATION DATE- 12/07//2020  
TIME OF OBSERVATION- 13:45  
WEATHER- CLEAR SKIES , 62 DEGREES FAHRENHEIT  
RIVER STREAM FLOW- SLIGHT FLOW  
GENERAL COMMENTS- STP WAS NOT DIVERTING DURING THE TIME OF THE  
OBSERVATION. THE RMPF TRAVELING SCREENS WERE IN GOOD CONDITION.  
THE FISH RETURN SYSTEM WAS IN PLACE. THE RMPF PUMPS AND ELECTRICAL  
COMPONENTS APPEARED IN GOOD CONDITION. NO INDICATIONS OF FOAM,  
FISH OR WILDLIFE MORTALITIES, UNUSUAL INDICATION OF FLORA OR FAUNA,  
ETC IN THE FOREBAY AREA. NO ABNORMAL CONDITIONS WERE OBSERVED  
DURING THE WEEKLY WALKDOWN.  
RP..

12/07/20 17:00 SYSTEMS WALKDOWN  
  
LIFTSTATION FUNCTIONABILITY CHECKS ON BLD. 20, WHSE. E, WHSE. 31,  
5/50, NSC, NTF, BLDG. 60 LIFT STATIONS. ALL SAT.  
  
SANITARY WASTE TREATMENT SYSTEMS WALKDOWN- ALL SAT.  
POTABLE WASTER SYSTEMS WALKDOWN- ALL SAT. (ADJUSTED AS NEEDED).  
RP.



12/15/20 06:15 Collected Outfall 101 and 201 weekly effluent samples from Unit 1 Control Room. All samples were clear.  
RN

12/15/20 06:45 TSWTS  
Collected weekly Outfall 601 effluent samples. All samples were most clear with a light tea color tint to the matrix.  
RN

12/15/20 07:05 WSWTS  
Collected weekly Outfall 401 effluent samples. All samples were clear.  
RN

12/15/20 09:00 RESERVOIR MAKEUP PUMPING FACILITY WEEKLY WALKDOWN  
RESERVOIR MAKEUP PUMPING FACILITY WEEKLY WALKDOWN  
WEATHER- CLEAR SKIES , 52 DEGREES FAHRENHEIT  
RIVER STREAM FLOW- SLIGHT FLOW  
GENERAL COMMENTS- STP WAS NOT DIVERTING DURING THE TIME OF THE OBSERVATION. THE RMPF TRAVELING SCREENS WERE IN GOOD CONDITION. THE FISH RETURN SYSTEM WAS IN PLACE. THE RMPF PUMPS AND ELECTRICAL COMPONENTS APPEARED IN GOOD CONDITION. NO INDICATIONS OF FOAM, FISH OR WILDLIFE MORTALITIES, UNUSUAL INDICATION OF FLORA OR FAUNA, ETC IN THE FOREBAY AREA. NO ABNORMAL CONDITIONS WERE OBSERVED DURING THE WEEKLY WALKDOWN.  
RN

12/15/20 09:45 Courier received weekly 101, 201, 401 , and 601 outfall samples to deliver to testing facility.  
RN

12/15/20 11:34 CIRC WATER INTAKE STRUCTURE WEEKLY WALK DOWN  
Performed weekly walk down of the Circ Water Intake Structure, inspecting for presence of foam, fish or wildlife mortalities, unusual indications of flora or fauna, etc. No abnormal conditions were observed, no foam was observed.  
RN

12/21/20 16:22 NSC/NTF PWS  
Walked down system and found in normal conditions. Chlorine level in storage tank was good.  
  
RG.

12/21/20 16:23 MAIN PWS  
Performed walk down of system and found in normal conditions. Chlorine level in storage tank was a little low, so ran hypo pump for 20 minutes. Checked chlorine level in afternoon and was good.

12/21/20 16:24 TSWTS 601 -  
Performed walk down of system and found in normal operating conditions. Returned supinate from ASH tank to Aeration basin for 20 minutes. Wasted from main clarifer to ASH Tank for 30 minutes.  
  
RG

12/21/20 16:25 WSWTS 401-  
Performed walk down of system and found in normal conditions. Returned supinate from ASH Tank to west aeration basin for 20 minutes. Transferred from waste basin to ASH Tank.  
  
RG

12/21/20 16:26 Collected River, Reservoir and 401 samples for chemistry. Relayed conductivity information for River and Reservoir to chemistry by phone and took 401 samples into the PA for them.  
  
RG

12/21/20 16:28 ++++++RESERVOIR MAKEUP PUMPING FACILITY WEEKLY WALKDOWN  
RESERVOIR MAKEUP PUMPING FACILITY WEEKLY WALKDOWN  
OBSERVATION DATE- 12/21/2020  
TIME OF OBSERVATION- 11:15  
WEATHER- Partly Cloudy, 75 DEGREES FAHRENHEIT  
RIVER STREAM FLOW- SLIGHT FLOW  
GENERAL COMMENTS- STP WAS DIVERTING DURING THE TIME OF THE OBSERVATION. THE RMPF TRAVELING SCREENS WERE IN GOOD CONDITION. THE FISH RETURN SYSTEM WAS IN PLACE. THE RMPF PUMPS AND ELECTRICAL COMPONENTS APPEARED IN GOOD CONDITION. NO INDICATIONS OF FOAM, FISH OR WILDLIFE MORTALITIES, UNUSUAL INDICATION OF FLORA OR FAUNA, ETC IN THE FOREBAY AREA. NO ABNORMAL CONDITIONS WERE OBSERVED DURING THE WEEKLY WALKDOWN.  
  
RG

12/28/20 17:04 NSF/NTF PWS  
Performed walk down of system and found in normal conditions.  
Checked storage tank chlorine and chlorine level was good.  
  
RG

12/28/20 17:05 MAIN PWS  
Performed walk down of system and found in normal conditions.  
Checked storage tank chlorine and chlorine level was good.  
  
RG

12/28/20 17:06 TSWTS -  
Performed walkdown of system and found in normal conditions.  
Returned supinate from ASH Tank to aeration basin for 20 minutes.  
  
RG

12/28/20 17:06 WSWTS -  
Performed walkdown of system and found in normal conditions.  
Returned supinate from ASH Tank to aeration basin for 20 minutes.  
  
RG

12/28/20 17:07 ++++++RESERVOIR MAKEUP PUMPING FACILITY WEEKLY WALKDOWN  
RESERVOIR MAKEUP PUMPING FACILITY WEEKLY WALKDOWN  
OBSERVATION DATE- 12/28/2020  
TIME OF OBSERVATION- 15:30  
WEATHER- Sunny, 75 DEGREES FAHRENHEIT  
RIVER STREAM FLOW- SLIGHT FLOW  
GENERAL COMMENTS- STP WAS NOT DIVERTING DURING THE TIME OF THE  
OBSERVATION. THE RMPF TRAVELING SCREENS WERE IN GOOD CONDITION.  
THE FISH RETURN SYSTEM WAS IN PLACE. THE RMPF PUMPS AND ELECTRICAL  
COMPONENTS APPEARED IN GOOD CONDITION. NO INDICATIONS OF FOAM,  
FISH OR WILDLIFE MORTALITIES, UNUSUAL INDICATION OF FLORA OR FAUNA,  
ETC IN THE FOREBAY AREA. NO ABNORMAL CONDITIONS WERE OBSERVED  
DURING THE WEEKLY WALKDOWN.  
  
RG

12/28/20 17:08 River Sample  
Collected river sample for Chemistry and relayed conductivity  
information to them  
  
RG

01/05/21 15:30      +++++++RESERVOIR MAKEUP PUMPING FACILITY WEEKLY WALKDOWN  
RESERVOIR MAKEUP PUMPING FACILITY WEEKLY WALKDOWN  
OBSERVATION DATE- 1/05/2021  
TIME OF OBSERVATION- 15:30  
WEATHER- Sunny, 66 DEGREES FAHRENHEIT  
RIVER STREAM FLOW- GOOD FLOW  
GENERAL COMMENTS- STP WAS DIVERTING DURING THE TIME OF THE  
OBSERVATION. THE RMPF TRAVELING SCREENS WERE IN GOOD CONDITION.  
THE FISH RETURN SYSTEM WAS IN PLACE. THE RMPF PUMPS AND ELECTRICAL  
COMPONENTS APPEARED IN GOOD CONDITION. NO INDICATIONS OF FOAM,  
FISH OR WILDLIFE MORTALITIES, UNUSUAL INDICATION OF FLORA OR FAUNA,  
ETC IN THE FOREBAY AREA. NO ABNORMAL CONDITIONS WERE OBSERVED  
DURING THE WEEKLY WALKDOWN.

RG

01/05/21 16:16      TSWTS  
Collected weekly Outfall 601 effluent samples. All samples were  
most clear with a light tea color tint to the matrix.  
Performed a walk down of system and found in normal operatoins.

Returned supinate for 20 minutes.  
Wasted from main clarifier for 30 minutes.

RG

01/05/21 16:17      WSWTS  
Collected weekly Outfall 401 effluent samples. All samples were  
clear.

Performed walk down of system and found in normal operating  
conditions.

Returned supinate for 20 minutes from ASH Tank.

RG

01/05/21 16:18      MAIN PWS:  
Performed walk down of system and found in normal operating  
conditions.

Storage tank chlorine level was a little low so ran hypo pump for 45  
minutes. Rechecked chlorine levels in the afternoon and was good.

RG

01/05/21 16:19      NSC/NTF WELL 8 PWS -  
Performed walk down of system and found in normal operating  
conditions.

RG

01/05/21 16:21      Collected River and Reservoir Sample for Chemistry.  
RG

01/05/21 16:23      Collected Outfall 101 and 201 weekly effluent samples from Unit 1  
Control Room. All samples were clear.  
RG

01/11/21 06:45 NSC Cooling Tower Totalizer Readings  
Collected the NSC Cooling Tower Totalizer Readings for the week.  
  
RG

01/11/21 08:30 Chiller Cans  
Transported a pallet of chiller cans to the Sally Port to be delivered to the MOF.  
  
RG

01/11/21 09:00 Enviornmental Yard  
Organized Yard  
  
RG

01/11/21 10:15 ++++++RESERVOIR MAKEUP PUMPING FACILITY WEEKLY WALKDOWN  
RESERVOIR MAKEUP PUMPING FACILITY WEEKLY WALKDOWN  
OBSERVATION DATE- 1/11/2021  
TIME OF OBSERVATION- 10:15  
WEATHER- CLOUDY, 37 DEGREES FAHRENHEIT  
RIVER STREAM FLOW- MODERATE FLOW  
GENERAL COMMENTS- STP WAS DIVERTING DURING THE TIME OF THE  
OBSERVATION. THE RMPF TRAVELING SCREENS WERE IN GOOD CONDITION.  
THE FISH RETURN SYSTEM WAS IN PLACE. THE RMPF PUMPS AND ELECTRICAL  
COMPONENTS APPEARED IN GOOD CONDITION. NO INDICATIONS OF FOAM,  
FISH OR WILDLIFE MORTALITIES, UNUSUAL INDICATION OF FLORA OR FAUNA,  
ETC IN THE FOREBAY AREA. NO ABNORMAL CONDITIONS WERE OBSERVED  
DURING THE WEEKLY WALKDOWN.  
  
RP

01/11/21 11:53 CIRC WATER INTAKE STRUCTURE WEEKLY WALK DOWN  
  
PERFORMED WEEKLY WALK DOWN OF THE CIRC WATER INTAKE STRUCTURE,  
INSPECTING FOR PRESENCE OF FOAM, FISH OR WILDLIFE MORTALITIES,  
UNUSUAL INDICATIONS OF FLORA OR FAUNA, ETC. NO ABNORMAL CONDITIONS  
WERE OBSERVED, NO FOAM WAS OBSERVED.  
RP...

01/11/21 12:10 >>>>WEST SNITARY WASTE TREATMENT SYSTEM  
LEAKING SLUDGE RETURN LINE (WEST AERATION BASIN)  
  
A SMALL LEAK WAS DISCOVERED ON THE SLUDGE RETURN LINE (WEST AERATION  
BASIN)  
THE LEAK DRIPS INTO THE AERATION BASIN NOT TO GROUND.  
FACILITY WORK ORDER HAS BEEN CREATED (Work order FS21-00147)  
RP.

01/11/21 13:30      Used Oil  
Transferred approximately 2000 gallons of used oil from drums to the  
used oil storage tank.  
  
RG

01/11/21 15:30      Drum Crushing  
Crushed 8 Drums using drum crusher and disposed of them in the scrap  
metal bin.  
  
RG

01/18/21 09:10 PEREZ, RODOLFO (RUDY) relieved the ENVIRONMENTAL CHEMIST  
Environmental Shift Log commenced for Monday 01/18/2021

01/18/21 12:10 ++++++RESERVOIR MAKEUP PUMPING FACILITY WEEKLY WALKDOWN  
RESERVOIR MAKEUP PUMPING FACILITY WEEKLY WALKDOWN  
OBSERVATION DATE- 1/18/2021  
TIME OF OBSERVATION- 12:10  
WEATHER- Mostly CLOUDY, 67 DEGREES FAHRENHEIT  
RIVER STREAM FLOW- SLOW FLOW  
GENERAL COMMENTS- STP WAS DIVERTING DURING THE TIME OF THE  
OBSERVATION. THE RMPF TRAVELING SCREENS WERE IN GOOD CONDITION.  
THE FISH RETURN SYSTEM WAS IN PLACE. THE RMPF PUMPS AND ELECTRICAL  
COMPONENTS APPEARED IN GOOD CONDITION. NO INDICATIONS OF FOAM,  
FISH OR WILDLIFE MORTALITIES, UNUSUAL INDICATION OF FLORA OR FAUNA,  
ETC IN THE FOREBAY AREA. NO ABNORMAL CONDITIONS WERE OBSERVED  
DURING THE WEEKLY WALKDOWN.  
  
RP

01/18/21 16:26 CIRC WATER INTAKE STRUCTURE WEEKLY WALK DOWN  
  
PERFORMED WEEKLY WALK DOWN OF THE CIRC WATER INTAKE STRUCTURE,  
INSPECTING FOR PRESENCE OF FOAM, FISH OR WILDLIFE MORTALITIES,  
UNUSUAL INDICATIONS OF FLORA OR FAUNA, ETC. NO ABNORMAL CONDITIONS  
WERE OBSERVED, NO FOAM WAS OBSERVED.  
RP...

01/18/21 17:23 SYSTEMS WALKDOWN  
  
LIFTSTATION FUNCTIONABILITY CHECKS ON BLD. 20, WHSE. E, WHSE. 31,  
5/50, NSC, NTF, BLDG. 60 LIFT STATIONS. ALL SAT.  
  
SANITARY WASTE TREATMENT SYSTEMS WALKDOWN- ALL SAT.  
POTABLE WASTE SYSTEMS WALKDOWN- ALL SAT. (ADJUSTED AS NEEDED).  
RP.

01/18/21 17:24 \*\*\*\*\*RESERVOIR MAKEUP AND RIVER CONDUCTIVITY SAMPLING  
  
RESERVOIR MAKEUP - 11:07 - 2513 uS/cm  
RIVER - 12:00 - 1397 uS/cm  
  
RP.



01/18/21 17:28

&gt;&gt;&gt;&gt;&gt;&gt;&gt;SODIUM HYPOCHLORITE DELIVERY

NSC/NTF POTABLE WATER SYSTEM

WELL 8:

STARTING LEVEL- 235

NO. OF DRUMS ADDED- 3

ENDING LEVEL- 400

MAIN POTABLE WATER SYSTEM

MAIN :

STARTING LEVEL - 205

NO. OF DRUMS ADDED 4

ENDING LEVEL- 425

RP.

01/25/21 10:20 \*\*\*\*\*RIVER - WEEKLY CONDUCTIVITY SAMPLING  
6851 uS/cm  
RP.

01/25/21 10:25 ++++++RESERVOIR MAKEUP PUMPING FACILITY WEEKLY WALKDOWN  
RESERVOIR MAKEUP PUMPING FACILITY WEEKLY WALKDOWN  
OBSERVATION DATE- 1/25/2021  
TIME OF OBSERVATION- 10:25  
WEATHER- CLOUDY, 72 DEGREES FAHRENHEIT  
RIVER STREAM FLOW- NO FLOW  
GENERAL COMMENTS- STP WAS DIVERTING DURING THE TIME OF THE  
OBSERVATION. THE RMPF TRAVELING SCREENS WERE IN GOOD CONDITION.  
THE FISH RETURN SYSTEM WAS IN PLACE. THE RMPF PUMPS AND ELECTRICAL  
COMPONENTS APPEARED IN GOOD CONDITION. NO INDICATIONS OF FOAM,  
FISH OR WILDLIFE MORTALITIES, UNUSUAL INDICATION OF FLORA OR FAUNA,  
ETC IN THE FOREBAY AREA. NO ABNORMAL CONDITIONS WERE OBSERVED  
DURING THE WEEKLY WALKDOWN.  
RP

01/25/21 12:54 CIRC WATER INTAKE STRUCTURE WEEKLY WALK DOWN  
PERFORMED WEEKLY WALK DOWN OF THE CIRC WATER INTAKE STRUCTURE,  
INSPECTING FOR PRESENCE OF FOAM, FISH OR WILDLIFE MORTALITIES,  
UNUSUAL INDICATIONS OF FLORA OR FAUNA, ETC. NO ABNORMAL CONDITIONS  
WERE OBSERVED, NO FOAM WAS OBSERVED.  
RP...

01/25/21 17:09 SYSTEMS WALKDOWN  
LIFTSTATION FUNCTIONABILITY CHECKS ON BLD. 20, WHSE. E, WHSE. 31,  
5/50, NSC, NTF, BLDG. 60 LIFT STATIONS. ALL SAT.  
SANITARY WASTE TREATMENT SYSTEMS WALKDOWN- ALL SAT.  
POTABLE WASTER SYSTEMS WALKDOWN- ALL SAT. (ADJUSTED AS NEEDED).  
RP.

01/25/21 17:12 >>>>>>SANITARY WASTE SLUDGE PROCESSING - TSWTS (TRAINIING SANITARY  
WASTE TREATMENT SYSTEM)  
PROCESSED APPROX. 4,000 GALLONS OF SANITARY SLUDGE FROM AERATED  
SLUDGE HOLDING TANK INTO SLUDGE DEWATERING ROLL OFF.  
RP.

02/01/21 08:52 PEREZ, RODOLFO (RUDY) relieved the ENVIRONMENTAL CHEMIST  
Environmental Shift Log commenced for Monday 02/01/2021

02/01/21 09:40 ++++++RESERVOIR MAKEUP PUMPING FACILITY WEEKLY WALKDOWN  
RESERVOIR MAKEUP PUMPING FACILITY WEEKLY WALKDOWN  
OBSERVATION DATE- 2/01/2021  
TIME OF OBSERVATION- 09:40  
WEATHER- CLEAR SKIES, 42 DEGREES FAHRENHEIT  
RIVER STREAM FLOW- NO FLOW  
GENERAL COMMENTS- NO INDICATIONS OF FOAM,  
FISH OR WILDLIFE MORTALITIES, UNUSUAL INDICATION OF FLORA OR FAUNA,  
ETC IN THE FOREBAY AREA. NO ABNORMAL CONDITIONS WERE OBSERVED  
DURING THE WEEKLY WALKDOWN.

RP

02/01/21 09:40 ++++++RESERVOIR MAKEUP PUMPING FACILITY WEEKLY WALKDOWN  
RESERVOIR MAKEUP PUMPING FACILITY WEEKLY WALKDOWNS

LAST STP RIVER DIVERSION - 1/19/2021.  
PREVIOUS RESERVOIR MAKEUP PUMPING FACILITY WEEKLY WALKDOWN  
ENVIRONMENTAL LOGS INCLUDED STP DIVERSION LOG CANNED ENTRIES THUS  
SHOWING ALL PREVIOUS LOG ENTRIES AS STP RIVER DIVERSIONS. ON EACH  
WEEKLY LOG ENTRY.  
THIS HAS NOW BEEN CORRECTED.  
RP.

02/01/21 17:16 SYSTEMS WALKDOWN

LIFTSTATION FUNCTIONABILITY CHECKS ON BLD. 20, WHSE. E, WHSE. 31,  
5/50, NSC, NTF, BLDG. 60 LIFT STATIONS. ALL SAT.

SANITARY WASTE TREATMENT SYSTEMS WALKDOWN- ALL SAT.  
POTABLE WASTE SYSTEMS WALKDOWN- ALL SAT. (ADJUSTED AS NEEDED).  
RP.

02/08/21 08:09 PEREZ, RODOLFO (RUDY) relieved the ENVIRONMENTAL CHEMIST  
Environmental Shift Log commenced for Monday 02/08/2021

02/08/21 09:00 Drum Crushing  
Crushed 42 metal drums using the drum crusher at the environmental  
yard. Took crushed drums to the scrap metal bin.  
RG

02/08/21 09:10 \*\*\*\*RIVER - WEEKLY CONDUCTIVITY SAMPLING  
7485 uS/cm  
RP.

02/08/21 09:15 ++++++RESERVOIR MAKEUP PUMPING FACILITY WEEKLY WALKDOWN  
RESERVOIR MAKEUP PUMPING FACILITY WEEKLY WALKDOWN  
OBSERVATION DATE- 2/08/2021  
TIME OF OBSERVATION- 09:15  
WEATHER- CLOUDY, 54 DEGREES FAHRENHEIT  
RIVER STREAM FLOW- NO FLOW  
GENERAL COMMENTS- NO INDICATIONS OF FOAM,  
FISH OR WILDLIFE MORTALITIES, UNUSUAL INDICATION OF FLORA OR FAUNA,  
ETC IN THE FOREBAY AREA. NO ABNORMAL CONDITIONS WERE OBSERVED  
DURING THE WEEKLY WALKDOWN.  
RP

02/08/21 11:00 Loaded approximately 3500 gallons of water into the vacuum truck to  
be transported to the oily waste surge tank.  
RG

02/08/21 14:30 Offloaded water from vacuum truck in to oily waste surge tank.  
RG

02/08/21 16:44 Environmental Yard  
Organized yard.  
RG

02/08/21 17:18 SYSTEMS WALKDOWN  
LIFTSTATION FUNCTIONABILITY CHECKS ON BLD. 20, WHSE. E, WHSE. 31,  
5/50, NSC, NTF, BLDG. 60 LIFT STATIONS. ALL SAT.  
SANITARY WASTE TREATMENT SYSTEMS WALKDOWN- ALL SAT.  
POTABLE WATER SYSTEMS WALKDOWN- ALL SAT. (ADJUSTED AS NEEDED).  
RP.

02/17/21 04:15 >>>>>WEEKLY EFFLUENT SAMPLING - OUTFALL 401 (WEST SANITARY WASTE TREATMENT SYSTEM)

COLLECTED SAMPLES FOR TOTAL SUSPENDED SOLIDS (TSS) AND BIOCHEMICAL OXYGEN DEMAND ANALYSIS (BOD). SAMPLES LOOKED CLEAR.  
RP.

02/17/21 04:40 >>>>>>WEEKLY EFFLUENT SAMPLING - OUTFALL 601 (TRAINING SANITARY WASTE TREATMENT SYSTEM)

COLLECTED SAMPLES FOR TOTAL SUSPENDED SOLIDS (TSS) AND BIOCHEMICAL OXYGEN DEMAND ANALYSIS (BOD). SAMPLES LOOKED CLEAR.  
RP.

02/17/21 10:40 >>>>>WEEKLY OUTFALL SAMPLES - COURIER PICK UP

OUTFALL SAMPLES - 101, 201, 401 AND 601 WERE PACKAGED AND SHIPPED VIA WEEKLY COURIER FOR ANALYSIS AT HOUSTON TX. LAB.101, 201,401 AND 601 SAMPLES LOOKED CLEAR.  
RP.

02/17/21 14:56 CIRC WATER INTAKE STRUCTURE WEEKLY WALK DOWN

PERFORMED WEEKLY WALK DOWN OF THE CIRC WATER INTAKE STRUCTURE, INSPECTING FOR PRESENCE OF FOAM, FISH OR WILDLIFE MORTALITIES, UNUSUAL INDICATIONS OF FLORA OR FAUNA, ETC. NO ABNORMAL CONDITIONS WERE OBSERVED, NO FOAM WAS OBSERVED.  
RP...

02/17/21 15:10 ++++++RESERVOIR MAKEUP PUMPING FACILITY WEEKLY WALKDOWN  
RESERVOIR MAKEUP PUMPING FACILITY WEEKLY WALKDOWN  
OBSERVATION DATE- 2/17/2021  
TIME OF OBSERVATION- 15:10  
WEATHER- CLOUDY, 37 DEGREES FAHRENHEIT  
RIVER STREAM FLOW- NO FLOW  
GENERAL COMMENTS- NO INDICATIONS OF FOAM,  
FISH OR WILDLIFE MORTALITIES, UNUSUAL INDICATION OF FLORA OR FAUNA,  
ETC IN THE FOREBAY AREA. NO ABNORMAL CONDITIONS WERE OBSERVED  
DURING THE WEEKLY WALKDOWN.  
  
RP

02/17/21 17:58

\*\*\*\*\*SR. ENVIRONMENTAL WORK SUMMARY

## MAINT POTABLE WATER SYSTEM

- SOLENOID WATER LINE USED TO TRANSFER HYPO INTO THE GROUND WATER STORAGE TANK IS ISOLATED TO BROKEN KINES FROM FREEZE.
  - A TEMPORARY INJECTION LINE WAS INSTALLED ALONG WITH NEW SUTION AND DISCHARGE TUBING. ALSO, A NEW SODIUM HYPOCHLORITE PUMP WAS INSTALLED.
  - TODAY, EACH GW STORAGE TANK RECEIVED 1 GALLON EACH OF BLEACH TO MAINTAIN A CHLORINE RESIDUAL (FREE AVAILABLE)
- FACILITIES IS AWARE OF THE LINE BREAK AND IS ON THEIR "TO DO LIST".

## CONCRETE WASH AREA

- WATER LINE BREAK AT CONCRETE WASHING AREA. THE LINE WAS SECURED BY ISOLATING THE BACKFLOW PREVENTER LOCATED (EAST OF MAIN POTABLE WATER SYSTEM) .

## WELL 8 - WELL FILL TO GROUND WATER STORAGE TANK

- PROBLEM- THE WELL DOESN'T SHUT OFF WHEN IN AUTO THUS CAUSING GROUND WATER STORAGE TANK TO OVERFILL.
- FACILITIES REROUTED AND INSTALLED A NEW LINE FROM TEH FOOT VALVE FROM BOTTOM OF GWST (THIS TELLS THE CONTROL PANEL HOW MUCH WATER IS IN THE GWST)
- PERFORMED A FILL TEST IN AUTO BUT THE GWST OVERFILLED AND WELL DIDN'T SHUT OFF.

NOTE: CURRENTLY, THE GROUND WATER STORAGE TANK WILL BE FILLED AND WELL PLACED IN "OFF" POSITION UNTIL THE NEXT MORNING.

- SAFETY EYEWASH STATION IS BROKEN DUE TO FREEZE. A TEMP EYEWASH IS IN PLACE.
- SIGHT GLASS (PRESSURE TANK) IS BROKEN DUE TO FREEZE.

## EFFLUENT SAMPLES TO SGS

- LAB WAS CLOSED DUE TO INCLEMENT WEATHER
  - COMMUNICATED WITH SGS SUPERVISOR ABOUT EFFLUENT SAMPLES.
  - COMMUNICATED WITH COURIER ABOUT PICK UP.
  - SAMPLES WERE PICKED UP BY COURIER AND DROPPED OFF WITH SAMPLE RECEIVING PERSON AT SGS FACILITY IN HOUSTON.
- RP.

02/25/21 07:10 CIRC WATER INTAKE STRUCTURE WEEKLY WALK DOWN

PERFORMED WEEKLY WALK DOWN OF THE CIRC WATER INTAKE STRUCTURE, INSPECTING FOR PRESENCE OF FOAM, FISH OR WILDLIFE MORTALITIES, UNUSUAL INDICATIONS OF FLORA OR FAUNA, ETC. NO ABNORMAL CONDITIONS WERE OBSERVED, SLIGHT FOAM WAS OBSERVED.  
RP...

02/25/21 08:30 \*\*\*\*\*RESERVOIR INLET - CONDUCTIVITY SAMPLING  
RMPF WAS DIVERTING FROM RIVER TO RESERVOIR INLET.  
1398 uS/cm

RP.

02/25/21 08:42 \*\*\*\*\*RIVER - CONDUCTIVITY SAMPLING  
RMPF WAS DIVERTING FROM RIVER TO RESERVOIR INLET  
1387 uS/cm

RP.

02/25/21 08:45 +++++++RESERVOIR MAKEUP PUMPING FACILITY WEEKLY WALKDOWN  
RESERVOIR MAKEUP PUMPING FACILITY WEEKLY WALKDOWN  
OBSERVATION DATE- 2/25/2021  
TIME OF OBSERVATION- 08:45  
WEATHER- CLOUDY, 66 DEGREES FAHRENHEIT  
RIVER STREAM FLOW- MEDIUM FLOW  
GENERAL COMMENTS- STP WAS DIVERTING DURING THE TIME OF THE OBSERVATION. THE RMPF TRAVELING SCREENS WERE IN GOOD CONDITION. THE FISH RETURN SYSTEM WAS IN PLACE. THE RMPF PUMPS AND ELECTRICAL COMPONENTS APPEARED IN GOOD CONDITION. NO INDICATIONS OF FOAM, FISH OR WILDLIFE MORTALITIES, UNUSUAL INDICATION OF FLORA OR FAUNA, ETC IN THE FOREBAY AREA. NO ABNORMAL CONDITIONS WERE OBSERVED DURING THE WEEKLY WALKDOWN.

RP

02/25/21 09:32 Swapped running 60 CFS pumps at RMPF to support PMT on RMPF pump 1.  
No diversion rate change.

02/25/21 13:08 RMPF pumping secured due to low river flow.

02/25/21 17:08 SYSTEMS WALKDOWN

LIFTSTATION FUNCTIONABILITY CHECKS ON BLD. 20, WHSE. E, WHSE. 31, 5/50, NSC, NTF, BLDG. 60 LIFT STATIONS. ALL SAT.

SANITARY WASTE TREATMENT SYSTEMS WALKDOWN- ALL SAT.  
POTABLE WASTER SYSTEMS WALKDOWN- ALL SAT. (ADJUSTED AS NEEDED).  
RP.

02/25/21 17:14

\*\*\*\*\*SR. ENVIRONMENTAL TECHNICIAN WORK SUMMARY

- RECEIVED HAZARDOUS WASTE WEEKLY RUN- NO HAZARDOUS WASTE: USED OIL DRUM, EMPTY SCRAP POLY DRUM, PAINT WASTE DEBRIS, ASBESTOS CONTAMINATED MATERIAL IN DRUMS.

-SLUDGE WASTING TRAINING SANITARY WASTE TREATMENT SYSTEM- 30 MINUTE WASTE

-OBTAINED OWNER CONTROLLED AREA MONTHLY DIESEL GENERATOR READINGS.

- CHECKED ON FREEZE AFFECTED EQUIPMENT REPAIRS BY FACILITIES - IN PROGRESS.

- EFFLUENT LINE LEAK REPAIRED- WEST SANITARY WASTE TREATMENT SYSTEM.

- WELL 8 - MANUAL GROUND WATER STORAGE TANK FILLS AT 06:30 - 07:15 AND 15:00 - 14:15.  
RP.



03/03/21 13:38

++++++RESERVOIR MAKEUP PUMPING FACILITY WEEKLY WALKDOWN  
RESERVOIR MAKEUP PUMPING FACILITY WEEKLY WALKDOWN  
OBSERVATION DATE- 3/03/2021  
TIME OF OBSERVATION- 13:38  
WEATHER- BLUE SKIES, 65 DEGREES FAHRENHEIT  
RIVER STREAM FLOW- NO FLOW  
GENERAL COMMENTS- NO INDICATIONS OF FOAM,  
FISH OR WILDLIFE MORTALITIES, UNUSUAL INDICATION OF FLORA OR FAUNA,  
ETC IN THE FOREBAY AREA. NO ABNORMAL CONDITIONS WERE OBSERVED  
DURING THE WEEKLY WALKDOWN.

RP

03/08/21 09:00        SYSTEMS WALKDOWN

LIFTSTATION FUNCTIONABILITY CHECKS ON BLD. 20, WHSE. E, WHSE. 31, 5/50, NSC, NTF, BLDG. 60 LIFT STATIONS. ALL SAT.

SANITARY WASTE TREATMENT SYSTEMS WALKDOWN- ALL SAT.  
POTABLE WASTE SYSTEMS WALKDOWN- ALL SAT. (ADJUSTED AS NEEDED).  
RP.

03/08/21 11:20        \*\*\*\*\*TEMPORARY FRAC TANK- SOUTH OF WSWTS

SET UP HOSE FOR DRAINING THE FRAC TANK INTO THE WEST SANITARY WASTE TREATMENT SYSTEM EFFLUENT SUMP FOR UPCOMING PICK UP.  
RP.

03/08/21 12:20        WEEKLY RIVER CONDUCTIVITY SAMPLE

NO FLOW.  
4,489 uS/cm

RP.

03/08/21 12:25        ++++++RESERVOIR MAKEUP PUMPING FACILITY WEEKLY WALKDOWN  
RESERVOIR MAKEUP PUMPING FACILITY WEEKLY WALKDOWN  
OBSERVATION DATE- 3/08/2021  
TIME OF OBSERVATION- 12:25  
WEATHER- CLEAR, 71 DEGREES FAHRENHEIT  
RIVER STREAM FLOW- NO FLOW  
GENERAL COMMENTS- NO INDICATIONS OF FOAM,  
FISH OR WILDLIFE MORTALITIES, UNUSUAL INDICATION OF FLORA OR FAUNA,  
ETC IN THE FOREBAY AREA. NO ABNORMAL CONDITIONS WERE OBSERVED  
DURING THE WEEKLY WALKDOWN.

RP

03/08/21 16:00        >>>>>>TRAINING SANITARY WASTE TREATMENT SYSTEM  
RETURNED SUPERNATE

20 MINUTE SLUDGE WASTING.  
RP.

03/08/21 16:03        WEST SANITARY WASTE TREATMENT SYSTEM

RETURNED SUPERNATE.  
RP.

03/15/21 09:23 PEREZ, RODOLFO (RUDY) relieved the ENVIRONMENTAL CHEMIST  
Environmental Shift Log commenced for Monday 03/15/2021

03/15/21 10:50 \*\*\*\*\*RIVER - WEEKLY CONDUCTIVITY SAMPLING  
  
4498 uS/cm  
RP.

03/15/21 11:00 ++++++RESERVOIR MAKEUP PUMPING FACILITY WEEKLY WALKDOWN  
RESERVOIR MAKEUP PUMPING FACILITY WEEKLY WALKDOWN  
OBSERVATION DATE- 3/15/2021  
TIME OF OBSERVATION- 11:00  
WEATHER- CLOUDY, 64 DEGREES FAHRENHEIT  
RIVER STREAM FLOW- SLIGHT FLOW  
GENERAL COMMENTS- NO INDICATIONS OF FOAM,  
FISH OR WILDLIFE MORTALITIES, UNUSUAL INDICATION OF FLORA OR FAUNA,  
ETC IN THE FOREBAY AREA. NO ABNORMAL CONDITIONS WERE OBSERVED  
DURING THE WEEKLY WALKDOWN.  
  
RP

03/15/21 15:23 SYSTEMS WALKDOWN  
  
LIFTSTATION FUNCTIONABILITY CHECKS ON BLD. 20, WHSE. E, WHSE. 31,  
5/50, NSC, NTF, BLDG. 60 LIFT STATIONS. ALL SAT.  
  
SANITARY WASTE TREATMENT SYSTEMS WALKDOWN- ALL SAT.  
POTABLE WATER SYSTEMS WALKDOWN- ALL SAT. (ADJUSTED AS NEEDED).  
RP.

03/25/21 11:00 Self Assessment  
Did self assessment review with environmental group.  
  
RG

03/25/21 13:00 Self Assessment Final Report  
Completed Self Assessment Final report.  
  
RG

03/25/21 13:25 ++++++RESERVOIR MAKEUP PUMPING FACILITY WEEKLY WALKDOWN  
RESERVOIR MAKEUP PUMPING FACILITY WEEKLY WALKDOWN  
OBSERVATION DATE- 3/25/2021  
TIME OF OBSERVATION- 13:25  
WEATHER- Sunny, 75 DEGREES FAHRENHEIT  
RIVER STREAM FLOW- GOOD FLOW  
GENERAL COMMENTS- STP WAS NOT DIVERTING DURING THE TIME OF THE  
OBSERVATION. THE RMPF TRAVELING SCREENS WERE IN GOOD CONDITION.  
THE FISH RETURN SYSTEM WAS IN PLACE. THE RMPF PUMPS AND ELECTRICAL  
COMPONENTS APPEARED IN GOOD CONDITION. NO INDICATIONS OF FOAM,  
FISH OR WILDLIFE MORTALITIES, UNUSUAL INDICATION OF FLORA OR FAUNA,  
ETC IN THE FOREBAY AREA. NO ABNORMAL CONDITIONS WERE OBSERVED  
DURING THE WEEKLY WALKDOWN.

03/25/21 14:00 Well 8  
Went to fill Well 8 ground storage tank with water.  
  
RG

03/26/21 06:30 Well 8  
Began to fill Well 8 ground water storage tank.  
Stopped filling at 8:00am  
RG

03/26/21 08:00 Well 8  
Performed walk down of Well 8 PWS. Found no abnormalities. Chlorine  
level in groundwater storage tank was sat.  
  
RG

03/26/21 08:28 Main PWS  
Performed walk down of Main PWS. Found no abnormalities. Chlorine in  
storage tank was SAT.  
  
RG

03/26/21 09:15 Hazmat Run  
Received 55 fiber drums in Haz Run.  
  
RG

03/29/21 09:15

++++++RESERVOIR MAKEUP PUMPING FACILITY WEEKLY WALKDOWN

RESERVOIR MAKEUP PUMPING FACILITY WEEKLY WALKDOWN

OBSERVATION DATE- 3/29/2021

TIME OF OBSERVATION- 09:15

WEATHER- PARTLY CLOUDY, 50 DEGREES FAHRENHEIT

RIVER STREAM FLOW- GOOD FLOW

GENERAL COMMENTS- STP WAS NOT DIVERTING DURING THE TIME OF THE OBSERVATION. THE RMPF TRAVELING SCREENS WERE IN GOOD CONDITION. THE FISH RETURN SYSTEM WAS IN PLACE. THE RMPF PUMPS AND ELECTRICAL COMPONENTS APPEARED IN GOOD CONDITION. NO INDICATIONS OF FOAM, FISH OR WILDLIFE MORTALITIES, UNUSUAL INDICATION OF FLORA OR FAUNA, ETC IN THE FOREBAY AREA. NO ABNORMAL CONDITIONS WERE OBSERVED DURING THE WEEKLY WALKDOWN.

THE RMPF TRAVELING SCREENS WERE IN GOOD CONDITION. THE FISH RETURN SYSTEM WAS IN PLACE. THE RMPF PUMPS AND ELECTRICAL COMPONENTS APPEARED IN GOOD CONDITION.

RP.

03/29/21 17:00

SR. ENVIRONEMENTAL TECHNICIAN WORK SUMMARY

SYSTEM CHECKS- POTABLE WATER SYSTEMS/ WASTE WATER TREATMENT SYSTEMS- ALL SAT.

SLUDGE WASTING - 40 MINUTE WASTE AT WEST SANITARY WASTE TREATMENT SYSTEM.

CLEANED BAR SCREENS.

ADJUSTED AIR DIFFUSERS IN AERATION BASINS.

GENERAL HOUSEKEEPING.

TRAINING SANITARY WASTE TREATMENT SYSTEM-  
CLEANED BAR SCREEN.

STANDARD SYSTEM MAINT.

FLOW TOTALIZER CALIBRATIONS - MERCER (WSWTS/ TSWTS)

LIFTSTATION FUNCTIONABILITY CHECKS ON BLD. 20, WHSE. E, WHSE. 31, 5/50, NSC, NTF, BLDG. 60 LIFT STATIONS. ALL SAT.

RP.

03/30/21 05:10

&gt;&gt;&gt;&gt;WEEKLY EFFLUENT SAMPLING - OUTFALL 401 (WEST SANITARY WASTE TREATMENT SYSTEM)

COLLECTED SAMPLES FOR TOTAL SUSPENDED SOLIDS (TSS) AND BIOCHEMICAL OXYGEN DEMAND ANALYSIS (BOD). SAMPLES LOOKED CLEAR.

RP.

03/30/21 05:40

&gt;&gt;&gt;&gt;&gt;WEEKLY EFFLUENT SAMPLING - OUTFALL 601 (TRAINING SANITARY WASTE TREATMENT SYSTEM)

COLLECTED SAMPLES FOR TOTAL SUSPENDED SOLIDS (TSS) AND BIOCHEMICAL OXYGEN DEMAND ANALYSIS (BOD). SAMPLES LOOKED CLEAR.

RP.

03/30/21 10:15 >>>>>WEEKLY OUTFALL SAMPLES - COURIER PICK UP  
OUTFALL SAMPLES - 101, 201, 401 AND 601 WERE PACKAGED AND SHIPPED  
VIA WEEKLY COURIER FOR ANALYSIS AT HOUSTON TX. LAB.101, 201,401 AND  
601.  
ALL SAMPLES LOOKED CLEAR.  
RP.

03/30/21 12:00 SUPPORT  
USED FRONT END LOADER TO MOVE SCRAP METAL CONNEX FOR SURPLUS.  
RP.

03/30/21 12:15 >>>>>OPERATIONAL SAMPLES - COURIER PICK UP  
OUTFALL OPERATIONAL SAMPLES 401 AND 601 WERE PACKAGED AND SHIPPED  
VIA A & B LABS COURIER FOR ANALYSIS AT HOUSTON TX. LAB.  
401 AND 601.SAMPLES LOOKED CLEAR.  
RP.

04/05/21 11:40 \*\*\*\*\*RIVER - WEEKLY CONDUCTIVITY SAMPLING  
6290 uS/cm.  
RP.

04/05/21 11:45 +++++++RESERVOIR MAKEUP PUMPING FACILITY WEEKLY WALKDOWN  
RESERVOIR MAKEUP PUMPING FACILITY WEEKLY WALKDOWN  
OBSERVATION DATE- 4/05/2021  
TIME OF OBSERVATION- 11:45  
WEATHER- SUNNY, 74 DEGREES FAHRENHEIT  
RIVER STREAM FLOW- NO FLOW  
GENERAL COMMENTS- STP WAS NOT DIVERTING DURING THE TIME OF THE  
OBSERVATION. THE RMPF TRAVELING SCREENS WERE IN GOOD CONDITION.  
THE FISH RETURN SYSTEM WAS IN PLACE. THE RMPF PUMPS AND ELECTRICAL  
COMPONENTS APPEARED IN GOOD CONDITION. NO INDICATIONS OF FOAM,  
FISH OR WILDLIFE MORTALITIES, UNUSUAL INDICATION OF FLORA OR FAUNA,  
ETC IN THE FOREBAY AREA. NO ABNORMAL CONDITIONS WERE OBSERVED  
DURING THE WEEKLY WALKDOWN.  
THE RMPF TRAVELING SCREENS WERE IN GOOD CONDITION. THE FISH RETURN  
SYSTEM WAS IN PLACE. THE RMPF PUMPS AND ELECTRICAL COMPONENTS  
APPEARED IN GOOD CONDITION.  
RP.

04/05/21 12:00 CIRC WATER INTAKE STRUCTURE WEEKLY WALK DOWN  
PERFORMED WEEKLY WALK DOWN OF THE CIRC WATER INTAKE STRUCTURE,  
INSPECTING FOR PRESENCE OF FOAM, FISH OR WILDLIFE MORTALITIES,  
UNUSUAL INDICATIONS OF FLORA OR FAUNA, ETC. NO ABNORMAL CONDITIONS  
WERE OBSERVED, SLIGHT FOAM WAS OBSERVED BUT WAS NOT SIGNIFICANT  
AMOUNT.  
RP...

04/09/21 16:58

\*\*\*\*\*Sr. Environmental Technician Daily Work Summary

- Poly drum shipment manual loading support (not fork lift) - 100 drums
- B-1 Liftstation pump issues resolved.  
Pumped down B-1 Liftstation.  
Applied sodium hypochlorite in clean out over spill - 3 ' x 10 ' area
- PMI Pressure Tank Walkdown -  
Main Potable Water System and NSC/NTF Potable Water System-  
MPWS - top sightglass inlet base needs coating.  
NSC/NTF PWS - Bottom and possibly top need to be replaced and coated.  
Required Documentation - Search Environmental Workroom library, NSC 5th floor drawing area,  
Environmental Yard drawings area. Required documentation not found. Will reach out to  
Facilities for documentation on NSC/NTF PWS Pressure Tank.
- Water Well disinfection instruction  
RP.

04/12/21 07:28

PEREZ, RODOLFO (RUDY) relieved the ENVIRONMENTAL CHEMIST  
Environmental Shift Log commenced for Monday 04/12/2021

04/12/21 08:53

\*\*\*\*RIVER - WEEKLY CONDUCTIVITY SAMPLING

14.25 mS/cm  
RP.

04/12/21 08:59

++++++RESERVOIR MAKEUP PUMPING FACILITY WEEKLY WALKDOWN

RESERVOIR MAKEUP PUMPING FACILITY WEEKLY WALKDOWN

OBSERVATION DATE- 4/12/2021

TIME OF OBSERVATION- 08:59

WEATHER- PARTLY CLOUDY, 57 DEGREES FAHRENHEIT

RIVER STREAM FLOW- NO FLOW

GENERAL COMMENTS- STP WAS NOT DIVERTING DURING THE TIME OF THE OBSERVATION. THE RMPF TRAVELING SCREENS WERE IN GOOD CONDITION. THE FISH RETURN SYSTEM WAS IN PLACE. THE RMPF PUMPS AND ELECTRICAL COMPONENTS APPEARED IN GOOD CONDITION. NO INDICATIONS OF FOAM, FISH OR WILDLIFE MORTALITIES, UNUSUAL INDICATION OF FLORA OR FAUNA, ETC IN THE FOREBAY AREA. NO ABNORMAL CONDITIONS WERE OBSERVED DURING THE WEEKLY WALKDOWN.

THE RMPF TRAVELING SCREENS WERE IN GOOD CONDITION. THE FISH RETURN SYSTEM WAS IN PLACE. THE RMPF PUMPS AND ELECTRICAL COMPONENTS APPEARED IN GOOD CONDITION.

RP.

04/16/21 16:47

\*\*\*\*\*SR. Environmental Tech Work Summary

West Sanitary Waste Treatment System

- PMI replaced sodium hypochlorite pump building.  
(Chemical injection water line was disturbed but not broken.  
Retightened and no leaks detected).  
Replaced sodium hypo check valve.
- Transferred approx. 30 gallons of sodium hypochlorite into Sodium Hypo Tank for disinfectio  
(Used sodium hypo drum pump and hoses, etc.)  
Adjusted injection pump as needed.

River conductivity sampling

- 09:10 - 12.12 mS/cm
- 14:10 - 11.54 mS/cm
- 16:00 - 12.39 mS/cm

NSC/NTF Potable Water System

- GWS Tank fills.

Outage Focus

- Well Disinfection instruction draft completed.
- Commenced on freeze protection restoration checklist.

RP.

04/19/21 07:29

PEREZ, RODOLFO (RUDY) relieved the ENVIRONMENTAL CHEMIST  
Environmental Shift Log commenced for Monday 04/19/2021

04/19/21 08:40

++++++RESERVOIR MAKEUP PUMPING FACILITY WEEKLY WALKDOWN

RESERVOIR MAKEUP PUMPING FACILITY WEEKLY WALKDOWN

OBSERVATION DATE- 4/19/2021

TIME OF OBSERVATION- 08:40

WEATHER- PARTLY CLOUDY, 55 DEGREES FAHRENHEIT

RIVER STREAM FLOW- MODERATE FLOW

GENERAL COMMENTS- STP WAS DIVERTING DURING THE TIME OF THE  
OBSERVATION. THE RMPF TRAVELING SCREENS WERE IN GOOD CONDITION.  
THE FISH RETURN SYSTEM WAS IN PLACE. THE RMPF PUMPS AND ELECTRICAL  
COMPONENTS APPEARED IN GOOD CONDITION. NO INDICATIONS OF FOAM,  
FISH OR WILDLIFE MORTALITIES, UNUSUAL INDICATION OF FLORA OR FAUNA,  
ETC IN THE FOREBAY AREA. NO ABNORMAL CONDITIONS WERE OBSERVED  
DURING THE WEEKLY WALKDOWN.

THE RMPF TRAVELING SCREENS WERE IN GOOD CONDITION. THE FISH RETURN  
SYSTEM WAS IN PLACE. THE RMPF PUMPS AND ELECTRICAL COMPONENTS  
APPEARED IN GOOD CONDITION.

RP.



04/26/21 08:40       \*\*\*WEEKLY RIVER CONDUCTIVITY SAMPLING

08:40 - 4879 uS/cm

RP.

04/26/21 08:48       +++++++RESERVOIR MAKEUP PUMPING FACILITY WEEKLY WALKDOWN

RESERVOIR MAKEUP PUMPING FACILITY WEEKLY WALKDOWN  
OBSERVATION DATE- 4/26/2021  
TIME OF OBSERVATION- 08:48  
WEATHER- PARTLY CLOUDY, 65 DEGREES FAHRENHEIT  
RIVER STREAM FLOW- SOME FLOW  
GENERAL COMMENTS- STP WAS NOT DIVERTING DURING THE TIME OF THE  
OBSERVATION. THE RMPF TRAVELING SCREENS WERE IN GOOD CONDITION.  
THE FISH RETURN SYSTEM WAS IN PLACE. THE RMPF PUMPS AND ELECTRICAL  
COMPONENTS APPEARED IN GOOD CONDITION. NO INDICATIONS OF FOAM,  
FISH OR WILDLIFE MORTALITIES, UNUSUAL INDICATION OF FLORA OR FAUNA,  
ETC IN THE FOREBAY AREA. NO ABNORMAL CONDITIONS WERE OBSERVED  
DURING THE WEEKLY WALKDOWN.  
THE RMPF TRAVELING SCREENS WERE IN GOOD CONDITION. THE FISH RETURN  
SYSTEM WAS IN PLACE. THE RMPF PUMPS AND ELECTRICAL COMPONENTS  
APPEARED IN GOOD CONDITION.  
RP.

04/26/21 16:00       CIRC WATER INTAKE STRUCTURE WEEKLY WALK DOWN

PERFORMED WEEKLY WALK DOWN OF THE CIRC WATER INTAKE STRUCTURE,  
INSPECTING FOR PRESENCE OF FOAM, FISH OR WILDLIFE MORTALITIES,  
UNUSUAL INDICATIONS OF FLORA OR FAUNA, ETC. NO ABNORMAL CONDITIONS  
WERE OBSERVED, NO FOAM WAS OBSERVED.  
RP...

04/26/21 16:45       \*\*\*\*\*LIFTSTATION FUNCTIONABILITY WEEKLY CHECKS

ALL LIFTSTATIONS IN OWNER CONTROLLED AREA WERE CHECKED. ALL WERE  
SAT.  
RP.

05/02/21 16:15 RMPF Pump 4 tripped  
CR 21-5090  
Diversion rate change of -240 cfs  
Current diversion rate of 360 cfs

05/03/21 07:24 PEREZ, RODOLFO (RUDY) relieved the ENVIRONMENTAL CHEMIST  
Environmental Shift Log commenced for Monday 05/03/2021

05/03/21 11:00 CIRC WATER INTAKE STRUCTURE WEEKLY WALK DOWN  
  
PERFORMED WEEKLY WALK DOWN OF THE CIRC WATER INTAKE STRUCTURE, INSPECTING FOR PRESENCE OF FOAM, FISH OR WILDLIFE MORTALITIES, UNUSUAL INDICATIONS OF FLORA OR FAUNA, ETC. NO ABNORMAL CONDITIONS WERE OBSERVED, SLIGHT FOAM WAS OBSERVED.  
RP...

05/03/21 11:30 ++++++RESERVOIR MAKEUP PUMPING FACILITY WEEKLY WALKDOWN  
  
RESERVOIR MAKEUP PUMPING FACILITY WEEKLY WALKDOWN  
OBSERVATION DATE- 5/03/2021  
TIME OF OBSERVATION- 11:30  
WEATHER- PARTLY CLOUDY, 81 DEGREES FAHRENHEIT  
RIVER STREAM FLOW- HIGH FLOW  
GENERAL COMMENTS- STP WAS DIVERTING DURING THE TIME OF THE OBSERVATION. THE RMPF TRAVELING SCREENS WERE IN GOOD CONDITION. THE FISH RETURN SYSTEM WAS IN PLACE. THE RMPF PUMPS AND ELECTRICAL COMPONENTS APPEARED IN GOOD CONDITION. NO INDICATIONS OF FOAM, FISH OR WILDLIFE MORTALITIES, UNUSUAL INDICATION OF FLORA OR FAUNA, ETC IN THE FOREBAY AREA. NO ABNORMAL CONDITIONS WERE OBSERVED DURING THE WEEKLY WALKDOWN.  
THE RMPF TRAVELING SCREENS WERE IN GOOD CONDITION. THE FISH RETURN SYSTEM WAS IN PLACE. THE RMPF PUMPS AND ELECTRICAL COMPONENTS APPEARED IN GOOD CONDITION.  
RP.

05/03/21 17:16 05/03/2021  
• Recorded NSC cooling tower totalizer readings  
• Attended Fit Test  
• Met with facilities regarding overflow of water by warehouse 19.  
• Emptied Trash Clam shell from Environmental yard into Trash Roll-off box  
• Moved 17 drums of blast sand to blast yard.  
• Emptied 8 drums of blast sand into blast sand roll-off box  
• Moved used oil drums inside the berm to have ready to transfer the used oil to the used oil storage tank.  
• Prepared used filter drums for shipment tomorrow.  
• Dewatered approximately 100 gallons of water from oily sludge box #1.  
• Isolated the pressure tank valves at well 8 and main.  
  
RG

05/05/21 09:07      Concurred with Chemistry request for extended chlorination of OLACW for bryozoa control. Anticipated duration of 20 - 22 hours to commence at approximately 13:00. No MCR blowdown in progress or planned for the period of the planned OLACW chlorination. Reference Nonradiological Environmental Evaluation No. 07-03. JAL

05/05/21 17:28      05/05/2021

- Attended meeting with Environmental Supervisor.
- Spoke with GCA/ABM regarding the berm and hoses they needed. Discussed that they needed a smaller berm and different hoses. Placed the berm and hoses I taken out yesterday back and took out the requested items.
- Washed and scrubbed the inside of the pressure tank at Main PWS.
- Shrink wrapped and placed a label on the items for GCA/ABM and took them to the sally port for delivery to the PA.
- Washed and scrubbed the inside of the pressure tank at NSC/NTF PWS.
- Placed items used for the washing of the pressure tanks up in the storage area of the environmental yard.
- Transferred used oil from metal drums to used oil storage tank.

05/10/21 09:10      +++++++RESERVOIR MAKEUP PUMPING FACILITY WEEKLY WALKDOWN

RESERVOIR MAKEUP PUMPING FACILITY WEEKLY WALKDOWN  
OBSERVATION DATE- 5/10/2021  
TIME OF OBSERVATION- 09:10  
WEATHER- CLOUDY, 81 DEGREES FAHRENHEIT  
RIVER STREAM FLOW- HIGH FLOW  
GENERAL COMMENTS- STP WAS DIVERTING DURING THE TIME OF THE OBSERVATION. THE RMPF TRAVELING SCREENS WERE IN GOOD CONDITION. THE FISH RETURN SYSTEM WAS IN PLACE. THE RMPF PUMPS AND ELECTRICAL COMPONENTS APPEARED IN GOOD CONDITION. NO INDICATIONS OF FOAM, FISH OR WILDLIFE MORTALITIES, UNUSUAL INDICATION OF FLORA OR FAUNA, ETC IN THE FOREBAY AREA. NO ABNORMAL CONDITIONS WERE OBSERVED DURING THE WEEKLY WALKDOWN.  
THE RMPF TRAVELING SCREENS WERE IN GOOD CONDITION. THE FISH RETURN SYSTEM WAS IN PLACE. THE RMPF PUMPS AND ELECTRICAL COMPONENTS APPEARED IN GOOD CONDITION.  
RP.

05/10/21 11:17      CIRC WATER INTAKE STRUCTURE WEEKLY WALK DOWN

PERFORMED WEEKLY WALK DOWN OF THE CIRC WATER INTAKE STRUCTURE, INSPECTING FOR PRESENCE OF FOAM, FISH OR WILDLIFE MORTALITIES, UNUSUAL INDICATIONS OF FLORA OR FAUNA, ETC. NO ABNORMAL CONDITIONS WERE OBSERVED, SLIGHT FOAM WAS OBSERVED.  
RP...

05/13/21 17:00

\*\*\*\*\*WSWTS AND TSWTS SLUDGE BLANKET LEVELS - CLARIFIERS

WSWTS

EAST CLARIFIER- 1.5 FT.

WEST CLARIFIER- 1 FT.

TSWTS - 1.5 FT. (WITH SOME LIGHT FLOC)

RP.

05/13/21 17:19

\*\*\*\*\*Sr. Environmental Tech Work Summary

- Wastewater and Potable Water Systems weekend checks and adjustments.

- WSWTS sludge wasting - 2 hours.

  - General maint.

  - Facilities repaired two power receptacles.

  - Applied calcium hypochlorite tabs for algae control and disinfection.

- TSWTS sludge roll off shipment.

  - ABM mowed area.

  - Secured South Aeration Basin return line to evenly distribute sludge return from Clarifier.

  - Placed South Aeration Basin back in normal configuration for weekend.

- Liftstation functionability checks. All sat.

- Potable water tank chlorines completed.

- River conductivity sampling.

- Daily chlorines

- Ops Environmental Training video creating, producing and editing completed.

RP.

-

05/17/21 09:04

+++++++RESERVOIR MAKEUP PUMPING FACILITY WEEKLY WALKDOWN

RESERVOIR MAKEUP PUMPING FACILITY WEEKLY WALKDOWN

OBSERVATION DATE- 5/17/2021

TIME OF OBSERVATION- 09:04

WEATHER- CLOUDY, 79 DEGREES FAHRENHEIT

RIVER STREAM FLOW- HIGH FLOW

GENERAL COMMENTS- STP WAS DIVERTING DURING THE TIME OF THE OBSERVATION. THE RMPF TRAVELING SCREENS WERE IN GOOD CONDITION.

THE FISH RETURN SYSTEM WAS IN PLACE. THE RMPF PUMPS AND ELECTRICAL COMPONENTS APPEARED IN GOOD CONDITION. NO INDICATIONS OF FOAM, FISH OR WILDLIFE MORTALITIES, UNUSUAL INDICATION OF FLORA OR FAUNA, ETC IN THE FOREBAY AREA. NO ABNORMAL CONDITIONS WERE OBSERVED DURING THE WEEKLY WALKDOWN.

THE RMPF TRAVELING SCREENS WERE IN GOOD CONDITION. THE FISH RETURN SYSTEM WAS IN PLACE. THE RMPF PUMPS AND ELECTRICAL COMPONENTS APPEARED IN GOOD CONDITION.

RP.

05/24/21 12:35 \*\*\*\*\*RESERVOIR INLET CONDUCTIVITY SAMPLING  
213 uS/cm  
RP.

05/24/21 12:45 \*\*\*\*\*RIVER CONDUCTIVITY SAMPLING  
237 uS/cm  
RP.

05/24/21 12:50 +++++++RESERVOIR MAKEUP PUMPING FACILITY WEEKLY WALKDOWN  
RESERVOIR MAKEUP PUMPING FACILITY WEEKLY WALKDOWN  
OBSERVATION DATE- 5/24/2021  
TIME OF OBSERVATION- 12:50  
WEATHER- PARTLY SUNNY, 82 DEGREES FAHRENHEIT  
RIVER STREAM FLOW- HIGH FLOW  
GENERAL COMMENTS- STP WAS DIVERTING DURING THE TIME OF THE  
OBSERVATION. THE RMPF TRAVELING SCREENS WERE IN GOOD CONDITION.  
THE FISH RETURN SYSTEM WAS IN PLACE. THE RMPF PUMPS AND ELECTRICAL  
COMPONENTS APPEARED IN GOOD CONDITION. NO INDICATIONS OF FOAM,  
FISH OR WILDLIFE MORTALITIES, UNUSUAL INDICATION OF FLORA OR FAUNA,  
ETC IN THE FOREBAY AREA. NO ABNORMAL CONDITIONS WERE OBSERVED  
DURING THE WEEKLY WALKDOWN.  
THE RMPF TRAVELING SCREENS WERE IN GOOD CONDITION. THE FISH RETURN  
SYSTEM WAS IN PLACE. THE RMPF PUMPS AND ELECTRICAL COMPONENTS  
APPEARED IN GOOD CONDITION.  
RP.

05/24/21 16:03 \*\*\*\*\*Sr. Environmental Technician Work Summary  
- Performed reference checks on Hach DR-300 colorimeter and Five Go  
conductivity meter along with ph Sension meter.  
- Coach to coach observation - relief well outfall sampling - EN 005  
- Outfall 005.  
- Reservoir Inlet and River conductivity sampling.  
- RMPF weekly observation.  
- Potable Water and Wastewater system checks and adjustments.  
WSWTS, TSWTS, Main Potable Water System and NSC/NTF Potable Water  
System.  
- Lift station functionability checks - All sat. with the exception  
of 5/50 lift station (South basin- Pump # 2)  
As found - Pump #2 was not operating on manual or auto.  
Action taken- Contacted Facilities. Temporary repair. Pump # 2  
now operating in manual and auto.  
Part ordered.  
- Settabliities performed- TSWTS and WSWTS.  
- Derived oxygens performed - TSWTS and WSWTS.  
RP.

06/01/21 16:51

6/1/2021

- Reference checked PH Meter and uploaded results in CDMS.
- Collected Effluent Samples for 401 and 601. Tested for Total Residual Chlorine and PH, entered results in CDMS.
- Collected 101 and 201 samples from cold chemistry lab 1.
- Labeled, packaged and shipped all samples with courier.
- Performed a walkdown of NSC/NTF PWS. System was in normal operating condition and storage tank chlorine was SAT.
- Collected river and reservoir samples and reported conductivity results to Cold Chemistry Lab 2.
- Performed RMPF weekly observation.
- Performed walkdown of Main PWS. System was in normal working condition. Storage tank chlorine level was a little low. Increased hypo rate.
- Performed Settabilities check at Training Sanitary Wastewater Treatment System. Recorded result in CDMS.
- Performed Settabilities check at West Sanitary Wastewater Treatment System. Recorded result in CDMS.
- Performed Derived Oxygens test for both West and Training Plants. Recorded results in Environmental folder.
- Obtained diesel run time for Fire House Pump 1.

RG

06/01/21 16:55

++++++RESERVOIR MAKEUP PUMPING FACILITY WEEKLY WALKDOWN  
RESERVOIR MAKEUP PUMPING FACILITY WEEKLY WALKDOWN  
OBSERVATION DATE- 6/1/2021  
TIME OF OBSERVATION- 11:30  
WEATHER- CLOUDY WITH OVERCAST, 78 DEGREES FAHRENHEIT  
RIVER STREAM FLOW- GOOD FLOW  
GENERAL COMMENTS- STP WAS DIVERTING DURING THE TIME OF THE  
OBSERVATION. THE RMPF TRAVELING SCREENS WERE IN GOOD CONDITION.  
THE FISH RETURN SYSTEM WAS IN PLACE. THE RMPF PUMPS AND ELECTRICAL  
COMPONENTS APPEARED IN GOOD CONDITION. NO INDICATIONS OF FOAM,  
FISH OR WILDLIFE MORTALITIES, UNUSUAL INDICATION OF FLORA OR FAUNA,  
ETC IN THE FOREBAY AREA. NO ABNORMAL CONDITIONS WERE OBSERVED  
DURING THE WEEKLY WALKDOWN.

RG

06/03/21 17:11

6/3/2021

- Obtained daily sample from the NSC room 3511. Chlorine level SAT.
- Obtained daily sample from the Environmental Yard. Chlorine level SAT.
- Performed walkdown of NSC/NTF PWS. Found in normal operating condition. Storage tank chlorine level was SAT.
- Performed walk down of Main PWS. Found in normal operating condition. Storage tank chlorine level was SAT.
- Obtained River and Reservoir samples and reported conductivity readings to Unit 2 Cold Chem Lab.
- Performed walk down of Training Sanitary Wastewater Treatment System. Found in normal operating conditions.
- Performed walk down of West Sanitary Wastewater Treatment System. Found in normal operating conditions.
- Loaded approximately 4000 gallons of water from the water tanks located at the Environmental Yard to the Vacuum truck.
- Offloaded the 4000 gallons of water into the Oily Waste Surge Tank.
- Removed approximately 2500 gallons of sludgy/mungey water from the Oily Waste System catch basin and offloaded into frac tank located by the surge tank.
- Removed approximately 4000 gallons of oily sludge/water mix from Separated Oil Storage Tank and transported to the Environmental Yard.
- Received weekly Haz-Run. No Hazardous material was received.

RG

06/07/21 08:11

PEREZ, RODOLFO (RUDY) relieved the ENVIRONMENTAL CHEMIST  
Environmental Shift Log commenced for Monday 06/07/2021

06/07/21 10:45

++++++RESERVOIR MAKEUP PUMPING FACILITY WEEKLY WALKDOWN

RESERVOIR MAKEUP PUMPING FACILITY WEEKLY WALKDOWN

OBSERVATION DATE- 6/07/2021

TIME OF OBSERVATION- 10:45

WEATHER- CLOUDY, 84 DEGREES FAHRENHEIT

RIVER STREAM FLOW- HIGH FLOW

GENERAL COMMENTS- STP WAS DIVERTING DURING THE TIME OF THE OBSERVATION. THE RMPF TRAVELING SCREENS WERE IN GOOD CONDITION. THE FISH RETURN SYSTEM WAS IN PLACE. THE RMPF PUMPS AND ELECTRICAL COMPONENTS APPEARED IN GOOD CONDITION. NO INDICATIONS OF FOAM, FISH OR WILDLIFE MORTALITIES, UNUSUAL INDICATION OF FLORA OR FAUNA, ETC IN THE FOREBAY AREA. NO ABNORMAL CONDITIONS WERE OBSERVED DURING THE WEEKLY WALKDOWN.

THE RMPF TRAVELING SCREENS WERE IN GOOD CONDITION. THE FISH RETURN SYSTEM WAS IN PLACE BUT TRASH BASKET WAS FULL OF DEBRIS. CONTACTED OPERATIONS TO HAVE THE SOUTH TRASH BASKET EMPTIED. THE RMPF PUMPS AND ELECTRICAL COMPONENTS APPEARED IN GOOD CONDITION.  
RP.

06/14/21 10:50

+++++++RESERVOIR MAKEUP PUMPING FACILITY WEEKLY WALKDOWN

RESERVOIR MAKEUP PUMPING FACILITY WEEKLY WALKDOWN

OBSERVATION DATE- 6/14/2021

TIME OF OBSERVATION- 10:50

WEATHER- CLEAR SKY, 88 DEGREES FAHRENHEIT

RIVER STREAM FLOW- MEDIUM FLOW

GENERAL COMMENTS- STP WAS DIVERTING DURING THE TIME OF THE OBSERVATION. THE RMPF TRAVELING SCREENS WERE IN GOOD CONDITION. THE FISH RETURN SYSTEM WAS IN PLACE. THE RMPF PUMPS AND ELECTRICAL COMPONENTS APPEARED IN GOOD CONDITION. NO INDICATIONS OF FOAM, FISH OR WILDLIFE MORTALITIES, UNUSUAL INDICATION OF FLORA OR FAUNA, ETC IN THE FOREBAY AREA. NO ABNORMAL CONDITIONS WERE OBSERVED DURING THE WEEKLY WALKDOWN.

THE RMPF TRAVELING SCREENS WERE IN GOOD CONDITION. THE FISH RETURN SYSTEM WAS IN PLACE. THE RMPF PUMPS AND ELECTRICAL COMPONENTS APPEARED IN GOOD CONDITION.

RP.

06/14/21 13:35

CIRC WATER INTAKE STRUCTURE WEEKLY WALK DOWN

PERFORMED WEEKLY WALK DOWN OF THE CIRC WATER INTAKE STRUCTURE, INSPECTING FOR PRESENCE OF FOAM, FISH OR WILDLIFE MORTALITIES, UNUSUAL INDICATIONS OF FLORA OR FAUNA, ETC. NO ABNORMAL CONDITIONS WERE OBSERVED, NO FOAM WAS OBSERVED.

RP.

06/14/21 16:56

06/14/2021

- Obtained NSC Cooling Tower totalizer readings.
- Communicated and confirmed with facilities about them working vacuum truck this week. Have been updated that they should be done with it by the end of the week.
- Moved empty drums to the drum crusher and prepared for crushing.
- Organized drums in the environmental yard and started preparing to weigh drums for Haz-waste shipment.
- Transferred used oil from drums to used oil storage tank.
- Emailed Courtney Martinez about have the scrap metal bin emptied.
- Filled a tote with water for Chemistry. Will take to the CWI in the AM.
- Shrink wrapped Cuno Filter drums and prepared to take to the sally port to be delivered to rad waste yard.

RG



06/21/21 09:20 \*\*\*\*\*RESERVOIR INLET CONDUCTIVITY SAMPLING  
2641 uS/cm  
RP.

06/21/21 09:33 \*\*\*\*\*RIVER CONDUCTIVITY SAMPLING  
2340 uS/cm  
RP.

06/21/21 09:40 +++++++RESERVOIR MAKEUP PUMPING FACILITY WEEKLY WALKDOWN  
RESERVOIR MAKEUP PUMPING FACILITY WEEKLY WALKDOWN  
OBSERVATION DATE- 6/21/2021  
TIME OF OBSERVATION- 09:40  
WEATHER- PARTLY CLOUDY, 86 DEGREES FAHRENHEIT  
RIVER STREAM FLOW- SLIGHT FLOW  
GENERAL COMMENTS- STP WAS DIVERTING DURING THE TIME OF THE  
OBSERVATION. THE RMPF TRAVELING SCREENS WERE IN GOOD CONDITION.  
THE FISH RETURN SYSTEM WAS IN PLACE. THE RMPF PUMPS AND ELECTRICAL  
COMPONENTS APPEARED IN GOOD CONDITION. NO INDICATIONS OF FOAM,  
FISH OR WILDLIFE MORTALITIES, UNUSUAL INDICATION OF FLORA OR FAUNA,  
ETC IN THE FOREBAY AREA. NO ABNORMAL CONDITIONS WERE OBSERVED  
DURING THE WEEKLY WALKDOWN.  
THE RMPF TRAVELING SCREENS WERE IN GOOD CONDITION. THE FISH RETURN  
SYSTEM WAS IN PLACE. THE RMPF PUMPS AND ELECTRICAL COMPONENTS  
APPEARED IN GOOD CONDITION.  
RP.

06/21/21 16:30 \*\*\*\*\*Sr. Environmental Technician Work Summary  
- Relieve Environmental Watch.  
- Environmental rainfall CDMS entries.  
- Performed reference checks on Hach DR-300 colorimeter and Five Go  
conductivity meter.  
- Reservoir Inlet and River conductivity sampling.  
- RMPF weekly observation.  
- Potable Water and Wastewater systems checks and adjustments.  
WSWTS, TSWTS, Main Potable Water System and NSC/NTF Potable Water  
System.  
- Lift station functionability checks - All sat.  
- Settability tests performed- TSWTS and WSWTS.  
- Derived oxygens performed - TSWTS and WSWTS.  
- Daily chlorines.  
- Hot Work Firewatch training completed (CBT)  
- GET 004 SCBA training completed (CBT)  
RP.

06/22/21 05:40 >>>>WEEKLY EFFLUENT SAMPLING - OUTFALL 401 (WEST SANITARY WASTE  
TREATMENT SYSTEM)  
  
COLLECTED SAMPLES FOR TOTAL SUSPENDED SOLIDS (TSS) AND BIOCHEMICAL  
OXYGEN DEMAND ANALYSIS (BOD). SAMPLES LOOKED CLEAR.  
RP.

06/29/21 16:29

6/29/2021

- Obtained 401 Effluent Sample for both SGS and A&B Lab Operational Samples
- Obtained 601 Effluent Sample for both SGS and A&B Lab Operational Samples
- Potable water systems chlorine checks
- Performed walk down of Well 8 NSC/NTF PWS and found in normal operation. Storage tank chlorine SAT.
- Performed walk down of Main PWS and found in normal operation. Storage tank chlorine SAT.
- Obtained River and Inlet Conductivity Samples reported results to chemistry.
- Performed walk down of Training Sanitary Wastewater Treatment System. Found in normal operating condition.
- Performed walk down of West Sanitary Wastewater Treatment System. Found in normal operating condition.
- Obtained NSC Cooling tower totalizer readings.

RG

06/30/21 17:29

+++++++RESERVOIR MAKEUP PUMPING FACILITY WEEKLY WALKDOWN  
RESERVOIR MAKEUP PUMPING FACILITY WEEKLY WALKDOWN  
OBSERVATION DATE- 06/30/2021

TIME OF OBSERVATION- 09:00

WEATHER- CLOUDY, 82 DEGREES FAHRENHEIT

RIVER STREAM FLOW- VERY SLIGHT FLOW

GENERAL COMMENTS- STP WAS DIVERTING DURING THE TIME OF THE OBSERVATION. THE RMPF TRAVELING SCREENS WERE IN GOOD CONDITION. THE FISH RETURN SYSTEM WAS IN PLACE. THE RMPF PUMPS AND ELECTRICAL COMPONENTS APPEARED IN GOOD CONDITION. NO INDICATIONS OF FOAM, FISH OR WILDLIFE MORTALITIES, UNUSUAL INDICATION OF FLORA OR FAUNA, ETC IN THE FOREBAY AREA. NO ABNORMAL CONDITIONS WERE OBSERVED DURING THE WEEKLY WALKDOWN.

06/30/21 17:36

6/30/21

- Met with Environmental Supervisor to discuss DMR.
- Obtained River and Inlet conductivity samples and relayed results to Chemistry.
- Processed approximately 1200 gallons of water from oily sludge box #2
- Processed approximately 1400 gallons of water from oily sludge box #3.
- Processed approximately 200 gallons of water from oily sludge box #4.
- Received approximately 5000 gallons of oily water/sludge mix and offloaded into oily sludge box #4 and #3.
- Received two dewatering boxes from Republic Services and stationed them in the environmental yard.
- Sent approximately 3000 gallons of water to the frac tank located by the oily waste surge tank.
- Participated in Environmental Monthly Staff Meeting.
- Performed settleability samples for both 401 and 601 outfalls.
- Obtained storage tank chlorine samples for both Well 8 and Main PWS.
- Obtained daily chlorine samples.

RG

07/06/21 11:09 CIRC WATER INTAKE STRUCTURE WEEKLY WALK DOWN

PERFORMED WEEKLY WALK DOWN OF THE CIRC WATER INTAKE STRUCTURE, INSPECTING FOR PRESENCE OF FOAM, FISH OR WILDLIFE MORTALITIES, UNUSUAL INDICATIONS OF FLORA OR FAUNA, ETC. NO ABNORMAL CONDITIONS WERE OBSERVED, NO FOAM WAS OBSERVED.

RP.

07/06/21 14:00 \*\*\*\*\*WELL 8 - HYPO INJECTION DISCHARGE LINE REPLACEMENT

REPLACED SODIUM HYPO DISCHARGE LINE CHECK VALVE.

RP.

07/06/21 17:12 7/6/2021

- Obtained the NSC Cooling tower totalizer readings.
- Obtained River and Inlet samples and reported conductivity readings to chemistry.
- Performed walk down of the RMPF.
- Performed HWSA Inventory
- Labeled and Stored drums in the environmental yard.

RG

07/06/21 17:13 +++++++RESERVOIR MAKEUP PUMPING FACILITY WEEKLY WALKDOWN

RESERVOIR MAKEUP PUMPING FACILITY WEEKLY WALKDOWN

OBSERVATION DATE- 07/6/2021

TIME OF OBSERVATION- 11:30

WEATHER- CLOUDY WITH OVERCAST, 82 DEGREES FAHRENHEIT

RIVER STREAM FLOW- DECENT FLOW

GENERAL COMMENTS- STP WAS DIVERTING DURING THE TIME OF THE OBSERVATION. THE RMPF TRAVELING SCREENS WERE IN GOOD CONDITION. THE FISH RETURN SYSTEM WAS IN PLACE. THE RMPF PUMPS AND ELECTRICAL COMPONENTS APPEARED IN GOOD CONDITION. NO INDICATIONS OF FOAM, FISH OR WILDLIFE MORTALITIES, UNUSUAL INDICATION OF FLORA OR FAUNA, ETC IN THE FOREBAY AREA. NO ABNORMAL CONDITIONS WERE OBSERVED DURING THE WEEKLY WALKDOWN.

RG

07/06/21 23:59 >>>>>WEEKLY EFFLUENT SAMPLING - OUTFALL 601 (TRAINING SANITARY WASTE TREATMENT SYSTEM)

COLLECTED SAMPLES FOR TOTAL SUSPENDED SOLIDS (TSS) AND BIOCHEMICAL OXYGEN DEMAND ANALYSIS (BOD). SAMPLES LOOKED CLEAR.

RP.

07/12/21 07:25 PEREZ, RODOLFO (RUDY) relieved the ENVIRONMENTAL CHEMIST  
Environmental Shift Log commenced for Monday 07/12/2021

07/12/21 12:10 CIRC WATER INTAKE STRUCTURE WEEKLY WALK DOWN

PERFORMED WEEKLY WALK DOWN OF THE CIRC WATER INTAKE STRUCTURE,  
INSPECTING FOR PRESENCE OF FOAM, FISH OR WILDLIFE MORTALITIES,  
UNUSUAL INDICATIONS OF FLORA OR FAUNA, ETC. NO ABNORMAL CONDITIONS  
WERE OBSERVED, NO FOAM WAS OBSERVED.  
RP.

07/12/21 12:15 \*\*\*\*\*CIRC WATER INTAKE SODIUM HYPOCHLORITE TANK BERM DAILY WALK  
DOWN

PERFORMED DAILY WALK DOWN OF THE CIRC WATER INTAKE SODIUM  
HYPOCHLORITE TANK BERM, INSPECTING FOR PRESENCE OF SODIUM  
HYPOCHLORITE TO GROUND OR EVIDENCE OF LEAKS AROUND BERM. NO  
ABNORMAL CONDITIONS WERE OBSERVED, NO SODIUM HYPOCHLORITE WAS  
OBSERVED IN AREA OUTSIDE OF BERM.

RP.

07/12/21 15:10 \*\*\*\*\*WEEKLY RIVER CONDUCTIVITY SAMPLING

15:10 - 262.5 uS/cm

RP.

07/12/21 15:20 +++++++RESERVOIR MAKEUP PUMPING FACILITY WEEKLY WALKDOWN

RESERVOIR MAKEUP PUMPING FACILITY WEEKLY WALKDOWN  
OBSERVATION DATE- 07/12/2021  
TIME OF OBSERVATION- 15:20  
WEATHER- PARTLY CLOUDY , 91 DEGREES FAHRENHEIT  
RIVER STREAM FLOW- MODERATE FLOW  
GENERAL COMMENTS- STP WAS NOT DIVERTING DURING THE TIME OF THE  
OBSERVATION. THE RMPF TRAVELING SCREENS WERE IN GOOD CONDITION.  
THE FISH RETURN SYSTEM WAS IN PLACE. THE RMPF PUMPS AND ELECTRICAL  
COMPONENTS APPEARED IN GOOD CONDITION. NO INDICATIONS OF FOAM,  
FISH OR WILDLIFE MORTALITIES, UNUSUAL INDICATION OF FLORA OR FAUNA,  
ETC IN THE FOREBAY AREA. NO ABNORMAL CONDITIONS WERE OBSERVED  
DURING THE WEEKLY WALKDOWN.

RP

+++++++RESERVOIR MAKEUP PUMPING FACILITY WEEKLY WALKDOWN

RESERVOIR MAKEUP PUMPING FACILITY WEEKLY WALKDOWN

OBSERVATION DATE- 07/19/2021

TIME OF OBSERVATION- 15:50

WEATHER- PARTLY CLOUDY, 92 DEGREES FAHRENHEIT

RIVER STREAM FLOW- MODERATE FLOW

GENERAL COMMENTS- STP WAS NOT DIVERTING DURING THE TIME OF THE OBSERVATION. THE RMPF TRAVELING SCREENS WERE IN GOOD CONDITION. THE FISH RETURN SYSTEM WAS IN PLACE. THE RMPF PUMPS AND ELECTRICAL COMPONENTS APPEARED IN GOOD CONDITION. NO INDICATIONS OF FOAM, FISH OR WILDLIFE MORTALITIES, UNUSUAL INDICATION OF FLORA OR FAUNA, ETC IN THE FOREBAY AREA. NO ABNORMAL CONDITIONS WERE OBSERVED DURING THE WEEKLY WALKDOWN.

RP

+++++++RESERVOIR MAKEUP PUMPING FACILITY WEEKLY WALKDOWN

RESERVOIR MAKEUP PUMPING FACILITY WEEKLY WALKDOWN OBSERVATION

DATE- 07/26/2021

TIME OF OBSERVATION- 14:00

WEATHER- PARTLY CLOUDY, 90 DEGREES FAHRENHEIT

RIVER STREAM FLOW- NO FLOW

GENERAL COMMENTS- STP WAS NOT DIVERTING DURING THE TIME OF THE OBSERVATION. THE RMPF TRAVELING SCREENS WERE IN GOOD CONDITION. THE FISH RETURN SYSTEM WAS IN PLACE. THE RMPF PUMPS AND ELECTRICAL COMPONENTS APPEARED IN GOOD CONDITION. NO INDICATIONS OF FOAM, FISH OR WILDLIFE MORTALITIES, UNUSUAL INDICATION OF FLORA OR FAUNA, ETC IN THE FOREBAY AREA. NO ABNORMAL CONDITIONS WERE OBSERVED DURING THE WEEKLY WALKDOWN.

RP

08/02/21 16:26       +++++++RESERVOIR MAKEUP PUMPING FACILITY WEEKLY WALKDOWN

RESERVOIR MAKEUP PUMPING FACILITY WEEKLY WALKDOWN  
OBSERVATION DATE- 08/02/2021  
TIME OF OBSERVATION- 16:26  
WEATHER- PARTLY CLOUDY , 93 DEGREES FAHRENHEIT  
RIVER STREAM FLOW- MODERATE FLOW  
GENERAL COMMENTS- STP WAS NOT DIVERTING DURING THE TIME OF THE  
OBSERVATION. THE RMPF TRAVELING SCREENS WERE IN GOOD CONDITION.  
THE FISH RETURN SYSTEM WAS IN PLACE. THE RMPF PUMPS AND ELECTRICAL  
COMPONENTS APPEARED IN GOOD CONDITION. NO INDICATIONS OF FOAM,  
FISH OR WILDLIFE MORTALITIES, UNUSUAL INDICATION OF FLORA OR FAUNA,  
ETC IN THE FOREBAY AREA. NO ABNORMAL CONDITIONS WERE OBSERVED  
DURING THE WEEKLY WALKDOWN.

RP

08/03/21 05:00       >>>>WEEKLY EFFLUENT SAMPLING - OUTFALL 401 (WEST SANITARY WASTE  
TREATMENT SYSTEM)

COLLECTED SAMPLES FOR TOTAL SUSPENDED SOLIDS (TSS) AND BIOCHEMICAL  
OXYGEN DEMAND ANALYSIS (BOD). SAMPLES LOOKED CLEAR.  
RP.

08/03/21 05:31       >>>>WEEKLY EFFLUENT SAMPLING - OUTFALL 601 (TRAINING SANITARY WASTE  
TREATMENT SYSTEM)

COLLECTED SAMPLES FOR TOTAL SUSPENDED SOLIDS (TSS) AND BIOCHEMICAL  
OXYGEN DEMAND ANALYSIS (BOD). SAMPLES LOOKED CLEAR.  
RP.

08/03/21 13:05       >>>>WEEKLY OUTFALL SAMPLES - COURIER PICK UP

OUTFALL SAMPLES - 101, 201, 401 AND 601 WERE PACKAGED AND SHIPPED  
VIA WEEKLY COURIER FOR ANALYSIS AT HOUSTON TX. LAB.101, 201,401 AND  
601.  
ALL SAMPLES LOOKED CLEAR.

RP.

08/03/21 13:05       >>>MONTHLY BACTI SAMPLES - COURIER PICK UP  
2 SAMPLES PER SYSTEM

COURIER PICKED UP BACTI SAMPLES FOR:  
MAIN POTABLE WATER SYSTEM (1610051):  
- East Gate House Kitchen Sink (EGH) - 06:45  
- Unit 1 Cold Chem Lab (CCL1) - 07:04

NSC/NTF POTABLE WATER SYSTEM (1610103)  
- NSC RM 3511 SINK, 3rd FLOOR - 08:15  
- NSC RM 5492 Sink, 5th Floor - 07:31  
RP.

08/05/21 15:45       \*\*\*\*\*Sodium HypoTransfer/ Delivery - Well 8 (NSC/NTF Potable Water System)  
VariChem

Starting Sodium hypochlorite level- 120 gal  
Drums added - 1. 8 drums  
Ending tank level- 200 gal

RP.

08/09/21 05:30       \*\*\*\*\*MAIN POTABLE WATER SYSTEM- PRESSURE TANK ALARM

05:00 - AS FOUND

MAIN POTABLE WATER SYSTEM PRESSURE TANK LEVEL WAS AT A RATION OF 30% AIR AND 70% WATER DUE TO SYSTEM IS ON TEMP POWER.   WATERLOGGED ALARM WAS FLASHING.

ACTION TAKEN

MANUALLY ADDED AIR USING TEMPORARY AIR COMPRESSOR ALONG WITH REMOVAL OF SOME WATER FROM PRESSURE TANK TO MAINTAIN SYSTEM PSI.

05:30 - SYSTEM WAS AT A RATION OF 50% AIR AND 50% WATER IN PRESSURE TANK.  
WATER LOGGED ALARM CLEARED.

RP.

08/09/21 08:10       PEREZ,RODOLFO (RUDY) relieved the ENVIRONMENTAL CHEMIST  
Environmental Shift Log commenced for Monday       08/09/2021

08/09/21 10:00       +++++++RESERVOIR MAKEUP PUMPING FACILITY WEEKLY WALKDOWN

RESERVOIR MAKEUP PUMPING FACILITY WEEKLY WALKDOWN  
OBSERVATION DATE- 08/09/2021  
TIME OF OBSERVATION- 10:00  
WEATHER- PARTLY CLOUDY , 88 DEGREES FAHRENHEIT  
RIVER STREAM FLOW- MODERATE FLOW  
GENERAL COMMENTS- STP WAS NOT DIVERTING DURING THE TIME OF THE OBSERVATION. THE RMPF TRAVELING SCREENS WERE IN GOOD CONDITION. THE FISH RETURN SYSTEM WAS IN PLACE. THE RMPF PUMPS AND ELECTRICAL COMPONENTS APPEARED IN GOOD CONDITION. NO INDICATIONS OF FOAM, FISH OR WILDLIFE MORTALITIES, UNUSUAL INDICATION OF FLORA OR FAUNA, ETC IN THE FOREBAY AREA. NO ABNORMAL CONDITIONS WERE OBSERVED DURING THE WEEKLY WALKDOWN.

RP



08/16/21 11:07 CIRC WATER INTAKE STRUCTURE WEEKLY WALK DOWN

PERFORMED WEEKLY WALK DOWN OF THE CIRC WATER INTAKE STRUCTURE, INSPECTING FOR PRESENCE OF FOAM, FISH OR WILDLIFE MORTALITIES, UNUSUAL INDICATIONS OF FLORA OR FAUNA, ETC. NO ABNORMAL CONDITIONS WERE OBSERVED, NO FOAM WAS OBSERVED.

RP.

08/16/21 11:30 \*\*\*\*\*WELL 8 - SODIUMHYPOCHLORITE PUMP DISCHARGE TUBE REPLACEMENT

REPLACED THE DISCHARGE TUBING FROM THE SODIUM HYPOCHLORITE INJECTION PUMP DUE TO A PIN HOLE LEAK.

RP.

08/16/21 13:55 \*\*\*\*\*WEEKLY RIVER CONDUCTIVITY SAMPLING

1811 uS/cm

RP.

08/16/21 14:10 +++++++RESERVOIR MAKEUP PUMPING FACILITY WEEKLY WALKDOWN

RESERVOIR MAKEUP PUMPING FACILITY WEEKLY WALKDOWN  
OBSERVATION DATE- 08/16/2021  
TIME OF OBSERVATION- 14:10  
WEATHER- PARTLY CLOUDY , 90 DEGREES FAHRENHEIT  
RIVER STREAM FLOW- SLOW FLOW  
GENERAL COMMENTS- STP WAS NOT DIVERTING DURING THE TIME OF THE OBSERVATION. THE RMPF TRAVELING SCREENS WERE IN GOOD CONDITION. THE FISH RETURN SYSTEM WAS IN PLACE. THE RMPF PUMPS AND ELECTRICAL COMPONENTS APPEARED IN GOOD CONDITION. NO INDICATIONS OF FOAM, FISH OR WILDLIFE MORTALITIES, UNUSUAL INDICATION OF FLORA OR FAUNA, ETC IN THE FOREBAY AREA. NO ABNORMAL CONDITIONS WERE OBSERVED DURING THE WEEKLY WALKDOWN.

RP

08/16/21 15:59 8/16/2021

- Loaded approximately 4500 gallons of water from water tanks to vacuum truck. Transported and offloaded this water at the oily waste surge tank.
- Processed approximately 1500 gallons of water from oily sludge box #2.
- Processed approximately 1000 gallons of water from oily sludge box #3
- Processed approximately 400 gallons of water from oily sludge box #1
- Crushed 50 fiber drums using the drum crusher and disposed of them in the RCRA box.
- Moved empty poly drums to warehouse E for storage,.
- Recorded NSC cooling tower totalizer readings.

RG

08/23/21 10:45

+++++++RESERVOIR MAKEUP PUMPING FACILITY WEEKLY WALKDOWN

RESERVOIR MAKEUP PUMPING FACILITY WEEKLY WALKDOWN

OBSERVATION DATE- 08/23/2021

TIME OF OBSERVATION- 10:45

WEATHER- PARTLY CLOUDY , 92 DEGREES FAHRENHEIT

RIVER STREAM FLOW- SLIGHT FLOW

GENERAL COMMENTS- STP WAS NOT DIVERTING DURING THE TIME OF THE OBSERVATION. THE RMPF TRAVELING SCREENS WERE IN GOOD CONDITION. THE FISH RETURN SYSTEM WAS IN PLACE. THE RMPF PUMPS AND ELECTRICAL COMPONENTS APPEARED IN GOOD CONDITION. NO INDICATIONS OF FOAM, FISH OR WILDLIFE MORTALITIES, UNUSUAL INDICATION OF FLORA OR FAUNA, ETC IN THE FOREBAY AREA. NO ABNORMAL CONDITIONS WERE OBSERVED DURING THE WEEKLY WALKDOWN.

RG

08/23/21 16:14

8/23/2021

- Performed walk down of West Sanitary Treatments System. Found East clarifier skimmer not working. Emailed Facilities to submit a work order to have it fixed. (Skimmer has been fixed and is working)
- Performed settleability at West SWTS.
- Obtained river sample and reported results to chemistry.
- Performed RMPF walk down.
- Performed walk down of Training Sanitary Wastewater Treatment System. Found in normal conditions.
- Performed settleability test at TSWTS.
- Performed walk down of NSC/NTF PWS. Found in normal condition.
- Performed walk down of Main PWS. Found in normal condition.
- Obtained daily chlorine samples.
- Crushed approximately 50 fiber drums using drum crusher. Disposed of crushed drums in RCRA box.
- Emailed D&Z regarding the upcoming PM for the OWTS.

RG

08/24/21 16:57

08/24/2021

- Obtained 401 effluent samples. Samples were clear and Total Chlorine was SAT.
- Obtained 601 effluent samples. Samples were clear and Total Chlorine was SAT.
- Obtained 101 and 201 samples.
- Labeled, packaged, and shipped samples.
- Performed Visible emissions observation for Diesel Generator 23.
- Performed Environmental PA weekly walk down.
- Performed walk down of NSC/NTF PWS. Found in normal operations
- Performed walk down of Main PWS. Found in normal operations.
- Performed walk down of West SWTS. Found in normal operations.
- Performed walk down of Training SWTS. Found in normal operations.
- Obtained daily chlorine samples.
- Began labeling drums that will be shipped in the hazardous waste shipment.

RG

08/30/21 11:30

\*\*\*\*\*WEEKLY RIVER CONDUCTIVITY SAMPLING

9895 uS/cm

RP.

08/30/21 11:35

+++++++RESERVOIR MAKEUP PUMPING FACILITY WEEKLY WALKDOWN

RESERVOIR MAKEUP PUMPING FACILITY WEEKLY WALKDOWN

OBSERVATION DATE- 08/30/2021

TIME OF OBSERVATION- 11:35

WEATHER- PARTLY CLOUDY , 90 DEGREES FAHRENHEIT

RIVER STREAM FLOW- SLOW FLOW

GENERAL COMMENTS- STP WAS NOT DIVERTING DURING THE TIME OF THE OBSERVATION. THE RMPF TRAVELING SCREENS WERE IN GOOD CONDITION. THE FISH RETURN SYSTEM WAS IN PLACE. THE RMPF PUMPS AND ELECTRICAL COMPONENTS APPEARED IN GOOD CONDITION. NO INDICATIONS OF FOAM, FISH OR WILDLIFE MORTALITIES, UNUSUAL INDICATION OF FLORA OR FAUNA, ETC IN THE FOREBAY AREA. NO ABNORMAL CONDITIONS WERE OBSERVED DURING THE WEEKLY WALKDOWN.

RP

08/30/21 15:59

8/30/2021

- Removed torn/ripped temporary berm from yard.
- Obtained NSC cooling tower totalizer readings.
- Met with Environmental Supervisor and Manager for coach the coach.
- Emptied chiller oil can into metal drum shrink wrapped empty chiller cans.
- Packaged expired sealant in metal drum. Labeled drum and placed on pallet.
- Processed approximately 1000 gallons of water from oily sludge box #3.
- Transferred used oil from drums to used oil storage tank.
- Crushed 10 metal drums and placed them in the scrap metal bin.
- Emailed to have scrap metal bin picked up.

RG

08/30/21 17:36

\*\*\*\*\*Sr. Environmental Technician Work Summary

- System walkdowns:

-WSWTS - alternated aeration blowers, raked bar screen, washed down clarifer weirs and troughs. Primed sodium hypo injection pump. Opened air valve for ASH Tank for sludge mixing. Dissolved oxygens, settabillities.

- Main Potable Water System:

- System checks and adjustments
- primed sodium hypo injection pump
- checked tank chlorine

- TSWTS - alternated aeration blowers, raked bar screen, washed down clarifer weirs and troughs. Primed sodium hypo injection pump. Washed down aeration header. Dissolved oxygens, settabillities.

- Drained sodium hypo tank berm for rainwater.

- NSC/NTF Potable Water System

- System checks and adjustments
  - primed sodium hypo injection pump
  - checked tank chlorine
- Drained sodium hypo berm for rainwater

- Daily chlorines
- Morning meeting.
- Weekly river conductivity sampling.
- RMPF weekly observation.
- CWI weekly observation.
- TCEQ Wastewater license renewal paid.
- Liftstation functionability checks.

RP.

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Inspections are to be conducted on a weekly basis. Observations SHALL be performed of the Reservoir Makeup Pump Facility as required per the STP TPDES Permit WQ00019008000.

Observation Date: 9/7/21

Time of Observation: 12:10

River Flow Conditions: SLOW FLOW

Weather Conditions: PARTY CLOUDY

Outside Temperature: 90°F

Diversions during the time of observation: Yes ☐ No ☒

Satisfactory?

Comments – if No, Other or NA

### Facility Equipment

Fish Return System	Yes <input checked="" type="checkbox"/> No <input type="checkbox"/>	<u>NA</u>
Bar Screens	Yes <input checked="" type="checkbox"/> No <input type="checkbox"/>	<u>NA</u>
Traveling Screens	Yes <input checked="" type="checkbox"/> No <input type="checkbox"/>	<u>NA</u>
Electrical Components	Yes <input checked="" type="checkbox"/> No <input type="checkbox"/>	<u>NA</u>
Pumps and Motors	Yes <input checked="" type="checkbox"/> No <input type="checkbox"/>	<u>NA</u>

### Wildlife and Environment

Comments – if No, Other or NA

Presence of foam	Yes <input type="checkbox"/> No <input checked="" type="checkbox"/>	<u>NA</u>
Fish Mortalities	Yes <input type="checkbox"/> No <input checked="" type="checkbox"/>	<u>NA</u>
Oil Sheen	Yes <input type="checkbox"/> No <input checked="" type="checkbox"/>	<u>NA</u>

Inspector: Rudy Perry

Date: 9/7/21

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Inspections are to be conducted on a weekly basis. Observations SHALL be performed of the Reservoir Makeup Pump Facility as required per the STP TPDES Permit WQ00019008000.

Observation Date: 9/13/21

Time of Observation: 10:15

River Flow Conditions: High Flow

Weather Conditions: CLOUDY, STORM Nicholas in Gulf.

Outside Temperature: 73°F

Diversions during the time of observation: Yes ☐ No ☒

Satisfactory?

Comments – if No, Other or NA

#### Facility Equipment

Fish Return System	Yes <input checked="" type="checkbox"/> No <input type="checkbox"/>	<u>NA</u>
Bar Screens	Yes <input checked="" type="checkbox"/> No <input type="checkbox"/>	<u>NA</u>
Traveling Screens	Yes <input checked="" type="checkbox"/> No <input type="checkbox"/>	<u>NA</u>
Electrical Components	Yes <input checked="" type="checkbox"/> No <input type="checkbox"/>	<u>NA</u>
Pumps and Motors	Yes <input checked="" type="checkbox"/> No <input type="checkbox"/>	<u>NA</u>

#### Wildlife and Environment

Comments – if No, Other or NA

Presence of foam	Yes <input type="checkbox"/> No <input checked="" type="checkbox"/>	<u>NA</u>
Fish Mortalities	Yes <input type="checkbox"/> No <input checked="" type="checkbox"/>	<u>NA</u>
Oil Sheen	Yes <input type="checkbox"/> No <input checked="" type="checkbox"/>	<u>NA</u>

Inspector: R. Perry

Date: 9/13/21

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Inspections are to be conducted on a weekly basis. Observations SHALL be performed of the Reservoir Makeup Pump Facility as required per the STP TPDES Permit WQ00019008000.

Observation Date: 9/20/21

Time of Observation: 14:40

River Flow Conditions: NO FLOW

Weather Conditions: SUNNY

Outside Temperature: 90°F

Diversions during the time of observation: Yes \_\_\_ No X

Satisfactory?

Comments – if No, Other or NA

#### Facility Equipment

Fish Return System	Yes <u>X</u> No ___	<u>NA</u>
Bar Screens	Yes <u>X</u> No ___	<u>NA</u>
Traveling Screens	Yes <u>X</u> No ___	<u>NA</u>
Electrical Components	Yes <u>X</u> No ___	<u>NA</u>
Pumps and Motors	Yes <u>X</u> No ___	<u>NA</u>

#### Wildlife and Environment

Comments – if No, Other or NA

Presence of foam	Yes ___ No <u>X</u>	<u>NA</u>
Fish Mortalities	Yes ___ No <u>X</u>	<u>NA</u>
Oil Sheen	Yes ___ No <u>X</u>	<u>NA</u>

Inspector: 

Date: 9/20/21

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Inspections are to be conducted on a weekly basis. Observations SHALL be performed of the Reservoir Makeup Pump Facility as required per the STP TPDES Permit WQ00019008000.

Observation Date: 9/27/2021

Time of Observation: 10:45 AM

River Flow Conditions: Slight Flow

Weather Conditions: Partly Cloudy

Outside Temperature: 89° F

Diversions during the time of observation: Yes ☐ No ☒

Satisfactory?

Comments – if No, Other or NA

### Facility Equipment

Fish Return System	Yes <input checked="" type="checkbox"/> No <input type="checkbox"/>	<u></u>
Bar Screens	Yes <input checked="" type="checkbox"/> No <input type="checkbox"/>	<u></u>
Traveling Screens	Yes <input checked="" type="checkbox"/> No <input type="checkbox"/>	<u></u>
Electrical Components	Yes <input checked="" type="checkbox"/> No <input type="checkbox"/>	<u></u>
Pumps and Motors	Yes <input checked="" type="checkbox"/> No <input type="checkbox"/>	<u></u>

### Wildlife and Environment

Comments – if No, Other or NA

Presence of foam	Yes <input type="checkbox"/> No <input checked="" type="checkbox"/>	<u>N/A</u>
Fish Mortalities	Yes <input type="checkbox"/> No <input checked="" type="checkbox"/>	<u>N/A</u>
Oil Sheen	Yes <input type="checkbox"/> No <input checked="" type="checkbox"/>	<u>N/A</u>

Inspector: Daniel Z. Davis

Date: 9/27/2021

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Inspections are to be conducted on a weekly basis. Observations SHALL be performed of the Reservoir Makeup Pump Facility as required per the STP TPDES Permit WQ00019008000.

Observation Date: 10/4/21

Time of Observation: 10:15

River Flow Conditions: Moderate Flow

Weather Conditions: Partly Cloudy

Outside Temperature: 79°F

Diversions during the time of observation: Yes ☐ No ☒

Satisfactory?

Comments – if No, Other or NA

#### Facility Equipment

Fish Return System	Yes <input checked="" type="checkbox"/> No <input type="checkbox"/>	<u>N/A</u>
Bar Screens	Yes <input checked="" type="checkbox"/> No <input type="checkbox"/>	<u>N/A</u>
Traveling Screens	Yes <input checked="" type="checkbox"/> No <input type="checkbox"/>	<u>N/A</u>
Electrical Components	Yes <input checked="" type="checkbox"/> No <input type="checkbox"/>	<u>N/A</u>
Pumps and Motors	Yes <input checked="" type="checkbox"/> No <input type="checkbox"/>	<u>N/A</u>

#### Wildlife and Environment

Comments – if No, Other or NA

Presence of foam	Yes <input type="checkbox"/> No <input checked="" type="checkbox"/>	<u>N/A</u>
Fish Mortalities	Yes <input type="checkbox"/> No <input checked="" type="checkbox"/>	<u>N/A</u>
Oil Sheen	Yes <input type="checkbox"/> No <input checked="" type="checkbox"/>	<u>N/A</u>

Inspector: R. Perez

Date: 10/4/21

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Inspections are to be conducted on a weekly basis. Observations SHALL be performed of the Reservoir Makeup Pump Facility as required per the STP TPDES Permit WQ00019008000.

Observation Date: 10/11/21

Time of Observation: 12:02

River Flow Conditions: moderate flow

Weather Conditions: cloudy

Outside Temperature: 79°F

Diversions during the time of observation: Yes ☐ No ☒

Satisfactory?

Comments – if No, Other or NA

#### Facility Equipment

Fish Return System	Yes <input checked="" type="checkbox"/> No <input type="checkbox"/>	<u>N/A</u>
Bar Screens	Yes <input checked="" type="checkbox"/> No <input type="checkbox"/>	<u>N/A</u>
Traveling Screens	Yes <input checked="" type="checkbox"/> No <input type="checkbox"/>	<u>N/A</u>
Electrical Components	Yes <input checked="" type="checkbox"/> No <input type="checkbox"/>	<u>N/A</u>
Pumps and Motors	Yes <input checked="" type="checkbox"/> No <input type="checkbox"/>	<u>N/A</u>

#### Wildlife and Environment

Comments – if No, Other or NA

Presence of foam	Yes <input type="checkbox"/> No <input checked="" type="checkbox"/>	<u>N/A</u>
Fish Mortalities	Yes <input type="checkbox"/> No <input checked="" type="checkbox"/>	<u>N/A</u>
Oil Sheen	Yes <input type="checkbox"/> No <input checked="" type="checkbox"/>	<u>N/A</u>

Inspector: 

Date: 10/11/21

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Inspections are to be conducted on a weekly basis. Observations SHALL be performed of the Reservoir Makeup Pump Facility as required per the STP TPDES Permit WQ00019008000.

Observation Date: 10/18/21

Time of Observation: 09:10

River Flow Conditions: High Flow

Weather Conditions: Sunny, blue skies

Outside Temperature: 61°F

Diversions during the time of observation: Yes X No     

Satisfactory?

Comments – if No, Other or NA

### Facility Equipment

Fish Return System	Yes <u>X</u> No <u>    </u>	<u>NO</u>
Bar Screens	Yes <u>X</u> No <u>    </u>	<u>NO</u>
Traveling Screens	Yes <u>X</u> No <u>    </u>	<u>NO</u>
Electrical Components	Yes <u>X</u> No <u>    </u>	<u>NO</u>
Pumps and Motors	Yes <u>X</u> No <u>    </u>	<u>NO</u>

### Wildlife and Environment

Comments – if No, Other or NA

Presence of foam	Yes <u>    </u> No <u>X</u>	<u>NO</u>
Fish Mortalities	Yes <u>    </u> No <u>X</u>	<u>NO</u>
Oil Sheen	Yes <u>    </u> No <u>X</u>	<u>NO</u>

Inspector: Randy Ray

Date: 10/18/21

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Inspections are to be conducted on a weekly basis. Observations SHALL be performed of the Reservoir Makeup Pump Facility as required per the STP TPDES Permit WQ00019008000.

Observation Date: 10/25/21

Time of Observation: 15:30

River Flow Conditions: SLIGHT

Weather Conditions: CLOUDY

Outside Temperature: 90°F

Diversions during the time of observation: Yes X No     

Satisfactory?

Comments – if No, Other or NA

#### Facility Equipment

Fish Return System	Yes <u>X</u> No <u>    </u>	<u>NO</u>
Bar Screens	Yes <u>X</u> No <u>    </u>	<u>NO</u>
Traveling Screens	Yes <u>X</u> No <u>    </u>	<u>NO</u>
Electrical Components	Yes <u>X</u> No <u>    </u>	<u>NO</u>
Pumps and Motors	Yes <u>X</u> No <u>    </u>	<u>NO</u>

#### Wildlife and Environment

Comments – if No, Other or NA

Presence of foam	Yes <u>    </u> No <u>X</u>	<u>NO</u>
Fish Mortalities	Yes <u>    </u> No <u>X</u>	<u>NO</u>
Oil Sheen	Yes <u>    </u> No <u>X</u>	<u>NO</u>

Inspector: 

Date: 10/25/21

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Inspections are to be conducted on a weekly basis. Observations SHALL be performed of the Reservoir Makeup Pump Facility as required per the STP TPDES Permit WQ00019008000.

Observation Date: 11/2/21

Time of Observation: 13:00

River Flow Conditions: Slight Flow

Weather Conditions: Partly Cloudy

Outside Temperature: 79°F

Diversions during the time of observation: Yes ☐ No ☒

Satisfactory?

Comments – if No, Other or NA

### Facility Equipment

Fish Return System	Yes <input checked="" type="checkbox"/> No <input type="checkbox"/>	<u>NO</u>
Bar Screens	Yes <input checked="" type="checkbox"/> No <input type="checkbox"/>	<u>NO</u>
Traveling Screens	Yes <input checked="" type="checkbox"/> No <input type="checkbox"/>	<u>NO</u>
Electrical Components	Yes <input checked="" type="checkbox"/> No <input type="checkbox"/>	<u>NO</u>
Pumps and Motors	Yes <input checked="" type="checkbox"/> No <input type="checkbox"/>	<u>NO</u>

### Wildlife and Environment

Comments – if No, Other or NA

Presence of foam	Yes <input type="checkbox"/> No <input checked="" type="checkbox"/>	<u>NO</u>
Fish Mortalities	Yes <input type="checkbox"/> No <input checked="" type="checkbox"/>	<u>NO</u>
Oil Sheen	Yes <input type="checkbox"/> No <input checked="" type="checkbox"/>	<u>NO</u>

Inspector: 

Date: 11/2/21

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Inspections are to be conducted on a weekly basis. Observations SHALL be performed of the Reservoir Makeup Pump Facility as required per the STP TPDES Permit WQ00019008000.

Observation Date: 11/8/21

Time of Observation: 10:35

River Flow Conditions: Moderate Flow

Weather Conditions: partly cloudy

Outside Temperature: 72°F

Diversions during the time of observation: Yes \_\_\_ No X

Satisfactory?

Comments – if No, Other or NA

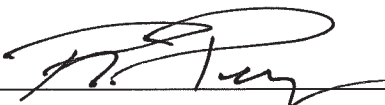
### Facility Equipment

Fish Return System	Yes <u>X</u> No ___	<u>NO</u>
Bar Screens	Yes <u>X</u> No ___	<u>NO</u>
Traveling Screens	Yes <u>X</u> No ___	<u>NO</u>
Electrical Components	Yes <u>X</u> No ___	<u>NO</u>
Pumps and Motors	Yes <u>X</u> No ___	<u>NO</u>

### Wildlife and Environment

Comments – if No, Other or NA

Presence of foam	Yes ___ No <u>X</u>	<u>NO</u>
Fish Mortalities	Yes ___ No <u>X</u>	<u>NO</u>
Oil Sheen	Yes ___ No <u>X</u>	<u>NO</u>

Inspector: 

Date: 11/8/21

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Inspections are to be conducted on a weekly basis. Observations SHALL be performed of the Reservoir Makeup Pump Facility as required per the STP TPDES Permit WQ00019008000.

Observation Date: 11/15/21

Time of Observation: 10:25

River Flow Conditions: Slight Flow

Weather Conditions: Partly Cloudy

Outside Temperature: 72°F

Diversions during the time of observation: Yes ☐ No ☒

Satisfactory?

Comments – if No, Other or NA


### Facility Equipment

Fish Return System	Yes <input checked="" type="checkbox"/> No <input type="checkbox"/>	<u>NO</u>
Bar Screens	Yes <input checked="" type="checkbox"/> No <input type="checkbox"/>	<u>NO</u>
Traveling Screens	Yes <input checked="" type="checkbox"/> No <input type="checkbox"/>	<u>NO</u>
Electrical Components	Yes <input checked="" type="checkbox"/> No <input type="checkbox"/>	<u>NO</u>
Pumps and Motors	Yes <input checked="" type="checkbox"/> No <input type="checkbox"/>	<u>NO</u>

### Wildlife and Environment

Comments – if No, Other or NA

Presence of foam	Yes <input type="checkbox"/> No <input checked="" type="checkbox"/>	<u>NO</u>
Fish Mortalities	Yes <input type="checkbox"/> No <input checked="" type="checkbox"/>	<u>NO</u>
Oil Sheen	Yes <input type="checkbox"/> No <input checked="" type="checkbox"/>	<u>NO</u>

Inspector: 

Date: 11/15/21

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Inspections are to be conducted on a weekly basis. Observations SHALL be performed of the Reservoir Makeup Pump Facility as required per the STP TPDES Permit WQ00019008000.

Observation Date: 11/22/21

Time of Observation: 12:25

River Flow Conditions: slight Flow

Weather Conditions: Partly Sunny

Outside Temperature: 68°F

Diversions during the time of observation: Yes ☐ No ☒

Satisfactory?

Comments – if No, Other or NA

#### Facility Equipment

Fish Return System	Yes <input checked="" type="checkbox"/> No <input type="checkbox"/>	<u>NO</u>
Bar Screens	Yes <input checked="" type="checkbox"/> No <input type="checkbox"/>	<u>NO</u>
Traveling Screens	Yes <input checked="" type="checkbox"/> No <input type="checkbox"/>	<u>NO</u>
Electrical Components	Yes <input checked="" type="checkbox"/> No <input type="checkbox"/>	<u>NO</u>
Pumps and Motors	Yes <input checked="" type="checkbox"/> No <input type="checkbox"/>	<u>NO</u>

#### Wildlife and Environment

Comments – if No, Other or NA

Presence of foam	Yes <input type="checkbox"/> No <input checked="" type="checkbox"/>	<u>NO</u>
Fish Mortalities	Yes <input type="checkbox"/> No <input checked="" type="checkbox"/>	<u>NO</u>
Oil Sheen	Yes <input type="checkbox"/> No <input checked="" type="checkbox"/>	<u>NO</u>

Inspector: 

Date: 11/22/21

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Inspections are to be conducted on a weekly basis. Observations SHALL be performed of the Reservoir Makeup Pump Facility as required per the STP TPDES Permit WQ00019008000.

Observation Date: 11/29/21

Time of Observation: 11:55

River Flow Conditions: NO FLOW

Weather Conditions: Partly Sunny

Outside Temperature: 64°F

Diversions during the time of observation: Yes \_\_\_ No X

Satisfactory?

Comments – if No, Other or NA

### Facility Equipment

Fish Return System	Yes <u>X</u> No ___	<u>NO</u>
Bar Screens	Yes <u>X</u> No ___	<u>NO</u>
Traveling Screens	Yes <u>X</u> No ___	<u>NO</u>
Electrical Components	Yes <u>X</u> No ___	<u>NO</u>
Pumps and Motors	Yes <u>X</u> No ___	<u>NO</u>

### Wildlife and Environment

Comments – if No, Other or NA

Presence of foam	Yes ___ No <u>X</u>	<u>NO</u>
Fish Mortalities	Yes ___ No <u>X</u>	<u>NO</u>
Oil Sheen	Yes ___ No <u>X</u>	<u>NO</u>

Inspector: 

Date: 11/29/21

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Inspections are to be conducted on a weekly basis. Observations SHALL be performed of the Reservoir Makeup Pump Facility as required per the STP TPDES Permit WQ00019008000.

Observation Date: 12/6/21

Time of Observation: 11:00

River Flow Conditions: Slight Flow

Weather Conditions: CLOUDY

Outside Temperature: 79°F

Diversions during the time of observation: Yes ☐ No ☒

Satisfactory?

Comments – if No, Other or NA

### Facility Equipment

Fish Return System	Yes <input checked="" type="checkbox"/> No <input type="checkbox"/>	<u>NO</u>
Bar Screens	Yes <input checked="" type="checkbox"/> No <input type="checkbox"/>	<u>NO</u>
Traveling Screens	Yes <input checked="" type="checkbox"/> No <input type="checkbox"/>	<u>NO</u>
Electrical Components	Yes <input checked="" type="checkbox"/> No <input type="checkbox"/>	<u>NO</u>
Pumps and Motors	Yes <input checked="" type="checkbox"/> No <input type="checkbox"/>	<u>NO</u>

### Wildlife and Environment

Comments – if No, Other or NA

Presence of foam	Yes <input type="checkbox"/> No <input checked="" type="checkbox"/>	<u>NO</u>
Fish Mortalities	Yes <input type="checkbox"/> No <input checked="" type="checkbox"/>	<u>NO</u>
Oil Sheen	Yes <input type="checkbox"/> No <input checked="" type="checkbox"/>	<u>NO</u>

Inspector: 

Date: 12/6/21

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Inspections are to be conducted on a weekly basis. Observations SHALL be performed of the Reservoir Makeup Pump Facility as required per the STP TPDES Permit WQ00019008000.

Observation Date: 12/13/21

Time of Observation: 11:15

River Flow Conditions: slight Flow

Weather Conditions: Partly cloudy

Outside Temperature: 67°F

Diversions during the time of observation: Yes ☐ No ☒

Satisfactory?

Comments – if No, Other or NA

### Facility Equipment

Fish Return System	Yes <input checked="" type="checkbox"/> No <input type="checkbox"/>	<u>NO</u>
Bar Screens	Yes <input checked="" type="checkbox"/> No <input type="checkbox"/>	<u>NO</u>
Traveling Screens	Yes <input checked="" type="checkbox"/> No <input type="checkbox"/>	<u>NO</u>
Electrical Components	Yes <input checked="" type="checkbox"/> No <input type="checkbox"/>	<u>NO</u>
Pumps and Motors	Yes <input checked="" type="checkbox"/> No <input type="checkbox"/>	<u>NO</u>

### Wildlife and Environment

Comments – if No, Other or NA

Presence of foam	Yes <input type="checkbox"/> No <input checked="" type="checkbox"/>	<u>NO</u>
Fish Mortalities	Yes <input type="checkbox"/> No <input checked="" type="checkbox"/>	<u>NO</u>
Oil Sheen	Yes <input type="checkbox"/> No <input checked="" type="checkbox"/>	<u>NO</u>

Inspector: R. Ray

Date: 12/13/21

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Inspections are to be conducted on a weekly basis. Observations SHALL be performed of the Reservoir Makeup Pump Facility as required per the STP TPDES Permit WQ00019008000.

Observation Date: 12/20/21

Time of Observation: 9:45 am

River Flow Conditions: Slight flow

Weather Conditions: Cloudy

Outside Temperature: 65°

Diversions during the time of observation: Yes ☐ No ☒

Satisfactory?

Comments – if No, Other or NA

### Facility Equipment

Fish Return System	Yes <input checked="" type="checkbox"/>	No <input type="checkbox"/>
Bar Screens	Yes <input checked="" type="checkbox"/>	No <input type="checkbox"/>
Traveling Screens	Yes <input checked="" type="checkbox"/>	No <input type="checkbox"/>
Electrical Components	Yes <input checked="" type="checkbox"/>	No <input type="checkbox"/>
Pumps and Motors	Yes <input checked="" type="checkbox"/>	No <input type="checkbox"/>

\_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_  
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\_\_\_\_\_

### Wildlife and Environment

Presence of foam	Yes <input type="checkbox"/>	No <input checked="" type="checkbox"/>
Fish Mortalities	Yes <input type="checkbox"/>	No <input checked="" type="checkbox"/>
Oil Sheen	Yes <input type="checkbox"/>	No <input checked="" type="checkbox"/>

Comments – if No, Other or NA

\_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_

Inspector: Rafael Garcia

Date: 12/20/21

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Inspections are to be conducted on a weekly basis. Observations SHALL be performed of the Reservoir Makeup Pump Facility as required per the STP TPDES Permit WQ00019008000.

Observation Date: 12/28/21

Time of Observation: 14:45

River Flow Conditions: Slight Flow

Weather Conditions: Cloudy

Outside Temperature: 77°

Diversions during the time of observation: Yes ☐ No ☒

Satisfactory?

Comments – if No, Other or NA

### Facility Equipment

Fish Return System	Yes <input checked="" type="checkbox"/> No <input type="checkbox"/>	<u></u>
Bar Screens	Yes <input checked="" type="checkbox"/> No <input type="checkbox"/>	<u></u>
Traveling Screens	Yes <input checked="" type="checkbox"/> No <input type="checkbox"/>	<u></u>
Electrical Components	Yes <input checked="" type="checkbox"/> No <input type="checkbox"/>	<u></u>
Pumps and Motors	Yes <input checked="" type="checkbox"/> No <input type="checkbox"/>	<u></u>

### Wildlife and Environment

Comments – if No, Other or NA

Presence of foam	Yes <input type="checkbox"/> No <input checked="" type="checkbox"/>	<u></u>
Fish Mortalities	Yes <input type="checkbox"/> No <input checked="" type="checkbox"/>	<u></u>
Oil Sheen	Yes <input type="checkbox"/> No <input checked="" type="checkbox"/>	<u></u>

Inspector: Rafael Garcia

Date: 12/28/21



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Inspections are to be conducted on a weekly basis. Observations SHALL be performed of the Reservoir Makeup Pump Facility as required per the STP TPDES Permit WQ00019008000.

Observation Date: 1/3/22

Time of Observation: 9:40 am

River Flow Conditions: Slight Flow

Weather Conditions: Sunny

Outside Temperature: 56°

Diversions during the time of observation: Yes ☐ No ☒

Satisfactory?

Comments – if No, Other or NA

### Facility Equipment

Fish Return System	Yes <input checked="" type="checkbox"/> No <input type="checkbox"/>	_____
Bar Screens	Yes <input checked="" type="checkbox"/> No <input type="checkbox"/>	_____
Traveling Screens	Yes <input checked="" type="checkbox"/> No <input type="checkbox"/>	_____
Electrical Components	Yes <input checked="" type="checkbox"/> No <input type="checkbox"/>	_____
Pumps and Motors	Yes <input checked="" type="checkbox"/> No <input type="checkbox"/>	_____

### Wildlife and Environment

Comments – if No, Other or NA

Presence of foam	Yes <input type="checkbox"/> No <input checked="" type="checkbox"/>	_____
Fish Mortalities	Yes <input type="checkbox"/> No <input checked="" type="checkbox"/>	_____
Oil Sheen	Yes <input type="checkbox"/> No <input checked="" type="checkbox"/>	_____

Inspector: Rafael Garcia

Date: 1/3/22

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Inspections are to be conducted on a weekly basis. Observations SHALL be performed of the Reservoir Makeup Pump Facility as required per the STP TPDES Permit WQ00019008000.

Observation Date: 1/10/22

Time of Observation: 14:30

River Flow Conditions: Moderate Flow

Weather Conditions: Partly cloudy

Outside Temperature: 61°F

Diversions during the time of observation: Yes ☐ No ☒

Satisfactory?

Comments – if No, Other or NA

#### Facility Equipment

Fish Return System	Yes <input checked="" type="checkbox"/> No <input type="checkbox"/>	<u>NO</u>
Bar Screens	Yes <input checked="" type="checkbox"/> No <input type="checkbox"/>	<u>NO</u>
Traveling Screens	Yes <input checked="" type="checkbox"/> No <input type="checkbox"/>	<u>NO</u>
Electrical Components	Yes <input checked="" type="checkbox"/> No <input type="checkbox"/>	<u>NO</u>
Pumps and Motors	Yes <input checked="" type="checkbox"/> No <input type="checkbox"/>	<u>NO</u>

#### Wildlife and Environment

Comments – if No, Other or NA

Presence of foam	Yes <input type="checkbox"/> No <input checked="" type="checkbox"/>	<u>NO</u>
Fish Mortalities	Yes <input type="checkbox"/> No <input checked="" type="checkbox"/>	<u>NO</u>
Oil Sheen	Yes <input type="checkbox"/> No <input checked="" type="checkbox"/>	<u>NO</u>

Inspector: R. Perry

Date: 1/10/22

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Inspections are to be conducted on a weekly basis. Observations SHALL be performed of the Reservoir Makeup Pump Facility as required per the STP TPDES Permit WQ00019008000.

Observation Date: 1/17/22

Time of Observation: 12:20

River Flow Conditions: Moderate

Weather Conditions: Blue skies

Outside Temperature: 66°F

Diversions during the time of observation: Yes ☐ No ☒

Satisfactory?

Comments – if No, Other or NA


#### Facility Equipment

Fish Return System	Yes <input checked="" type="checkbox"/> No <input type="checkbox"/>	<u>NO</u>
Bar Screens	Yes <input checked="" type="checkbox"/> No <input type="checkbox"/>	<u>NO</u>
Traveling Screens	Yes <input checked="" type="checkbox"/> No <input type="checkbox"/>	<u>NO</u>
Electrical Components	Yes <input checked="" type="checkbox"/> No <input type="checkbox"/>	<u>NO</u>
Pumps and Motors	Yes <input checked="" type="checkbox"/> No <input type="checkbox"/>	<u>NO</u>

#### Wildlife and Environment

Comments – if No, Other or NA

Presence of foam	Yes <input type="checkbox"/> No <input checked="" type="checkbox"/>	<u>NO</u>
Fish Mortalities	Yes <input type="checkbox"/> No <input checked="" type="checkbox"/>	<u>NO</u>
Oil Sheen	Yes <input type="checkbox"/> No <input checked="" type="checkbox"/>	<u>NO</u>

Inspector: 

Date: 1/17/22

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Inspections are to be conducted on a weekly basis. Observations SHALL be performed of the Reservoir Makeup Pump Facility as required per the STP TPDES Permit WQ00019008000.

Observation Date: 1/24/22

Time of Observation: 09:10

River Flow Conditions: MODERATE

Weather Conditions: CLOUDY

Outside Temperature: 49°F

Diversions during the time of observation: Yes ☐ No ☒

Satisfactory?

Comments – if No, Other or NA

### Facility Equipment

Fish Return System	Yes <input checked="" type="checkbox"/> No <input type="checkbox"/>	<u>NO</u>
Bar Screens	Yes <input checked="" type="checkbox"/> No <input type="checkbox"/>	<u>NO</u>
Traveling Screens	Yes <input checked="" type="checkbox"/> No <input type="checkbox"/>	<u>NO</u>
Electrical Components	Yes <input checked="" type="checkbox"/> No <input type="checkbox"/>	<u>NO</u>
Pumps and Motors	Yes <input checked="" type="checkbox"/> No <input type="checkbox"/>	<u>NO</u>

### Wildlife and Environment

Comments – if No, Other or NA

Presence of foam	Yes <input type="checkbox"/> No <input checked="" type="checkbox"/>	<u>NO</u>
Fish Mortalities	Yes <input type="checkbox"/> No <input checked="" type="checkbox"/>	<u>NO</u>
Oil Sheen	Yes <input type="checkbox"/> No <input checked="" type="checkbox"/>	<u>NO</u>

Inspector: 

Date: 1/24/22

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Inspections are to be conducted on a weekly basis. Observations SHALL be performed of the Reservoir Makeup Pump Facility as required per the STP TPDES Permit WQ00019008000.

Observation Date: 1/31/22

Time of Observation: 12:30

River Flow Conditions: High Flow

Weather Conditions: Cloudy, Rain

Outside Temperature: 62°F

Diversions during the time of observation: Yes ☐ No ☒

Satisfactory?

Comments – if No, Other or NA

#### Facility Equipment

Fish Return System	Yes <input checked="" type="checkbox"/> No <input type="checkbox"/>	<u>NO</u>
Bar Screens	Yes <input checked="" type="checkbox"/> No <input type="checkbox"/>	<u>NO</u>
Traveling Screens	Yes <input checked="" type="checkbox"/> No <input type="checkbox"/>	<u>NO</u>
Electrical Components	Yes <input checked="" type="checkbox"/> No <input type="checkbox"/>	<u>NO</u>
Pumps and Motors	Yes <input checked="" type="checkbox"/> No <input type="checkbox"/>	<u>NO</u>

#### Wildlife and Environment

Comments – if No, Other or NA

Presence of foam	Yes <input type="checkbox"/> No <input checked="" type="checkbox"/>	<u>NO</u>
Fish Mortalities	Yes <input type="checkbox"/> No <input checked="" type="checkbox"/>	<u>NO</u>
Oil Sheen	Yes <input type="checkbox"/> No <input checked="" type="checkbox"/>	<u>NO</u>

Inspector: R. P. [Signature]

Date: 1/31/22

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Inspections are to be conducted on a weekly basis. Observations SHALL be performed of the Reservoir Makeup Pump Facility as required per the STP TPDES Permit WQ00019008000.

Observation Date: 2/7/22

Time of Observation: 10:30 am

River Flow Conditions: Good Flow

Weather Conditions: Cloudy

Outside Temperature: 59°

Diversions during the time of observation: Yes ☐ No ☒

Satisfactory?

Comments – if No, Other or NA

### Facility Equipment

Fish Return System	Yes <input checked="" type="checkbox"/> No <input type="checkbox"/>	
Bar Screens	Yes <input checked="" type="checkbox"/> No <input type="checkbox"/>	
Traveling Screens	Yes <input checked="" type="checkbox"/> No <input type="checkbox"/>	
Electrical Components	Yes <input checked="" type="checkbox"/> No <input type="checkbox"/>	
Pumps and Motors	Yes <input checked="" type="checkbox"/> No <input type="checkbox"/>	

### Wildlife and Environment

Comments – if No, Other or NA

Presence of foam	Yes <input checked="" type="checkbox"/> No <input type="checkbox"/>	
Fish Mortalities	Yes <input checked="" type="checkbox"/> No <input type="checkbox"/>	
Oil Sheen	Yes <input checked="" type="checkbox"/> No <input type="checkbox"/>	

Inspector: Rafael Garcia

Date: 2/7/22

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Inspections are to be conducted on a weekly basis. Observations SHALL be performed of the Reservoir Makeup Pump Facility as required per the STP TPDES Permit WQ00019008000.

Observation Date: 2/14/22

Time of Observation: 9:30 am

River Flow Conditions: Slight Flow

Weather Conditions: Clear Skies

Outside Temperature: 65°

Diversions during the time of observation: Yes ☒ No ☐

Satisfactory?

Comments – if No, Other or NA

#### Facility Equipment

Fish Return System	Yes <input checked="" type="checkbox"/> No <input type="checkbox"/>	<u></u>
Bar Screens	Yes <input checked="" type="checkbox"/> No <input type="checkbox"/>	<u></u>
Traveling Screens	Yes <input checked="" type="checkbox"/> No <input type="checkbox"/>	<u></u>
Electrical Components	Yes <input checked="" type="checkbox"/> No <input type="checkbox"/>	<u></u>
Pumps and Motors	Yes <input checked="" type="checkbox"/> No <input type="checkbox"/>	<u></u>

#### Wildlife and Environment

Comments – if No, Other or NA

Presence of foam	Yes <input checked="" type="checkbox"/> No <input type="checkbox"/>	<u></u>
Fish Mortalities	Yes <input checked="" type="checkbox"/> No <input type="checkbox"/>	<u></u>
Oil Sheen	Yes <input checked="" type="checkbox"/> No <input type="checkbox"/>	<u></u>

Inspector: Rafael Garcia

Date: 2/14/22

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Inspections are to be conducted on a weekly basis. Observations SHALL be performed of the Reservoir Makeup Pump Facility as required per the STP TPDES Permit WQ00019008000.

Observation Date: 2/21/22

Time of Observation: 11:30

River Flow Conditions: MODERATE

Weather Conditions: CLOUDY

Outside Temperature: 74°F

Diversions during the time of observation: Yes ☐ No ☒

Satisfactory?

Comments – if No, Other or NA

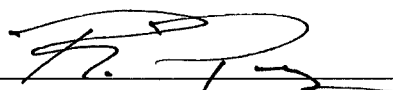
#### Facility Equipment

Fish Return System	Yes <input checked="" type="checkbox"/> No <input type="checkbox"/>	<u>NO</u>
Bar Screens	Yes <input checked="" type="checkbox"/> No <input type="checkbox"/>	<u>NO</u>
Traveling Screens	Yes <input checked="" type="checkbox"/> No <input type="checkbox"/>	<u>NO</u>
Electrical Components	Yes <input checked="" type="checkbox"/> No <input type="checkbox"/>	<u>NO</u>
Pumps and Motors	Yes <input checked="" type="checkbox"/> No <input type="checkbox"/>	<u>NO</u>

#### Wildlife and Environment

Comments – if No, Other or NA

Presence of foam	Yes <input type="checkbox"/> No <input checked="" type="checkbox"/>	<u>NO</u>
Fish Mortalities	Yes <input type="checkbox"/> No <input checked="" type="checkbox"/>	<u>NO</u>
Oil Sheen	Yes <input type="checkbox"/> No <input checked="" type="checkbox"/>	<u>NO</u>

Inspector: 

Date: 2/21/22



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Inspections are to be conducted on a weekly basis. Observations SHALL be performed of the Reservoir Makeup Pump Facility as required per the STP TPDES Permit WQ00019008000.

Observation Date: 2/28/22

Time of Observation: 13:00

River Flow Conditions: Minimum Flow

Weather Conditions: Clear Skies.

Outside Temperature: 63°F

Diversions during the time of observation: Yes      No X

Satisfactory?

Comments – if No, Other or NA

#### Facility Equipment

Fish Return System	Yes <u>X</u> No <u>    </u>	<u>No.</u>
Bar Screens	Yes <u>X</u> No <u>    </u>	<u>No.</u>
Traveling Screens	Yes <u>X</u> No <u>    </u>	<u>No.</u>
Electrical Components	Yes <u>X</u> No <u>    </u>	<u>No.</u>
Pumps and Motors	Yes <u>X</u> No <u>    </u>	<u>No.</u>

#### Wildlife and Environment

Comments – if No, Other or NA

Presence of foam	Yes <u>    </u> No <u>X</u>	<u>No.</u>
Fish Mortalities	Yes <u>    </u> No <u>X</u>	<u>No.</u>
Oil Sheen	Yes <u>    </u> No <u>X</u>	<u>No.</u>

Inspector: 

Date: 2/28/22

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Inspections are to be conducted on a weekly basis. Observations SHALL be performed of the Reservoir Makeup Pump Facility as required per the STP TPDES Permit WQ00019008000.

Observation Date: 3/7/22

Time of Observation: 14:45

River Flow Conditions: MODERATE FLOW.

Weather Conditions: CLOUDY

Outside Temperature: 60°F

Diversions during the time of observation: Yes ☐ No ☒

Satisfactory?

Comments – if No, Other or NA


#### Facility Equipment

Fish Return System	Yes <input checked="" type="checkbox"/> No <input type="checkbox"/>	<u>NO</u>
Bar Screens	Yes <input checked="" type="checkbox"/> No <input type="checkbox"/>	<u>NO</u>
Traveling Screens	Yes <input checked="" type="checkbox"/> No <input type="checkbox"/>	<u>NO</u>
Electrical Components	Yes <input checked="" type="checkbox"/> No <input type="checkbox"/>	<u>NO</u>
Pumps and Motors	Yes <input checked="" type="checkbox"/> No <input type="checkbox"/>	<u>NO</u>

#### Wildlife and Environment

Comments – if No, Other or NA

Presence of foam	Yes <input type="checkbox"/> No <input checked="" type="checkbox"/>	<u>NO</u>
Fish Mortalities	Yes <input type="checkbox"/> No <input checked="" type="checkbox"/>	<u>NO</u>
Oil Sheen	Yes <input type="checkbox"/> No <input checked="" type="checkbox"/>	<u>NO</u>

Inspector: 

Date: 3/7/22

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Inspections are to be conducted on a weekly basis. Observations SHALL be performed of the Reservoir Makeup Pump Facility as required per the STP TPDES Permit WQ00019008000.

Observation Date: 3/14/22

Time of Observation: 14:52

River Flow Conditions: slight flow.

Weather Conditions: Cloudy.

Outside Temperature: 75°F

Diversions during the time of observation: Yes ☐ No ☒

Satisfactory?

Comments – if No, Other or NA

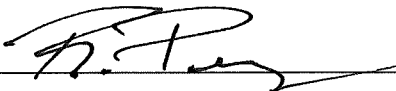
#### Facility Equipment

Fish Return System	Yes <input checked="" type="checkbox"/> No <input type="checkbox"/>	<u>NO</u>
Bar Screens	Yes <input checked="" type="checkbox"/> No <input type="checkbox"/>	<u>NO</u>
Traveling Screens	Yes <input checked="" type="checkbox"/> No <input type="checkbox"/>	<u>NO</u>
Electrical Components	Yes <input checked="" type="checkbox"/> No <input type="checkbox"/>	<u>NO</u>
Pumps and Motors	Yes <input checked="" type="checkbox"/> No <input type="checkbox"/>	<u>NO</u>

#### Wildlife and Environment

Comments – if No, Other or NA

Presence of foam	Yes <input type="checkbox"/> No <input checked="" type="checkbox"/>	<u>NO</u>
Fish Mortalities	Yes <input type="checkbox"/> No <input checked="" type="checkbox"/>	<u>NO</u>
Oil Sheen	Yes <input type="checkbox"/> No <input checked="" type="checkbox"/>	<u>NO</u>

Inspector: 

Date: 3/14/22



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Inspections are to be conducted on a weekly basis. Observations SHALL be performed of the Reservoir Makeup Pump Facility as required per the STP TPDES Permit WQ00019008000.

Observation Date: 3/21/22

Time of Observation: 11:35

River Flow Conditions: slight

Weather Conditions: CLOUDY

Outside Temperature: 73°F

Diversions during the time of observation: Yes \_\_\_ No X

Satisfactory?

Comments – if No, Other or NA

#### Facility Equipment

Fish Return System	Yes <u>X</u> No ___	<u>NO</u>
Bar Screens	Yes <u>X</u> No ___	<u>NO</u>
Traveling Screens	Yes <u>X</u> No ___	<u>NO</u>
Electrical Components	Yes <u>X</u> No ___	<u>NO</u>
Pumps and Motors	Yes <u>X</u> No ___	<u>NO</u>

#### Wildlife and Environment

Comments – if No, Other or NA

Presence of foam	Yes ___ No <u>X</u>	<u>NO</u>
Fish Mortalities	Yes ___ No <u>X</u>	<u>NO</u>
Oil Sheen	Yes ___ No <u>X</u>	<u>NO</u>

Inspector: 

Date: 3/21/22

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Inspections are to be conducted on a weekly basis. Observations SHALL be performed of the Reservoir Makeup Pump Facility as required per the STP TPDES Permit WQ00019008000.

Observation Date: 3/28/22

Time of Observation: 10:05

River Flow Conditions: MODERATE

Weather Conditions: Partly cloudy

Outside Temperature: 74°F

Diversions during the time of observation: Yes ☐ No ☒

Satisfactory?

Comments – if No, Other or NA

#### Facility Equipment

Fish Return System	Yes <input checked="" type="checkbox"/> No <input type="checkbox"/>	<u>NO</u>
Bar Screens	Yes <input checked="" type="checkbox"/> No <input type="checkbox"/>	<u>NO</u>
Traveling Screens	Yes <input checked="" type="checkbox"/> No <input type="checkbox"/>	<u>NO</u>
Electrical Components	Yes <input checked="" type="checkbox"/> No <input type="checkbox"/>	<u>NO</u>
Pumps and Motors	Yes <input checked="" type="checkbox"/> No <input type="checkbox"/>	<u>NO</u>

#### Wildlife and Environment

Comments – if No, Other or NA

Presence of foam	Yes <input type="checkbox"/> No <input checked="" type="checkbox"/>	<u>NO</u>
Fish Mortalities	Yes <input type="checkbox"/> No <input checked="" type="checkbox"/>	<u>NO</u>
Oil Sheen	Yes <input type="checkbox"/> No <input checked="" type="checkbox"/>	<u>NO</u>

Inspector: R. Py

Date: 3/28/22

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Inspections are to be conducted on a weekly basis. Observations SHALL be performed of the Reservoir Makeup Pump Facility as required per the STP TPDES Permit WQ00019008000.

Observation Date: 4/4/22

Time of Observation: 10:40

River Flow Conditions: Slight Flow

Weather Conditions: Cloudy / Overcast

Outside Temperature: 75°F

Diversions during the time of observation: Yes ☐ No ☒

Satisfactory?

Comments – if No, Other or NA

### Facility Equipment

Fish Return System	Yes <input checked="" type="checkbox"/> No <input type="checkbox"/>	<u>NO</u>
Bar Screens	Yes <input checked="" type="checkbox"/> No <input type="checkbox"/>	<u>NO</u>
Traveling Screens	Yes <input checked="" type="checkbox"/> No <input type="checkbox"/>	<u>NO</u>
Electrical Components	Yes <input checked="" type="checkbox"/> No <input type="checkbox"/>	<u>NO</u>
Pumps and Motors	Yes <input checked="" type="checkbox"/> No <input type="checkbox"/>	<u>NO</u>

### Wildlife and Environment

Comments – if No, Other or NA

Presence of foam	Yes <input type="checkbox"/> No <input checked="" type="checkbox"/>	<u>NO</u>
Fish Mortalities	Yes <input type="checkbox"/> No <input checked="" type="checkbox"/>	<u>NO</u>
Oil Sheen	Yes <input type="checkbox"/> No <input checked="" type="checkbox"/>	<u>NO</u>

Inspector: R. P. [Signature]

Date: 4/4/22

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Inspections are to be conducted on a weekly basis. Observations SHALL be performed of the Reservoir Makeup Pump Facility as required per the STP TPDES Permit WQ00019008000.

Observation Date: 4/11/22

Time of Observation: 11:50

River Flow Conditions: LOW FLOW

Weather Conditions: PARTLY CLOUDY

Outside Temperature: 78°F

Diversions during the time of observation: Yes \_\_\_\_\_ No X

Satisfactory?

Comments – if No, Other or NA

#### Facility Equipment

Fish Return System	Yes <u>X</u> No _____	<u>NO</u>
Bar Screens	Yes <u>X</u> No _____	<u>NO</u>
Traveling Screens	Yes <u>X</u> No _____	<u>NO</u>
Electrical Components	Yes <u>X</u> No _____	<u>NO</u>
Pumps and Motors	Yes <u>X</u> No _____	<u>NO</u>

#### Wildlife and Environment

Comments – if No, Other or NA

Presence of foam	Yes _____ No <u>X</u>	<u>NO</u>
Fish Mortalities	Yes _____ No <u>X</u>	<u>NO</u>
Oil Sheen	Yes _____ No <u>X</u>	<u>NO</u>

Inspector: [Signature]

Date: 4/11/22

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Inspections are to be conducted on a weekly basis. Observations SHALL be performed of the Reservoir Makeup Pump Facility as required per the STP TPDES Permit WQ00019008000.

Observation Date: 4/18/22

Time of Observation: 13:30

River Flow Conditions: Slight Flow

Weather Conditions: Sunny

Outside Temperature: 82°F

Diversions during the time of observation: Yes ☐ No ☒

Satisfactory?

Comments – if No, Other or NA

#### Facility Equipment

Fish Return System	Yes <input checked="" type="checkbox"/> No <input type="checkbox"/>	<u>NO</u>
Bar Screens	Yes <input checked="" type="checkbox"/> No <input type="checkbox"/>	<u>NO</u>
Traveling Screens	Yes <input checked="" type="checkbox"/> No <input type="checkbox"/>	<u>NO</u>
Electrical Components	Yes <input checked="" type="checkbox"/> No <input type="checkbox"/>	<u>NO</u>
Pumps and Motors	Yes <input checked="" type="checkbox"/> No <input type="checkbox"/>	<u>NO</u>

#### Wildlife and Environment

Comments – if No, Other or NA

Presence of foam	Yes <input type="checkbox"/> No <input checked="" type="checkbox"/>	<u>NO</u>
Fish Mortalities	Yes <input type="checkbox"/> No <input checked="" type="checkbox"/>	<u>NO</u>
Oil Sheen	Yes <input type="checkbox"/> No <input checked="" type="checkbox"/>	<u>NO</u>

Inspector: R. P. [Signature]

Date: 4/18/22

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Inspections are to be conducted on a weekly basis. Observations SHALL be performed of the Reservoir Makeup Pump Facility as required per the STP TPDES Permit WQ00019008000.

Observation Date: 4/25/22

Time of Observation: 10:15

River Flow Conditions: Moderate Flow

Weather Conditions: Partly Cloudy

Outside Temperature: 80°F

Diversions during the time of observation: Yes ☐ No ☒

Satisfactory?

Comments – if No, Other or NA

### Facility Equipment

Fish Return System	Yes <input checked="" type="checkbox"/> No <input type="checkbox"/>	<u>NO</u>
Bar Screens	Yes <input checked="" type="checkbox"/> No <input type="checkbox"/>	<u>NO</u>
Traveling Screens	Yes <input checked="" type="checkbox"/> No <input type="checkbox"/>	<u>NO</u>
Electrical Components	Yes <input checked="" type="checkbox"/> No <input type="checkbox"/>	<u>NO</u>
Pumps and Motors	Yes <input checked="" type="checkbox"/> No <input type="checkbox"/>	<u>NO</u>

### Wildlife and Environment

Comments – if No, Other or NA

Presence of foam	Yes <input type="checkbox"/> No <input checked="" type="checkbox"/>	<u>NO</u>
Fish Mortalities	Yes <input type="checkbox"/> No <input checked="" type="checkbox"/>	<u>NO</u>
Oil Sheen	Yes <input type="checkbox"/> No <input checked="" type="checkbox"/>	<u>NO</u>

Inspector: R. A. Ray

Date: 4/25/22

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Inspections are to be conducted on a weekly basis. Observations SHALL be performed of the Reservoir Makeup Pump Facility as required per the STP TPDES Permit WQ00019008000.

Observation Date: 5/2/22

Time of Observation: 10:15

River Flow Conditions: Moderate

Weather Conditions: Partly cloudy

Outside Temperature: 83°F

Diversions during the time of observation: Yes \_\_\_ No X

Satisfactory?

Comments – if No, Other or NA

### Facility Equipment

Fish Return System	Yes <u>X</u> No ___	<u>NO</u>
Bar Screens	Yes <u>X</u> No ___	<u>NO</u>
Traveling Screens	Yes <u>X</u> No ___	<u>NO</u>
Electrical Components	Yes <u>X</u> No ___	<u>NO</u>
Pumps and Motors	Yes <u>X</u> No ___	<u>NO</u>

### Wildlife and Environment

Comments – if No, Other or NA

Presence of foam	Yes ___ No <u>X</u>	<u>NO</u>
Fish Mortalities	Yes ___ No <u>X</u>	<u>NO</u>
Oil Sheen	Yes ___ No <u>X</u>	<u>NO</u>

Inspector: [Signature]

Date: 5/2/22

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Inspections are to be conducted on a weekly basis. Observations SHALL be performed of the Reservoir Makeup Pump Facility as required per the STP TPDES Permit WQ00019008000.

Observation Date: 5/9/22

Time of Observation: 10:20

River Flow Conditions: NO FLOW

Weather Conditions: PARTLY CLOUDY

Outside Temperature: 85°F

Diversions during the time of observation: Yes ☐ No ☒

Satisfactory?

Comments – if No, Other or NA

#### Facility Equipment

Fish Return System	Yes <input checked="" type="checkbox"/> No <input type="checkbox"/>	<u>NO</u>
Bar Screens	Yes <input checked="" type="checkbox"/> No <input type="checkbox"/>	<u>NO</u>
Traveling Screens	Yes <input checked="" type="checkbox"/> No <input type="checkbox"/>	<u>NO</u>
Electrical Components	Yes <input checked="" type="checkbox"/> No <input type="checkbox"/>	<u>NO</u>
Pumps and Motors	Yes <input checked="" type="checkbox"/> No <input type="checkbox"/>	<u>NO</u>

#### Wildlife and Environment

Comments – if No, Other or NA

Presence of foam	Yes <input type="checkbox"/> No <input checked="" type="checkbox"/>	<u>NO</u>
Fish Mortalities	Yes <input type="checkbox"/> No <input checked="" type="checkbox"/>	<u>NO</u>
Oil Sheen	Yes <input type="checkbox"/> No <input checked="" type="checkbox"/>	<u>NO</u>

Inspector: 

Date: 5/9/22

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Inspections are to be conducted on a weekly basis. Observations SHALL be performed of the Reservoir Makeup Pump Facility as required per the STP TPDES Permit WQ00019008000.

Observation Date: 5/16/22

Time of Observation: 09:00

River Flow Conditions: No Flow

Weather Conditions: Clear Skies

Outside Temperature: 76°F

Diversions during the time of observation: Yes ☐ No ☒

Satisfactory?

Comments – if No, Other or NA

#### Facility Equipment

Fish Return System	Yes <input checked="" type="checkbox"/> No <input type="checkbox"/>	<u>NO</u>
Bar Screens	Yes <input checked="" type="checkbox"/> No <input type="checkbox"/>	<u>NO</u>
Traveling Screens	Yes <input checked="" type="checkbox"/> No <input type="checkbox"/>	<u>NO</u>
Electrical Components	Yes <input checked="" type="checkbox"/> No <input type="checkbox"/>	<u>NO</u>
Pumps and Motors	Yes <input checked="" type="checkbox"/> No <input type="checkbox"/>	<u>NO</u>

#### Wildlife and Environment

Comments – if No, Other or NA

Presence of foam	Yes <input type="checkbox"/> No <input checked="" type="checkbox"/>	<u>NO</u>
Fish Mortalities	Yes <input type="checkbox"/> No <input checked="" type="checkbox"/>	<u>NO</u>
Oil Sheen	Yes <input type="checkbox"/> No <input checked="" type="checkbox"/>	<u>NO</u>

Inspector: R. P.

Date: 5/16/22

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Inspections are to be conducted on a weekly basis. Observations SHALL be performed of the Reservoir Makeup Pump Facility as required per the STP TPDES Permit WQ00019008000.

Observation Date: 5/23/22

Time of Observation: 12:40

River Flow Conditions: Slight Flow

Weather Conditions: PARTLY CLOUDY

Outside Temperature: 84°F

Diversions during the time of observation: Yes ☐ No ☒

Satisfactory?

Comments – if No, Other or NA

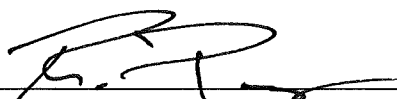
#### Facility Equipment

Fish Return System	Yes <input checked="" type="checkbox"/> No <input type="checkbox"/>	<u>NO</u>
Bar Screens	Yes <input checked="" type="checkbox"/> No <input type="checkbox"/>	<u>NO</u>
Traveling Screens	Yes <input checked="" type="checkbox"/> No <input type="checkbox"/>	<u>NO</u>
Electrical Components	Yes <input checked="" type="checkbox"/> No <input type="checkbox"/>	<u>NO</u>
Pumps and Motors	Yes <input checked="" type="checkbox"/> No <input type="checkbox"/>	<u>NO</u>

#### Wildlife and Environment

Comments – if No, Other or NA

Presence of foam	Yes <input type="checkbox"/> No <input checked="" type="checkbox"/>	<u>NO</u>
Fish Mortalities	Yes <input type="checkbox"/> No <input checked="" type="checkbox"/>	<u>NO</u>
Oil Sheen	Yes <input type="checkbox"/> No <input checked="" type="checkbox"/>	<u>NO</u>

Inspector: 

Date: 5/23/22

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Inspections are to be conducted on a weekly basis. Observations SHALL be performed of the Reservoir Makeup Pump Facility as required per the STP TPDES Permit WQ00019008000.

Observation Date: 5/31/22

Time of Observation: 13:45

River Flow Conditions: No Flow

Weather Conditions: Partly Cloudy

Outside Temperature: 87°F

Diversions during the time of observation: Yes ☐ No ☒

Satisfactory?

Comments – if No, Other or NA

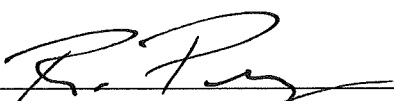
#### Facility Equipment

Fish Return System	Yes <input checked="" type="checkbox"/> No <input type="checkbox"/>	<u>NO</u>
Bar Screens	Yes <input checked="" type="checkbox"/> No <input type="checkbox"/>	<u>NO</u>
Traveling Screens	Yes <input checked="" type="checkbox"/> No <input type="checkbox"/>	<u>NO</u>
Electrical Components	Yes <input checked="" type="checkbox"/> No <input type="checkbox"/>	<u>NO</u>
Pumps and Motors	Yes <input checked="" type="checkbox"/> No <input type="checkbox"/>	<u>NO</u>

#### Wildlife and Environment

Comments – if No, Other or NA

Presence of foam	Yes <input type="checkbox"/> No <input checked="" type="checkbox"/>	<u>NO</u>
Fish Mortalities	Yes <input type="checkbox"/> No <input checked="" type="checkbox"/>	<u>NO</u>
Oil Sheen	Yes <input type="checkbox"/> No <input checked="" type="checkbox"/>	<u>NO</u>

Inspector: 

Date: 5/31/22

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Inspections are to be conducted on a weekly basis. Observations SHALL be performed of the Reservoir Makeup Pump Facility as required per the STP TPDES Permit WQ00019008000.

Observation Date: 6/6/22

Time of Observation: 15:50

River Flow Conditions: Slight Flow

Weather Conditions: Partly cloudy

Outside Temperature: 89°F

Diversions during the time of observation: Yes ☐ No ☒

Satisfactory?

Comments – if No, Other or NA

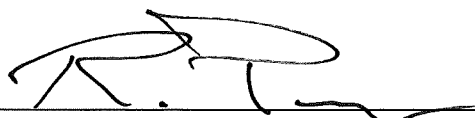
#### Facility Equipment

Fish Return System	Yes <input checked="" type="checkbox"/> No <input type="checkbox"/>	<u>NO</u>
Bar Screens	Yes <input checked="" type="checkbox"/> No <input type="checkbox"/>	<u>NO</u>
Traveling Screens	Yes <input checked="" type="checkbox"/> No <input type="checkbox"/>	<u>NO</u>
Electrical Components	Yes <input checked="" type="checkbox"/> No <input type="checkbox"/>	<u>NO</u>
Pumps and Motors	Yes <input checked="" type="checkbox"/> No <input type="checkbox"/>	<u>NO</u>

#### Wildlife and Environment

Comments – if No, Other or NA

Presence of foam	Yes <input type="checkbox"/> No <input checked="" type="checkbox"/>	<u>NO</u>
Fish Mortalities	Yes <input type="checkbox"/> No <input checked="" type="checkbox"/>	<u>NO</u>
Oil Sheen	Yes <input type="checkbox"/> No <input checked="" type="checkbox"/>	<u>NO</u>

Inspector: 

Date: 6/6/22

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Inspections are to be conducted on a weekly basis. Observations SHALL be performed of the Reservoir Makeup Pump Facility as required per the STP TPDES Permit WQ00019008000.

Observation Date: 6/13/22

Time of Observation: 12:55

River Flow Conditions: NO FLOW

Weather Conditions: PARTLY CLOUDY

Outside Temperature: 92°F

Diversions during the time of observation: Yes ☐ No ☒

Satisfactory?

Comments – if No, Other or NA

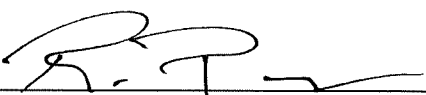
### Facility Equipment

Fish Return System	Yes <input checked="" type="checkbox"/> No <input type="checkbox"/>	<u>NO</u>
Bar Screens	Yes <input checked="" type="checkbox"/> No <input type="checkbox"/>	<u>NO</u>
Traveling Screens	Yes <input checked="" type="checkbox"/> No <input type="checkbox"/>	<u>NO</u>
Electrical Components	Yes <input checked="" type="checkbox"/> No <input type="checkbox"/>	<u>NO</u>
Pumps and Motors	Yes <input checked="" type="checkbox"/> No <input type="checkbox"/>	<u>NO</u>

### Wildlife and Environment

Comments – if No, Other or NA

Presence of foam	Yes <input type="checkbox"/> No <input checked="" type="checkbox"/>	<u>NO</u>
Fish Mortalities	Yes <input type="checkbox"/> No <input checked="" type="checkbox"/>	<u>NO</u>
Oil Sheen	Yes <input type="checkbox"/> No <input checked="" type="checkbox"/>	<u>NO</u>

Inspector: 

Date: 6/13/22

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Inspections are to be conducted on a weekly basis. Observations SHALL be performed of the Reservoir Makeup Pump Facility as required per the STP TPDES Permit WQ00019008000.

Observation Date: 6/20/22

Time of Observation: 11:12

River Flow Conditions: NONE

Weather Conditions: PARTLY CLOUDY

Outside Temperature: 90°F

Diversions during the time of observation: Yes \_\_\_ No X

Satisfactory?

Comments – if No, Other or NA

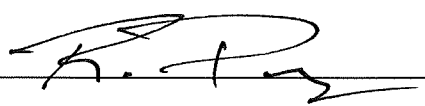
#### Facility Equipment

Fish Return System	Yes <u>X</u> No ___	<u>NO</u>
Bar Screens	Yes <u>X</u> No ___	<u>NO</u>
Traveling Screens	Yes <u>X</u> No ___	<u>NO</u>
Electrical Components	Yes <u>X</u> No ___	<u>NO</u>
Pumps and Motors	Yes <u>X</u> No ___	<u>NO</u>

#### Wildlife and Environment

Comments – if No, Other or NA

Presence of foam	Yes ___ No <u>X</u>	<u>NO</u>
Fish Mortalities	Yes ___ No <u>X</u>	<u>NO</u>
Oil Sheen	Yes ___ No <u>X</u>	<u>NO</u>

Inspector: 

Date: 6/20/22

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Inspections are to be conducted on a weekly basis. Observations SHALL be performed of the Reservoir Makeup Pump Facility as required per the STP TPDES Permit WQ00019008000.

Observation Date: 6/27/22

Time of Observation: 12:25

River Flow Conditions: Slight Flow

Weather Conditions: Partly Cloudy

Outside Temperature: 92°F

Diversions during the time of observation: Yes ☐ No ☒

Satisfactory?

Comments – if No, Other or NA

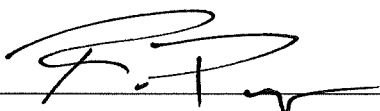
#### Facility Equipment

Fish Return System	Yes <input checked="" type="checkbox"/> No <input type="checkbox"/>	<u>NO</u>
Bar Screens	Yes <input checked="" type="checkbox"/> No <input type="checkbox"/>	<u>NO</u>
Traveling Screens	Yes <input checked="" type="checkbox"/> No <input type="checkbox"/>	<u>NO</u>
Electrical Components	Yes <input checked="" type="checkbox"/> No <input type="checkbox"/>	<u>NO</u>
Pumps and Motors	Yes <input checked="" type="checkbox"/> No <input type="checkbox"/>	<u>NO</u>

#### Wildlife and Environment

Comments – if No, Other or NA

Presence of foam	Yes <input type="checkbox"/> No <input checked="" type="checkbox"/>	<u>NO</u>
Fish Mortalities	Yes <input type="checkbox"/> No <input checked="" type="checkbox"/>	<u>NO</u>
Oil Sheen	Yes <input type="checkbox"/> No <input checked="" type="checkbox"/>	<u>NO</u>

Inspector: 

Date: 6/27/22

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Inspections are to be conducted on a weekly basis. Observations SHALL be performed of the Reservoir Makeup Pump Facility as required per the STP TPDES Permit WQ00019008000.

Observation Date: 7/5/22

Time of Observation: 15:00

River Flow Conditions: Slight Flow

Weather Conditions: Sunny

Outside Temperature: 91°

Diversions during the time of observation: Yes ☐ No ☒

Satisfactory?

Comments – if No, Other or NA

### Facility Equipment

Fish Return System	Yes <input checked="" type="checkbox"/> No <input type="checkbox"/>	<u></u>
Bar Screens	Yes <input checked="" type="checkbox"/> No <input type="checkbox"/>	<u></u>
Traveling Screens	Yes <input checked="" type="checkbox"/> No <input type="checkbox"/>	<u></u>
Electrical Components	Yes <input checked="" type="checkbox"/> No <input type="checkbox"/>	<u></u>
Pumps and Motors	Yes <input checked="" type="checkbox"/> No <input type="checkbox"/>	<u></u>

### Wildlife and Environment

Comments – if No, Other or NA

Presence of foam	Yes <input type="checkbox"/> No <input checked="" type="checkbox"/>	<u></u>
Fish Mortalities	Yes <input type="checkbox"/> No <input checked="" type="checkbox"/>	<u></u>
Oil Sheen	Yes <input type="checkbox"/> No <input checked="" type="checkbox"/>	<u></u>

Inspector: Rafael [Signature]

Date: 7/5/22



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Inspections are to be conducted on a weekly basis. Observations SHALL be performed of the Reservoir Makeup Pump Facility as required per the STP TPDES Permit WQ00019008000.

Observation Date: 7/11/22

Time of Observation: 11:10

River Flow Conditions: No Flow

Weather Conditions: Sunny

Outside Temperature: 91°F

Diversions during the time of observation: Yes ☐ No ☒

Satisfactory?

Comments – if No, Other or NA

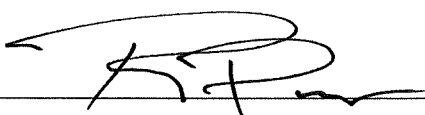
#### Facility Equipment

Fish Return System	Yes <input checked="" type="checkbox"/> No <input type="checkbox"/>	<u>NO</u>
Bar Screens	Yes <input checked="" type="checkbox"/> No <input type="checkbox"/>	<u>NO</u>
Traveling Screens	Yes <input checked="" type="checkbox"/> No <input type="checkbox"/>	<u>NO</u>
Electrical Components	Yes <input checked="" type="checkbox"/> No <input type="checkbox"/>	<u>NO</u>
Pumps and Motors	Yes <input checked="" type="checkbox"/> No <input type="checkbox"/>	<u>NO</u>

#### Wildlife and Environment

Comments – if No, Other or NA

Presence of foam	Yes <input type="checkbox"/> No <input checked="" type="checkbox"/>	<u>NO</u>
Fish Mortalities	Yes <input type="checkbox"/> No <input checked="" type="checkbox"/>	<u>NO</u>
Oil Sheen	Yes <input type="checkbox"/> No <input checked="" type="checkbox"/>	<u>NO</u>

Inspector: 

Date: 7/11/22

This Form, when completed, SHALL be retained in accordance with the Document Type List Notification.

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Inspections are to be conducted on a weekly basis. Observations SHALL be performed of the Reservoir Makeup Pump Facility as required per the STP TPDES Permit WQ00019008000.

Observation Date: 7/18/22

Time of Observation: 10:00am

River Flow Conditions: Slight Backflow

Weather Conditions: Partially Cloudy, Sunny

Outside Temperature: 86°

Diversions during the time of observation: Yes ☐ No ☒

Satisfactory?

Comments – if No, Other or NA

### Facility Equipment

Fish Return System	Yes <input checked="" type="checkbox"/>	No <input type="checkbox"/>
Bar Screens	Yes <input checked="" type="checkbox"/>	No <input type="checkbox"/>
Traveling Screens	Yes <input checked="" type="checkbox"/>	No <input type="checkbox"/>
Electrical Components	Yes <input checked="" type="checkbox"/>	No <input type="checkbox"/>
Pumps and Motors	Yes <input checked="" type="checkbox"/>	No <input type="checkbox"/>

\_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_  
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### Wildlife and Environment

Comments – if No, Other or NA

Presence of foam	Yes <input type="checkbox"/>	No <input checked="" type="checkbox"/>
Fish Mortalities	Yes <input type="checkbox"/>	No <input checked="" type="checkbox"/>
Oil Sheen	Yes <input type="checkbox"/>	No <input checked="" type="checkbox"/>

\_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_

Inspector: [Signature]

Date: 7/18/22

This Form, when completed, SHALL be retained in accordance with the Document Type List Notification.

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Inspections are to be conducted on a weekly basis. Observations SHALL be performed of the Reservoir Makeup Pump Facility as required per the STP TPDES Permit WQ00019008000.

Observation Date: 7/25/22

Time of Observation: 15:25

River Flow Conditions: NO FLOW

Weather Conditions: Partly cloudy

Outside Temperature: 95°F

Diversions during the time of observation: Yes \_\_\_ No X

Satisfactory?

Comments – if No, Other or NA

#### Facility Equipment

Fish Return System	Yes <u>X</u> No ___	<u>NO</u>
Bar Screens	Yes <u>X</u> No ___	<u>NO</u>
Traveling Screens	Yes <u>X</u> No ___	<u>NO</u>
Electrical Components	Yes <u>X</u> No ___	<u>NO</u>
Pumps and Motors	Yes <u>X</u> No ___	<u>NO</u>

#### Wildlife and Environment

Comments – if No, Other or NA

Presence of foam	Yes ___ No <u>X</u>	<u>NO</u>
Fish Mortalities	Yes ___ No <u>X</u>	<u>NO</u>
Oil Sheen	Yes ___ No <u>X</u>	<u>NO</u>

Inspector: [Signature]

Date: 7/25/22

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Inspections are to be conducted on a weekly basis. Observations SHALL be performed of the Reservoir Makeup Pump Facility as required per the STP TPDES Permit WQ00019008000.

Observation Date: 8/1/22

Time of Observation: 13:42

River Flow Conditions: NONE

Weather Conditions: Partly Cloudy

Outside Temperature: 92°F

Diversions during the time of observation: Yes \_\_\_ No X

Satisfactory?

Comments – if No, Other or NA

### Facility Equipment

Fish Return System	Yes <u>X</u> No ___	<u>NO</u>
Bar Screens	Yes <u>X</u> No ___	<u>NO</u>
Traveling Screens	Yes <u>X</u> No ___	<u>NO</u>
Electrical Components	Yes <u>X</u> No ___	<u>NO</u>
Pumps and Motors	Yes <u>X</u> No ___	<u>NO</u>

### Wildlife and Environment

Comments – if No, Other or NA

Presence of foam	Yes ___ No <u>X</u>	<u>NO</u>
Fish Mortalities	Yes ___ No <u>X</u>	<u>NO</u>
Oil Sheen	Yes ___ No <u>X</u>	<u>NO</u>

Inspector: R. P.

Date: 8/1/22

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Inspections are to be conducted on a weekly basis. Observations SHALL be performed of the Reservoir Makeup Pump Facility as required per the STP TPDES Permit WQ00019008000.

Observation Date: 8/8/22

Time of Observation: 13:10

River Flow Conditions: NO FLOW

Weather Conditions: Partly Cloudy

Outside Temperature: 95°F

Diversions during the time of observation: Yes\_\_\_ No X

Satisfactory?

Comments – if No, Other or NA

#### Facility Equipment

Fish Return System	Yes <u>X</u> No___	<u>NO</u>
Bar Screens	Yes <u>X</u> No___	<u>NO</u>
Traveling Screens	Yes <u>X</u> No___	<u>NO</u>
Electrical Components	Yes <u>X</u> No___	<u>NO</u>
Pumps and Motors	Yes <u>X</u> No___	<u>NO</u>

#### Wildlife and Environment

Comments – if No, Other or NA

Presence of foam	Yes___ No <u>X</u>	<u>NO</u>
Fish Mortalities	Yes___ No <u>X</u>	<u>NO</u>
Oil Sheen	Yes___ No <u>X</u>	<u>NO</u>

Inspector: R. P.

Date: 8/8/22

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Inspections are to be conducted on a weekly basis. Observations SHALL be performed of the Reservoir Makeup Pump Facility as required per the STP TPDES Permit WQ00019008000.

Observation Date: 8/15/22

Time of Observation: 10:20

River Flow Conditions: slight Flow

Weather Conditions: CLOUDY

Outside Temperature: 88°F

Diversions during the time of observation: Yes \_\_\_ No X

Satisfactory?

Comments – if No, Other or NA

### Facility Equipment

Fish Return System	Yes <u>X</u> No ___	<u>NO</u>
Bar Screens	Yes <u>X</u> No ___	<u>NO</u>
Traveling Screens	Yes <u>X</u> No ___	<u>NO</u>
Electrical Components	Yes <u>X</u> No ___	<u>NO</u>
Pumps and Motors	Yes <u>X</u> No ___	<u>NO</u>

### Wildlife and Environment

Comments – if No, Other or NA

Presence of foam	Yes ___ No <u>X</u>	<u>NO</u>
Fish Mortalities	Yes ___ No <u>X</u>	<u>NO</u>
Oil Sheen	Yes ___ No <u>X</u>	<u>NO</u>

Inspector: 

Date: 8/15/22

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Inspections are to be conducted on a weekly basis. Observations SHALL be performed of the Reservoir Makeup Pump Facility as required per the STP TPDES Permit WQ00019008000.

Observation Date: 8/22/22

Time of Observation: 11:40

River Flow Conditions: Slight Flow

Weather Conditions: Partly Cloudy

Outside Temperature: 89°F

Diversions during the time of observation: Yes \_\_\_ No X

Satisfactory?

Comments – if No, Other or NA

#### Facility Equipment

Fish Return System	Yes <u>X</u> No ___	<u>NO</u>
Bar Screens	Yes <u>X</u> No ___	<u>NO</u>
Traveling Screens	Yes <u>X</u> No ___	<u>NO</u>
Electrical Components	Yes <u>X</u> No ___	<u>NO</u>
Pumps and Motors	Yes <u>X</u> No ___	<u>NO</u>

#### Wildlife and Environment

Comments – if No, Other or NA

Presence of foam	Yes ___ No <u>X</u>	<u>NO</u>
Fish Mortalities	Yes ___ No <u>X</u>	<u>NO</u>
Oil Sheen	Yes ___ No <u>X</u>	<u>NO</u>

Inspector: 

Date: 8/22/22

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Inspections are to be conducted on a weekly basis. Observations SHALL be performed of the Reservoir Makeup Pump Facility as required per the STP TPDES Permit WQ00019008000.

Observation Date: 8/29/22

Time of Observation: 15:42

River Flow Conditions: Moderate Flow

Weather Conditions: Cloudy

Outside Temperature: 80°F

Diversions during the time of observation: Yes X No     

Satisfactory?

Comments – if No, Other or NA

#### Facility Equipment

Fish Return System	Yes <u>X</u> No <u>    </u>	<u>NO</u>
Bar Screens	Yes <u>X</u> No <u>    </u>	<u>NO</u>
Traveling Screens	Yes <u>X</u> No <u>    </u>	<u>NO</u>
Electrical Components	Yes <u>X</u> No <u>    </u>	<u>NO</u>
Pumps and Motors	Yes <u>X</u> No <u>    </u>	<u>NO</u>

#### Wildlife and Environment

Comments – if No, Other or NA

Presence of foam	Yes <u>    </u> No <u>X</u>	<u>NO</u>
Fish Mortalities	Yes <u>    </u> No <u>X</u>	<u>NO</u>
Oil Sheen	Yes <u>    </u> No <u>X</u>	<u>NO</u>

Inspector: 

Date: 8/28/22



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Inspections are to be conducted on a weekly basis. Observations SHALL be performed of the Reservoir Makeup Pump Facility as required per the STP TPDES Permit WQ00019008000.

Observation Date: 9/6/22

Time of Observation: 13:25

River Flow Conditions: NO FLOW

Weather Conditions: CLOUDY

Outside Temperature: 77°F

Diversions during the time of observation: Yes \_\_\_ No X

Satisfactory?

Comments – if No, Other or NA

#### Facility Equipment

Fish Return System	Yes <u>X</u> No ___	<u>NO</u>
Bar Screens	Yes <u>X</u> No ___	<u>NO</u>
Traveling Screens	Yes <u>X</u> No ___	<u>NO</u>
Electrical Components	Yes <u>X</u> No ___	<u>NO</u>
Pumps and Motors	Yes <u>X</u> No ___	<u>NO</u>

#### Wildlife and Environment

Comments – if No, Other or NA

Presence of foam	Yes ___ No <u>X</u>	<u>NO</u>
Fish Mortalities	Yes ___ No <u>X</u>	<u>NO</u>
Oil Sheen	Yes ___ No <u>X</u>	<u>NO</u>

Inspector: [Signature]

Date: 9/6/22

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Inspections are to be conducted on a weekly basis. Observations SHALL be performed of the Reservoir Makeup Pump Facility as required per the STP TPDES Permit WQ00019008000.

Observation Date: 9/12/22

Time of Observation: 13:00

River Flow Conditions: Slight Flow

Weather Conditions: Sunny

Outside Temperature: 90°

Diversions during the time of observation: Yes \_\_\_ No ☒

Satisfactory?

Comments – if No, Other or NA

### Facility Equipment

Fish Return System	Yes <input checked="" type="checkbox"/> No ___	_____
Bar Screens	Yes <input checked="" type="checkbox"/> No ___	_____
Traveling Screens	Yes <input checked="" type="checkbox"/> No ___	_____
Electrical Components	Yes <input checked="" type="checkbox"/> No ___	_____
Pumps and Motors	Yes <input checked="" type="checkbox"/> No ___	_____

### Wildlife and Environment

Comments – if No, Other or NA

Presence of foam	Yes ___ No <input checked="" type="checkbox"/>	_____
Fish Mortalities	Yes ___ No <input checked="" type="checkbox"/>	_____
Oil Sheen	Yes ___ No <input checked="" type="checkbox"/>	_____

Inspector: *Rafael Garcia*

Date: 9/12/22

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Inspections are to be conducted on a weekly basis. Observations SHALL be performed of the Reservoir Makeup Pump Facility as required per the STP TPDES Permit WQ00019008000.

Observation Date: 9/19/22

Time of Observation: 11:20

River Flow Conditions: slight Flow

Weather Conditions: CLOUDY

Outside Temperature: 87°F

Diversions during the time of observation: Yes ☐ No ☒

Satisfactory?

Comments – if No, Other or NA

### Facility Equipment

Fish Return System	Yes <input checked="" type="checkbox"/> No <input type="checkbox"/>	<u>NO</u>
Bar Screens	Yes <input checked="" type="checkbox"/> No <input type="checkbox"/>	<u>NO</u>
Traveling Screens	Yes <input checked="" type="checkbox"/> No <input type="checkbox"/>	<u>NO</u>
Electrical Components	Yes <input checked="" type="checkbox"/> No <input type="checkbox"/>	<u>NO</u>
Pumps and Motors	Yes <input checked="" type="checkbox"/> No <input type="checkbox"/>	<u>NO</u>

### Wildlife and Environment

Comments – if No, Other or NA

Presence of foam	Yes <input type="checkbox"/> No <input checked="" type="checkbox"/>	<u>NO</u>
Fish Mortalities	Yes <input type="checkbox"/> No <input checked="" type="checkbox"/>	<u>NO</u>
Oil Sheen	Yes <input type="checkbox"/> No <input checked="" type="checkbox"/>	<u>NO</u>

Inspector:

Date: 9/19/22

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Inspections are to be conducted on a weekly basis. Observations SHALL be performed of the Reservoir Makeup Pump Facility as required per the STP TPDES Permit WQ00019008000.

Observation Date: 9/26/22

Time of Observation: 15:50

River Flow Conditions: Slight Flow

Weather Conditions: Partly Cloudy

Outside Temperature: 94°F

Diversions during the time of observation: Yes \_\_\_ No X

Satisfactory?

Comments – if No, Other or NA

#### Facility Equipment

Fish Return System	Yes <u>X</u> No ___	<u>NO</u>
Bar Screens	Yes <u>X</u> No ___	<u>NO</u>
Traveling Screens	Yes <u>X</u> No ___	<u>NO</u>
Electrical Components	Yes <u>X</u> No ___	<u>NO</u>
Pumps and Motors	Yes <u>X</u> No ___	<u>NO</u>

#### Wildlife and Environment

Comments – if No, Other or NA

Presence of foam	Yes ___ No <u>X</u>	<u>NO</u>
Fish Mortalities	Yes ___ No <u>X</u>	<u>NO</u>
Oil Sheen	Yes ___ No <u>X</u>	<u>NO</u>

Inspector: K. T. [Signature]

Date: 9/26/22

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Inspections are to be conducted on a weekly basis. Observations SHALL be performed of the Reservoir Makeup Pump Facility as required per the STP TPDES Permit WQ00019008000.

Observation Date: 10/3/22

Time of Observation: 14:30

River Flow Conditions: NONE

Weather Conditions: Partly cloudy

Outside Temperature: 86°F

Diversions during the time of observation: Yes \_\_\_ No X

Satisfactory?

Comments – if No, Other or NA

#### Facility Equipment

Fish Return System	Yes <u>X</u> No ___	<u>NO</u>
Bar Screens	Yes <u>X</u> No ___	<u>NO</u>
Traveling Screens	Yes <u>X</u> No ___	<u>NO</u>
Electrical Components	Yes <u>X</u> No ___	<u>NO</u>
Pumps and Motors	Yes <u>X</u> No ___	<u>NO</u>

#### Wildlife and Environment

Comments -- if No, Other or NA

Presence of foam	Yes ___ No <u>X</u>	<u>NO</u>
Fish Mortalities	Yes ___ No <u>X</u>	<u>NO</u>
Oil Sheen	Yes ___ No <u>X</u>	<u>NO</u>

Inspector: R. P.

Date: 10/3/22

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Inspections are to be conducted on a weekly basis. Observations SHALL be performed of the Reservoir Makeup Pump Facility as required per the STP TPDES Permit WQ00019008000.

Observation Date: 10/10/22

Time of Observation: 15:30

River Flow Conditions: NO FLOW

Weather Conditions: Partly Cloudy

Outside Temperature: 83°F

Diversions during the time of observation: Yes ☐ No ☒

Satisfactory?

Comments – if No, Other or NA

### Facility Equipment

Fish Return System	Yes <input checked="" type="checkbox"/> No <input type="checkbox"/>	<u>NO</u>
Bar Screens	Yes <input checked="" type="checkbox"/> No <input type="checkbox"/>	<u>NO</u>
Traveling Screens	Yes <input checked="" type="checkbox"/> No <input type="checkbox"/>	<u>NO</u>
Electrical Components	Yes <input checked="" type="checkbox"/> No <input type="checkbox"/>	<u>NO</u>
Pumps and Motors	Yes <input checked="" type="checkbox"/> No <input type="checkbox"/>	<u>NO</u>

### Wildlife and Environment

Comments – if No, Other or NA

Presence of foam	Yes <input type="checkbox"/> No <input checked="" type="checkbox"/>	<u>NO</u>
Fish Mortalities	Yes <input type="checkbox"/> No <input checked="" type="checkbox"/>	<u>NO</u>
Oil Sheen	Yes <input type="checkbox"/> No <input checked="" type="checkbox"/>	<u>NO</u>

Inspector: 

Date: 10/10/22

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Inspections are to be conducted on a weekly basis. Observations SHALL be performed of the Reservoir Makeup Pump Facility as required per the STP TPDES Permit WQ00019008000.

Observation Date: 10/17/22  
 Time of Observation: 15:50  
 River Flow Conditions: Slight Flow.  
 Weather Conditions: CLOUDY  
 Outside Temperature: 70°F  
 Diversions during the time of observation: Yes \_\_\_ No X

Satisfactory?

Comments – if No, Other or NA

#### Facility Equipment

Fish Return System	Yes <u>X</u> No ___	<u>NO</u>
Bar Screens	Yes <u>X</u> No ___	<u>NO</u>
Traveling Screens	Yes <u>X</u> No ___	<u>NO</u>
Electrical Components	Yes <u>X</u> No ___	<u>NO</u>
Pumps and Motors	Yes <u>X</u> No ___	<u>NO</u>

#### Wildlife and Environment

Comments – if No, Other or NA

Presence of foam	Yes ___ No <u>X</u>	<u>NO</u>
Fish Mortalities	Yes ___ No <u>X</u>	<u>NO</u>
Oil Sheen	Yes ___ No <u>X</u>	<u>NO</u>

Inspector: R. R.

Date: 10/17/22

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Inspections are to be conducted on a weekly basis. Observations SHALL be performed of the Reservoir Makeup Pump Facility as required per the STP TPDES Permit WQ00019008000.

Observation Date: 10/24/22

Time of Observation: 11:30

River Flow Conditions: NO FLOW

Weather Conditions: CLOUDY, OVERCAST

Outside Temperature: 81°F

Diversions during the time of observation: Yes \_\_\_ No X

Satisfactory?

Comments – if No, Other or NA

### Facility Equipment

Fish Return System	Yes <u>X</u> No ___	<u>NO</u>
Bar Screens	Yes <u>X</u> No ___	<u>NO</u>
Traveling Screens	Yes <u>X</u> No ___	<u>NO</u>
Electrical Components	Yes <u>X</u> No ___	<u>NO</u>
Pumps and Motors	Yes <u>X</u> No ___	<u>NO</u>

### Wildlife and Environment

Comments – if No, Other or NA

Presence of foam	Yes ___ No <u>X</u>	<u>NO</u>
Fish Mortalities	Yes ___ No <u>X</u>	<u>NO</u>
Oil Sheen	Yes ___ No <u>X</u>	<u>NO</u>

Inspector: 

Date: 10/24/22



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Inspections are to be conducted on a weekly basis. Observations SHALL be performed of the Reservoir Makeup Pump Facility as required per the STP TPDES Permit WQ00019008000.

Observation Date: 10/31/22

Time of Observation: 15:00

River Flow Conditions: NONE

Weather Conditions: Partly Cloudy

Outside Temperature: 79°F

Diversions during the time of observation: Yes \_\_\_ No X

Satisfactory?

Comments – if No, Other or NA

### Facility Equipment

Fish Return System	Yes <u>X</u> No ___	<u>NO</u>
Bar Screens	Yes <u>X</u> No ___	<u>NO</u>
Traveling Screens	Yes <u>X</u> No ___	<u>NO</u>
Electrical Components	Yes <u>X</u> No ___	<u>NO</u>
Pumps and Motors	Yes <u>X</u> No ___	<u>NO</u>

### Wildlife and Environment

Comments – if No, Other or NA

Presence of foam	Yes ___ No <u>X</u>	<u>NO</u>
Fish Mortalities	Yes ___ No <u>X</u>	<u>NO</u>
Oil Sheen	Yes ___ No <u>X</u>	<u>NO</u>

Inspector: R. Ray

Date: 10/31/22

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Inspections are to be conducted on a weekly basis. Observations SHALL be performed of the Reservoir Makeup Pump Facility as required per the STP TPDES Permit WQ00019008000.

Observation Date: 11/7/22

Time of Observation: 14:55

River Flow Conditions: Slight Flow

Weather Conditions: Partly cloudy

Outside Temperature: 85°F

Diversions during the time of observation: Yes \_\_\_ No X

Satisfactory?

Comments – if No, Other or NA

### Facility Equipment

Fish Return System	Yes <u>X</u> No ___	<u>NO</u>
Bar Screens	Yes <u>X</u> No ___	<u>NO</u>
Traveling Screens	Yes <u>X</u> No ___	<u>NO</u>
Electrical Components	Yes <u>X</u> No ___	<u>NO</u>
Pumps and Motors	Yes <u>X</u> No ___	<u>NO</u>

### Wildlife and Environment

Comments – if No, Other or NA

Presence of foam	Yes ___ No <u>X</u>	<u>NO</u>
Fish Mortalities	Yes ___ No <u>X</u>	<u>NO</u>
Oil Sheen	Yes ___ No <u>X</u>	<u>NO</u>

Inspector: R. Remy

Date: 11/7/22

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Inspections are to be conducted on a weekly basis. Observations SHALL be performed of the Reservoir Makeup Pump Facility as required per the STP TPDES Permit WQ00019008000.

Observation Date: 11/14/22

Time of Observation: 10:05

River Flow Conditions: Slight Flow

Weather Conditions: Cloudy

Outside Temperature: 64°F

Diversions during the time of observation: Yes \_\_\_ No X

Satisfactory?

Comments – if No, Other or NA

#### Facility Equipment

Fish Return System	Yes <u>X</u> No ___	<u>NO</u>
Bar Screens	Yes <u>X</u> No ___	<u>NO</u>
Traveling Screens	Yes <u>X</u> No ___	<u>NO</u>
Electrical Components	Yes <u>X</u> No ___	<u>NO</u>
Pumps and Motors	Yes <u>X</u> No ___	<u>NO</u>

#### Wildlife and Environment

Comments – if No, Other or NA

Presence of foam	Yes ___ No <u>X</u>	<u>NO</u>
Fish Mortalities	Yes ___ No <u>X</u>	<u>NO</u>
Oil Sheen	Yes ___ No <u>X</u>	<u>NO</u>

Inspector: 

Date: 11/14/22

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Inspections are to be conducted on a weekly basis. Observations SHALL be performed of the Reservoir Makeup Pump Facility as required per the STP TPDES Permit WQ00019008000.

Observation Date: 11/21/22

Time of Observation: 11:39

River Flow Conditions: slight Flow

Weather Conditions: CLOUDY

Outside Temperature: 45°F

Diversions during the time of observation: Yes ☐ No ☒

Satisfactory?

Comments – if No, Other or NA

#### Facility Equipment

Fish Return System	Yes <input checked="" type="checkbox"/> No <input type="checkbox"/>	<u>NO</u>
Bar Screens	Yes <input checked="" type="checkbox"/> No <input type="checkbox"/>	<u>NO</u>
Traveling Screens	Yes <input checked="" type="checkbox"/> No <input type="checkbox"/>	<u>NO</u>
Electrical Components	Yes <input checked="" type="checkbox"/> No <input type="checkbox"/>	<u>NO</u>
Pumps and Motors	Yes <input checked="" type="checkbox"/> No <input type="checkbox"/>	<u>NO</u>

#### Wildlife and Environment

Comments – if No, Other or NA

Presence of foam	Yes <input type="checkbox"/> No <input checked="" type="checkbox"/>	<u>NO</u>
Fish Mortalities	Yes <input type="checkbox"/> No <input checked="" type="checkbox"/>	<u>NO</u>
Oil Sheen	Yes <input type="checkbox"/> No <input checked="" type="checkbox"/>	<u>NO</u>

Inspector: R. Perry

Date: 11/21/22

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Inspections are to be conducted on a weekly basis. Observations SHALL be performed of the Reservoir Makeup Pump Facility as required per the STP TPDES Permit WQ00019008000.

Observation Date: 11/28/22

Time of Observation: 12:15

River Flow Conditions: Moderate

Weather Conditions: Clear skies / Sunny

Outside Temperature: 73°F

Diversions during the time of observation: Yes X No     

Satisfactory?

Comments – if No, Other or NA

### Facility Equipment

Fish Return System	Yes <u>X</u> No <u>    </u>	<u>NO</u>
Bar Screens	Yes <u>X</u> No <u>    </u>	<u>NO</u>
Traveling Screens	Yes <u>X</u> No <u>    </u>	<u>NO</u>
Electrical Components	Yes <u>X</u> No <u>    </u>	<u>NO</u>
Pumps and Motors	Yes <u>X</u> No <u>    </u>	<u>NO</u>

### Wildlife and Environment

Comments – if No, Other or NA

Presence of foam	Yes <u>    </u> No <u>X</u>	<u>NO</u>
Fish Mortalities	Yes <u>    </u> No <u>X</u>	<u>NO</u>
Oil Sheen	Yes <u>    </u> No <u>X</u>	<u>NO</u>

Inspector: R. Ray

Date: 11/28/22

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Inspections are to be conducted on a weekly basis. Observations SHALL be performed of the Reservoir Makeup Pump Facility as required per the STP TPDES Permit WQ00019008000.

Observation Date: 12/5/22

Time of Observation: 13:45

River Flow Conditions: Minimal flow

Weather Conditions: CLOUDY

Outside Temperature: 79°F

Diversions during the time of observation: Yes \_\_\_ No X

Satisfactory?

Comments – if No, Other or NA

### Facility Equipment

Fish Return System	Yes <u>X</u> No ___	<u>NO</u>
Bar Screens	Yes <u>X</u> No ___	<u>NO</u>
Traveling Screens	Yes <u>X</u> No ___	<u>NO</u>
Electrical Components	Yes <u>X</u> No ___	<u>NO</u>
Pumps and Motors	Yes <u>X</u> No ___	<u>NO</u>

### Wildlife and Environment

Comments – if No, Other or NA

Presence of foam	Yes ___ No <u>X</u>	<u>NO</u>
Fish Mortalities	Yes ___ No <u>X</u>	<u>NO</u>
Oil Sheen	Yes ___ No <u>X</u>	<u>NO</u>

Inspector: 

Date: 12/5/22

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Inspections are to be conducted on a weekly basis. Observations SHALL be performed of the Reservoir Makeup Pump Facility as required per the STP TPDES Permit WQ00019008000.

Observation Date: 12/12/22

Time of Observation: 12:01

River Flow Conditions: LOW Flow

Weather Conditions: CLOUDY

Outside Temperature: 74°F

Diversions during the time of observation: Yes \_\_\_ No X

Satisfactory?

Comments – if No, Other or NA

### Facility Equipment

Fish Return System	Yes <u>X</u> No ___	<u>NO</u>
Bar Screens	Yes <u>X</u> No ___	<u>NO</u>
Traveling Screens	Yes <u>X</u> No ___	<u>NO</u>
Electrical Components	Yes <u>X</u> No ___	<u>NO</u>
Pumps and Motors	Yes <u>X</u> No ___	<u>NO</u>

### Wildlife and Environment

Comments – if No, Other or NA

Presence of foam	Yes ___ No <u>X</u>	<u>NO</u>
Fish Mortalities	Yes ___ No <u>X</u>	<u>NO</u>
Oil Sheen	Yes ___ No <u>X</u>	<u>NO</u>

Inspector: R. Perry

Date: 12/12/22



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Inspections are to be conducted on a weekly basis. Observations SHALL be performed of the Reservoir Makeup Pump Facility as required per the STP TPDES Permit WQ00019008000.

Observation Date: 12/19/22

Time of Observation: 09:00

River Flow Conditions: Slight Flow

Weather Conditions: Overcast

Outside Temperature: 57°

Diversions during the time of observation: Yes \_\_\_ No ✓

Satisfactory?

Comments – if No, Other or NA

### Facility Equipment

Fish Return System	Yes <u>✓</u> No ___	_____
Bar Screens	Yes <u>✓</u> No ___	_____
Traveling Screens	Yes <u>✓</u> No ___	_____
Electrical Components	Yes <u>✓</u> No ___	_____
Pumps and Motors	Yes <u>✓</u> No ___	_____

### Wildlife and Environment

Comments – if No, Other or NA

Presence of foam	Yes ___ No <u>✓</u>	<u>N/A</u>
Fish Mortalities	Yes ___ No <u>✓</u>	<u>N/A</u>
Oil Sheen	Yes ___ No <u>✓</u>	<u>N/A</u>

Inspector: Rafael Garcia

Date: 12/19/22



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Inspections are to be conducted on a weekly basis. Observations SHALL be performed of the Reservoir Makeup Pump Facility as required per the STP TPDES Permit WQ00019008000.

Observation Date: 12/27/22

Time of Observation: 9:55 am

River Flow Conditions: Slight Flow

Weather Conditions: Clear and Sunny

Outside Temperature: 45°

Diversions during the time of observation: Yes \_\_\_ No ☒

Satisfactory?

Comments – if No, Other or NA

### Facility Equipment

Fish Return System	Yes <input checked="" type="checkbox"/> No ___	_____
Bar Screens	Yes <input checked="" type="checkbox"/> No ___	_____
Traveling Screens	Yes <input checked="" type="checkbox"/> No ___	_____
Electrical Components	Yes <input checked="" type="checkbox"/> No ___	_____
Pumps and Motors	Yes <input checked="" type="checkbox"/> No ___	_____

### Wildlife and Environment

Comments – if No, Other or NA

Presence of foam	Yes ___ No <input checked="" type="checkbox"/>	<u>N/A</u>
Fish Mortalities	Yes ___ No <input checked="" type="checkbox"/>	<u>N/A</u>
Oil Sheen	Yes ___ No <input checked="" type="checkbox"/>	<u>N/A</u>

Inspector: Rafael Garcia

Date: 12/27/22

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Inspections are to be conducted on a weekly basis. Observations SHALL be performed of the Reservoir Makeup Pump Facility as required per the STP TPDES Permit WQ00019008000.

Observation Date: 1/2/23

Time of Observation: 14:38

River Flow Conditions: slight

Weather Conditions: cloudy

Outside Temperature: 77°F

Diversions during the time of observation: Yes ☐ No ☒

Satisfactory?

Comments – if No, Other or NA

#### Facility Equipment

Fish Return System	Yes <input checked="" type="checkbox"/> No <input type="checkbox"/>	<u>NO</u>
Bar Screens	Yes <input checked="" type="checkbox"/> No <input type="checkbox"/>	<u>NO</u>
Traveling Screens	Yes <input checked="" type="checkbox"/> No <input type="checkbox"/>	<u>NO</u>
Electrical Components	Yes <input checked="" type="checkbox"/> No <input type="checkbox"/>	<u>NO</u>
Pumps and Motors	Yes <input checked="" type="checkbox"/> No <input type="checkbox"/>	<u>NO</u>

#### Wildlife and Environment

Comments – if No, Other or NA

Presence of foam	Yes <input type="checkbox"/> No <input checked="" type="checkbox"/>	<u>NO</u>
Fish Mortalities	Yes <input type="checkbox"/> No <input checked="" type="checkbox"/>	<u>NO</u>
Oil Sheen	Yes <input type="checkbox"/> No <input checked="" type="checkbox"/>	<u>NO</u>

Inspector: R. Perry

Date: 1/2/23

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Inspections are to be conducted on a weekly basis. Observations SHALL be performed of the Reservoir Makeup Pump Facility as required per the STP TPDES Permit WQ00019008000.

Observation Date: 1/9/23

Time of Observation: 12:15

River Flow Conditions: slight

Weather Conditions: cloudy

Outside Temperature: 70°F

Diversions during the time of observation: Yes \_\_\_ No X

Satisfactory?

Comments – if No, Other or NA

### Facility Equipment

Fish Return System	Yes <u>X</u> No ___	<u>NO</u>
Bar Screens	Yes <u>X</u> No ___	<u>NO</u>
Traveling Screens	Yes <u>X</u> No ___	<u>NO</u>
Electrical Components	Yes <u>X</u> No ___	<u>NO</u>
Pumps and Motors	Yes <u>X</u> No ___	<u>NO</u>

### Wildlife and Environment

Comments – if No, Other or NA

Presence of foam	Yes ___ No <u>X</u>	<u>NO</u>
Fish Mortalities	Yes ___ No <u>X</u>	<u>NO</u>
Oil Sheen	Yes ___ No <u>X</u>	<u>NO</u>

Inspector: R. P. [Signature]

Date: 1/9/23

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Inspections are to be conducted on a weekly basis. Observations SHALL be performed of the Reservoir Makeup Pump Facility as required per the STP TPDES Permit WQ00019008000.

Observation Date: 1/18/23

Time of Observation: 13:12

River Flow Conditions: LOW

Weather Conditions: CLOUDY

Outside Temperature: 75°F

Diversions during the time of observation: Yes \_\_\_ No X

Satisfactory?

Comments – if No, Other or NA

### Facility Equipment

Fish Return System	Yes <u>X</u> No ___	<u>NO</u>
Bar Screens	Yes <u>X</u> No ___	<u>NO</u>
Traveling Screens	Yes <u>X</u> No ___	<u>NO</u>
Electrical Components	Yes <u>X</u> No ___	<u>NO</u>
Pumps and Motors	Yes <u>X</u> No ___	<u>NO</u>

### Wildlife and Environment

Comments – if No, Other or NA

Presence of foam	Yes ___ No <u>X</u>	<u>NO</u>
Fish Mortalities	Yes ___ No <u>X</u>	<u>NO</u>
Oil Sheen	Yes ___ No <u>X</u>	<u>NO</u>

Inspector: R. T. [Signature]

Date: 1/18/23

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Inspections are to be conducted on a weekly basis. Observations SHALL be performed of the Reservoir Makeup Pump Facility as required per the STP TPDES Permit WQ00019008000.

Observation Date: 1/23/23

Time of Observation: 11:00

River Flow Conditions: Slight Flow

Weather Conditions: Sunny

Outside Temperature: 55°

Diversions during the time of observation: Yes ☐ No ☒

Satisfactory?

Comments – if No, Other or NA

### Facility Equipment

Fish Return System	Yes <input checked="" type="checkbox"/> No <input type="checkbox"/>	<u>N/A</u>
Bar Screens	Yes <input checked="" type="checkbox"/> No <input type="checkbox"/>	<u>N/A</u>
Traveling Screens	Yes <input checked="" type="checkbox"/> No <input type="checkbox"/>	<u>N/A</u>
Electrical Components	Yes <input checked="" type="checkbox"/> No <input type="checkbox"/>	<u>N/A</u>
Pumps and Motors	Yes <input checked="" type="checkbox"/> No <input type="checkbox"/>	<u>N/A</u>

### Wildlife and Environment

Comments – if No, Other or NA

Presence of foam	Yes <input type="checkbox"/> No <input checked="" type="checkbox"/>	<u>N/A</u>
Fish Mortalities	Yes <input type="checkbox"/> No <input checked="" type="checkbox"/>	<u>N/A</u>
Oil Sheen	Yes <input type="checkbox"/> No <input checked="" type="checkbox"/>	<u>N/A</u>

Inspector: Rafael Lopez

Date: 1/23/23

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Inspections are to be conducted on a weekly basis. Observations SHALL be performed of the Reservoir Makeup Pump Facility as required per the STP TPDES Permit WQ00019008000.

Observation Date: 11/30/2023

Time of Observation: 12:10

River Flow Conditions: Moderate flow

Weather Conditions: Cloudy

Outside Temperature: 47°F

Diversions during the time of observation: Yes X No     

Satisfactory?

Comments – if No, Other or NA

#### Facility Equipment

Fish Return System	Yes <u>X</u> No <u>    </u>	<u>NO</u>
Bar Screens	Yes <u>X</u> No <u>    </u>	<u>NO</u>
Traveling Screens	Yes <u>X</u> No <u>    </u>	<u>NO</u>
Electrical Components	Yes <u>X</u> No <u>    </u>	<u>NO</u>
Pumps and Motors	Yes <u>X</u> No <u>    </u>	<u>NO</u>

#### Wildlife and Environment

Comments – if No, Other or NA

Presence of foam	Yes <u>    </u> No <u>X</u>	<u>NO</u>
Fish Mortalities	Yes <u>    </u> No <u>X</u>	<u>NO</u>
Oil Sheen	Yes <u>    </u> No <u>X</u>	<u>NO</u>

Inspector: R. R. [Signature]

Date: 11/30/2023



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Inspections are to be conducted on a weekly basis. Observations SHALL be performed of the Reservoir Makeup Pump Facility as required per the STP TPDES Permit WQ00019008000.

Observation Date: 2/6/23

Time of Observation: 12:35

River Flow Conditions: Moderate

Weather Conditions: partly cloudy

Outside Temperature: 75°F.

Diversions during the time of observation: Yes X No     

Satisfactory?

Comments – if No, Other or NA

#### Facility Equipment

Fish Return System	Yes <u>X</u> No <u>    </u>	<u>No</u>
Bar Screens	Yes <u>X</u> No <u>    </u>	<u>No</u>
Traveling Screens	Yes <u>X</u> No <u>    </u>	<u>No</u>
Electrical Components	Yes <u>X</u> No <u>    </u>	<u>No</u>
Pumps and Motors	Yes <u>X</u> No <u>    </u>	<u>No</u>

#### Wildlife and Environment

Comments – if No, Other or NA

Presence of foam	Yes <u>    </u> No <u>X</u>	<u>No</u>
Fish Mortalities	Yes <u>    </u> No <u>X</u>	<u>No</u>
Oil Sheen	Yes <u>    </u> No <u>X</u>	<u>No</u>

Inspector: 

Date: 2/6/23

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Inspections are to be conducted on a weekly basis. Observations SHALL be performed of the Reservoir Makeup Pump Facility as required per the STP TPDES Permit WQ00019008000.

Observation Date: 2/13/23

Time of Observation: 15:52

River Flow Conditions: slight

Weather Conditions: cloudy

Outside Temperature: 71°F

Diversions during the time of observation: Yes X No     

Satisfactory?

Comments – if No, Other or NA

#### Facility Equipment

Fish Return System	Yes <u>X</u> No <u>    </u>	<u>NO</u>
Bar Screens	Yes <u>X</u> No <u>    </u>	<u>NO</u>
Traveling Screens	Yes <u>X</u> No <u>    </u>	<u>NO</u>
Electrical Components	Yes <u>X</u> No <u>    </u>	<u>NO</u>
Pumps and Motors	Yes <u>X</u> No <u>    </u>	<u>NO</u>

#### Wildlife and Environment

Comments – if No, Other or NA

Presence of foam	Yes <u>    </u> No <u>X</u>	<u>NO</u>
Fish Mortalities	Yes <u>    </u> No <u>X</u>	<u>NO</u>
Oil Sheen	Yes <u>    </u> No <u>X</u>	<u>NO</u>

Inspector: A. P. Ray

Date: 2/13/23



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Inspections are to be conducted on a weekly basis. Observations SHALL be performed of the Reservoir Makeup Pump Facility as required per the STP TPDES Permit WQ00019008000.

Observation Date: 2/20/23

Time of Observation: 12:40

River Flow Conditions: NO FLOW

Weather Conditions: CLOUDY

Outside Temperature: 75°F

Diversions during the time of observation: Yes \_\_\_ No X

Satisfactory?

Comments – if No, Other or NA

### Facility Equipment

Fish Return System	Yes <u>X</u> No ___	<u>NO</u>
Bar Screens	Yes <u>X</u> No ___	<u>NO</u>
Traveling Screens	Yes <u>X</u> No ___	<u>NO</u>
Electrical Components	Yes <u>X</u> No ___	<u>NO</u>
Pumps and Motors	Yes <u>X</u> No ___	<u>NO</u>

### Wildlife and Environment

Comments – if No, Other or NA

Presence of foam	Yes ___ No <u>X</u>	<u>NO</u>
Fish Mortalities	Yes ___ No <u>X</u>	<u>NO</u>
Oil Sheen	Yes ___ No <u>X</u>	<u>NO</u>

Inspector: R. R. [Signature]

Date: 2/20/23

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Inspections are to be conducted on a weekly basis. Observations SHALL be performed of the Reservoir Makeup Pump Facility as required per the STP TPDES Permit WQ00019008000.

Observation Date: 2/27/23

Time of Observation: 12:25

River Flow Conditions: Slight Flow

Weather Conditions: cloudy

Outside Temperature: 11°F

Diversions during the time of observation: Yes \_\_\_ No X

Satisfactory?

Comments – if No, Other or NA

#### Facility Equipment

Fish Return System	Yes <u>X</u> No ___	<u>No Comments</u>
Bar Screens	Yes <u>X</u> No ___	<u>No Comments</u>
Traveling Screens	Yes <u>X</u> No ___	<u>No Comments</u>
Electrical Components	Yes <u>X</u> No ___	<u>No Comments</u>
Pumps and Motors	Yes <u>X</u> No ___	<u>No Comments</u>

#### Wildlife and Environment

Comments – if No, Other or NA

Presence of foam	Yes ___ No <u>X</u>	<u>No Comments</u>
Fish Mortalities	Yes ___ No <u>X</u>	<u>No Comments</u>
Oil Sheen	Yes ___ No <u>X</u>	<u>No Comments</u>

Inspector: 

Date: 2/27/23

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Inspections are to be conducted on a weekly basis. Observations SHALL be performed of the Reservoir Makeup Pump Facility as required per the STP TPDES Permit WQ00019008000.

Observation Date: 3/6/23

Time of Observation: 12:20

River Flow Conditions: No Flow

Weather Conditions: PARTLY CLOUDY

Outside Temperature: 81°F

Diversions during the time of observation: Yes \_\_\_ No X

Satisfactory?

Comments – if No, Other or NA

### Facility Equipment

Fish Return System	Yes <u>X</u> No ___	<u>No Comments.</u>
Bar Screens	Yes <u>X</u> No ___	<u>No Comments.</u>
Traveling Screens	Yes <u>X</u> No ___	<u>No Comments.</u>
Electrical Components	Yes <u>X</u> No ___	<u>No Comments.</u>
Pumps and Motors	Yes <u>X</u> No ___	<u>No Comments.</u>

### Wildlife and Environment

Comments – if No, Other or NA

Presence of foam	Yes ___ No <u>X</u>	<u>No Comments.</u>
Fish Mortalities	Yes ___ No <u>X</u>	<u>No Comments.</u>
Oil Sheen	Yes ___ No <u>X</u>	<u>No Comments.</u>

Inspector: R. P. Ray

Date: 3/6/23

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Inspections are to be conducted on a weekly basis. Observations SHALL be performed of the Reservoir Makeup Pump Facility as required per the STP TPDES Permit WQ00019008000.

Observation Date: 3/13/23

Time of Observation: 13:20

River Flow Conditions: NO FLOW

Weather Conditions: CLOUDY

Outside Temperature: 60°F

Diversions during the time of observation: Yes \_\_\_ No X

Satisfactory?

Comments – if No, Other or NA

### Facility Equipment

Fish Return System	Yes <u>X</u> No ___	<u>No comments.</u>
Bar Screens	Yes <u>X</u> No ___	<u>No Comments.</u>
Traveling Screens	Yes <u>X</u> No ___	<u>No Comments.</u>
Electrical Components	Yes <u>X</u> No ___	<u>No Comments.</u>
Pumps and Motors	Yes <u>X</u> No ___	<u>No Comments.</u>

### Wildlife and Environment

Comments – if No, Other or NA

Presence of foam	Yes ___ No <u>X</u>	<u>No Comments.</u>
Fish Mortalities	Yes ___ No <u>X</u>	<u>No Comments.</u>
Oil Sheen	Yes ___ No <u>X</u>	<u>No Comments.</u>

Inspector: R. R. [Signature]

Date: 3/13/23

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Inspections are to be conducted on a weekly basis. Observations SHALL be performed of the Reservoir Makeup Pump Facility as required per the STP TPDES Permit WQ00019008000.

Observation Date: 3/22/23

Time of Observation: 09:30

River Flow Conditions: NO flow

Weather Conditions: cloudy

Outside Temperature: 79°F

Diversions during the time of observation: Yes ☐ No ☒

Satisfactory?

Comments – if No, Other or NA

#### Facility Equipment

Fish Return System	Yes <input checked="" type="checkbox"/> No <input type="checkbox"/>	<u>No Comments.</u>
Bar Screens	Yes <input checked="" type="checkbox"/> No <input type="checkbox"/>	<u>No Comments.</u>
Traveling Screens	Yes <input checked="" type="checkbox"/> No <input type="checkbox"/>	<u>No Comments.</u>
Electrical Components	Yes <input checked="" type="checkbox"/> No <input type="checkbox"/>	<u>No Comments.</u>
Pumps and Motors	Yes <input checked="" type="checkbox"/> No <input type="checkbox"/>	<u>No Comments.</u>

#### Wildlife and Environment

Comments – if No, Other or NA

Presence of foam	Yes <input type="checkbox"/> No <input checked="" type="checkbox"/>	<u>No Comments.</u>
Fish Mortalities	Yes <input type="checkbox"/> No <input checked="" type="checkbox"/>	<u>No Comments.</u>
Oil Sheen	Yes <input type="checkbox"/> No <input checked="" type="checkbox"/>	<u>No Comments.</u>

Inspector: 

Date: 3/22/23

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Inspections are to be conducted on a weekly basis. Observations SHALL be performed of the Reservoir Makeup Pump Facility as required per the STP TPDES Permit WQ00019008000.

Observation Date: 3/27/23

Time of Observation: 10:15

River Flow Conditions: slight Flow

Weather Conditions: Partly Cloudy

Outside Temperature: 74°F

Diversions during the time of observation: Yes ☐ No ☒

Satisfactory?

Comments – if No, Other or NA

#### Facility Equipment

Fish Return System	Yes <input checked="" type="checkbox"/> No <input type="checkbox"/>	<u>No comments.</u>
Bar Screens	Yes <input checked="" type="checkbox"/> No <input type="checkbox"/>	<u>No comments.</u>
Traveling Screens	Yes <input checked="" type="checkbox"/> No <input type="checkbox"/>	<u>No comments.</u>
Electrical Components	Yes <input checked="" type="checkbox"/> No <input type="checkbox"/>	<u>No comments.</u>
Pumps and Motors	Yes <input checked="" type="checkbox"/> No <input type="checkbox"/>	<u>No comments.</u>

#### Wildlife and Environment

Comments – if No, Other or NA

Presence of foam	Yes <input type="checkbox"/> No <input checked="" type="checkbox"/>	<u>No comments.</u>
Fish Mortalities	Yes <input type="checkbox"/> No <input checked="" type="checkbox"/>	<u>No comments.</u>
Oil Sheen	Yes <input type="checkbox"/> No <input checked="" type="checkbox"/>	<u>No comments.</u>

Inspector: 

Date: 3/27/23

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Inspections are to be conducted on a weekly basis. Observations SHALL be performed of the Reservoir Makeup Pump Facility as required per the STP TPDES Permit WQ00019008000.

Observation Date: 4/3/23

Time of Observation: 11:55

River Flow Conditions: Slight Flow

Weather Conditions: CLOUDY

Outside Temperature: 82°F

Diversions during the time of observation: Yes \_\_\_ No X

	Yes	No	If No, explain:
<b>Facility Equipment</b>			
Is the Fish Return System satisfactory?	X		NC
Are the Bar Screens satisfactory?	X		NC
Are the Traveling Screens satisfactory?	X		NC
Are the Electrical Components satisfactory?	X		NC
Are the Pumps and Motors satisfactory?	X		NC
	Yes	No	If Yes, explain:
<b>Wildlife and Environment</b>			
Is there a presence of foam?		X	NC
Are there any fish mortalities ?		X	NC
Is there any oil sheen?		X	NC

Inspector: 

Date: 4/3/23

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Inspections are to be conducted on a weekly basis. Observations SHALL be performed of the Reservoir Makeup Pump Facility as required per the STP TPDES Permit WQ00019008000.

Observation Date: 4/10/23

Time of Observation: 12:10

River Flow Conditions: High Flow

Weather Conditions: Partly Cloudy

Outside Temperature: 73°F

Diversions during the time of observation: Yes X No     

	Yes	No	If No, explain:
<b>Facility Equipment</b>			
Is the Fish Return System satisfactory?	X		NC
Are the Bar Screens satisfactory?	X		NC
Are the Traveling Screens satisfactory?	X		NC
Are the Electrical Components satisfactory?	X		NC
Are the Pumps and Motors satisfactory?	X		NC
	Yes	No	If Yes, explain:
<b>Wildlife and Environment</b>			
Is there a presence of foam?		X	NC
Are there any fish mortalities ?		X	NC
Is there any oil sheen?		X	NC

Inspector: 

Date: 4/10/23

This Form, when completed, SHALL be retained in accordance with the Document Type List Notification.



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Inspections are to be conducted on a weekly basis. Observations SHALL be performed of the Reservoir Makeup Pump Facility as required per the STP TPDES Permit WQ00019008000.

Observation Date: 4/17/23

Time of Observation: 10:00

River Flow Conditions: slight flow

Weather Conditions: partly cloudy

Outside Temperature: 75°F.

Diversions during the time of observation: Yes ☐ No ☒

	Yes	No	If No, explain:
<b>Facility Equipment</b>			
Is the Fish Return System satisfactory?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	
Are the Bar Screens satisfactory?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	
Are the Traveling Screens satisfactory?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	
Are the Electrical Components satisfactory?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	
Are the Pumps and Motors satisfactory?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	
	Yes	No	If Yes, explain:
<b>Wildlife and Environment</b>			
Is there a presence of foam?	<input type="checkbox"/>	<input checked="" type="checkbox"/>	
Are there any fish mortalities ?	<input type="checkbox"/>	<input checked="" type="checkbox"/>	
Is there any oil sheen?	<input type="checkbox"/>	<input checked="" type="checkbox"/>	

Inspector: R. P. [Signature]

Date: 4/17/23

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Inspections are to be conducted on a weekly basis. Observations SHALL be performed of the Reservoir Makeup Pump Facility as required per the STP TPDES Permit WQ00019008000.

Observation Date: 4/24/23

Time of Observation: 13:19

River Flow Conditions: High Flow

Weather Conditions: Partly cloudy

Outside Temperature: 68°F

Diversions during the time of observation: Yes ☒ No ☐

	Yes	No	If No, explain:
<b>Facility Equipment</b>			
Is the Fish Return System satisfactory?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	
Are the Bar Screens satisfactory?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	
Are the Traveling Screens satisfactory?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	
Are the Electrical Components satisfactory?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	
Are the Pumps and Motors satisfactory?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	
	Yes	No	If Yes, explain:
<b>Wildlife and Environment</b>			
Is there a presence of foam?	<input type="checkbox"/>	<input checked="" type="checkbox"/>	
Are there any fish mortalities ?	<input type="checkbox"/>	<input checked="" type="checkbox"/>	
Is there any oil sheen?	<input type="checkbox"/>	<input checked="" type="checkbox"/>	

Inspector: 

Date: 4/24/23

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Inspections are to be conducted on a weekly basis. Observations SHALL be performed of the Reservoir Makeup Pump Facility as required per the STP TPDES Permit WQ00019008000.

Observation Date: 4/26/23

Time of Observation: 11:44

River Flow Conditions: Moderate Flow

Weather Conditions: Sunny

Outside Temperature: 75°F

Diversions during the time of observation: Yes ☐ No ☒

	Yes	No	If No, explain:
<b>Facility Equipment</b>			
Is the Fish Return System satisfactory?	<input checked="" type="checkbox"/>		
Are the Bar Screens satisfactory?	<input checked="" type="checkbox"/>		
Are the Traveling Screens satisfactory?	<input checked="" type="checkbox"/>		
Are the Electrical Components satisfactory?	<input checked="" type="checkbox"/>		
Are the Pumps and Motors satisfactory?	<input checked="" type="checkbox"/>		
	Yes	No	If Yes, explain:
<b>Wildlife and Environment</b>			
Is there a presence of foam?		<input checked="" type="checkbox"/>	
Are there any fish mortalities ?		<input checked="" type="checkbox"/>	
Is there any oil sheen?		<input checked="" type="checkbox"/>	

Inspector: 

Date: 4/26/23

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Inspections are to be conducted on a weekly basis. Observations SHALL be performed of the Reservoir Makeup Pump Facility as required per the STP TPDES Permit WQ00019008000.

Observation Date: 5/1/23

Time of Observation: 11:10

River Flow Conditions: High Flow

Weather Conditions: Partly Cloudy

Outside Temperature: 79°F.

Diversions during the time of observation: Yes X No     

	Yes	No	If No, explain:
<b>Facility Equipment</b>			
Is the Fish Return System satisfactory?	<u>X</u>		
Are the Bar Screens satisfactory?	<u>X</u>		
Are the Traveling Screens satisfactory?	<u>X</u>		
Are the Electrical Components satisfactory?	<u>X</u>		
Are the Pumps and Motors satisfactory?	<u>X</u>		
	Yes	No	If Yes, explain:
<b>Wildlife and Environment</b>			
Is there a presence of foam?		<u>X</u>	
Are there any fish mortalities ?		<u>X</u>	
Is there any oil sheen?		<u>X</u>	

Inspector: 

Date: 5/1/23

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Inspections are to be conducted on a weekly basis. Observations SHALL be performed of the Reservoir Makeup Pump Facility as required per the STP TPDES Permit WQ00019008000.

Observation Date: 5/8/23

Time of Observation: 10:54

River Flow Conditions: Moderate Flow

Weather Conditions: cloudy

Outside Temperature: 82°F

Diversions during the time of observation: Yes ☐ No ☒

	Yes	No	If No, explain:
<b>Facility Equipment</b>			
Is the Fish Return System satisfactory?	<input checked="" type="checkbox"/>		
Are the Bar Screens satisfactory?	<input checked="" type="checkbox"/>		
Are the Traveling Screens satisfactory?	<input checked="" type="checkbox"/>		
Are the Electrical Components satisfactory?	<input checked="" type="checkbox"/>		
Are the Pumps and Motors satisfactory?	<input checked="" type="checkbox"/>		
	Yes	No	If Yes, explain:
<b>Wildlife and Environment</b>			
Is there a presence of foam?		<input checked="" type="checkbox"/>	
Are there any fish mortalities ?		<input checked="" type="checkbox"/>	
Is there any oil sheen?		<input checked="" type="checkbox"/>	

Inspector: 

Date: 5/8/23

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Inspections are to be conducted on a weekly basis. Observations SHALL be performed of the Reservoir Makeup Pump Facility as required per the STP TPDES Permit WQ00019008000.

Observation Date: 5/15/23

Time of Observation: 12:14

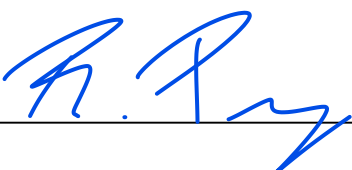
River Flow Conditions: High Flow

Weather Conditions: Partly Cloudy

Outside Temperature: 84°F

Diversions during the time of observation: Yes X No     

	Yes	No	If No, explain:
<b>Facility Equipment</b>			
Is the Fish Return System satisfactory?	<u>X</u>		
Are the Bar Screens satisfactory?	<u>X</u>		
Are the Traveling Screens satisfactory?	<u>X</u>		
Are the Electrical Components satisfactory?	<u>X</u>		
Are the Pumps and Motors satisfactory?	<u>X</u>		
	Yes	No	If Yes, explain:
<b>Wildlife and Environment</b>			
Is there a presence of foam?		<u>X</u>	
Are there any fish mortalities ?		<u>X</u>	
Is there any oil sheen?		<u>X</u>	

Inspector: 

Date: 5/15/23

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Inspections are to be conducted on a weekly basis. Observations SHALL be performed of the Reservoir Makeup Pump Facility as required per the STP TPDES Permit WQ00019008000.

Observation Date: 5/22/23

Time of Observation: 10:40

River Flow Conditions: Moderate Flow

Weather Conditions: Partly Cloudy

Outside Temperature: 77°F

Diversions during the time of observation: Yes X No     

	Yes	No	If No, explain:
<b>Facility Equipment</b>			
Is the Fish Return System satisfactory?	<u>X</u>		
Are the Bar Screens satisfactory?	<u>X</u>		
Are the Traveling Screens satisfactory?	<u>X</u>		
Are the Electrical Components satisfactory?	<u>X</u>		
Are the Pumps and Motors satisfactory?	<u>X</u>		
	Yes	No	If Yes, explain:
<b>Wildlife and Environment</b>			
Is there a presence of foam?		<u>X</u>	
Are there any fish mortalities ?		<u>X</u>	
Is there any oil sheen?		<u>X</u>	

Inspector: R. R. [Signature]

Date: 5/22/23

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Inspections are to be conducted on a weekly basis. Observations SHALL be performed of the Reservoir Makeup Pump Facility as required per the STP TPDES Permit WQ00019008000.

Observation Date: 5/31/23

Time of Observation: 09:17


River Flow Conditions: slow flow

Weather Conditions: Partly Cloudy

Outside Temperature: 78°F

Diversions during the time of observation: Yes ☐ No ☒

	Yes	No	If No, explain:
<b>Facility Equipment</b>			
Is the Fish Return System satisfactory?	<input checked="" type="checkbox"/>		
Are the Bar Screens satisfactory?	<input checked="" type="checkbox"/>		
Are the Traveling Screens satisfactory?	<input checked="" type="checkbox"/>		
Are the Electrical Components satisfactory?	<input checked="" type="checkbox"/>		
Are the Pumps and Motors satisfactory?	<input checked="" type="checkbox"/>		
	Yes	No	If Yes, explain:
<b>Wildlife and Environment</b>			
Is there a presence of foam?		<input checked="" type="checkbox"/>	
Are there any fish mortalities ?		<input checked="" type="checkbox"/>	
Is there any oil sheen?		<input checked="" type="checkbox"/>	

Inspector: 

Date: 5/31/23



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Inspections are to be conducted on a weekly basis. Observations SHALL be performed of the Reservoir Makeup Pump Facility as required per the STP TPDES Permit WQ00019008000.

Observation Date: 6/5/23

Time of Observation: 11:36

River Flow Conditions: Slight Flow

Weather Conditions: cloudy

Outside Temperature: 81°F.

Diversions during the time of observation: Yes \_\_\_\_\_ No X

	Yes	No	If No, explain:
<b>Facility Equipment</b>			
Is the Fish Return System satisfactory?	<u>X</u>		
Are the Bar Screens satisfactory?	<u>X</u>		
Are the Traveling Screens satisfactory?	<u>X</u>		
Are the Electrical Components satisfactory?	<u>X</u>		
Are the Pumps and Motors satisfactory?	<u>X</u>		
	Yes	No	If Yes, explain:
<b>Wildlife and Environment</b>			
Is there a presence of foam?		<u>X</u>	
Are there any fish mortalities ?		<u>X</u>	
Is there any oil sheen?		<u>X</u>	

Inspector: R. R.

Date: 6/5/23

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Inspections are to be conducted on a weekly basis. Observations SHALL be performed of the Reservoir Makeup Pump Facility as required per the STP TPDES Permit WQ00019008000.

Observation Date: 6/12/23

Time of Observation: 11:34

River Flow Conditions: Moderate flow

Weather Conditions: Partly cloudy

Outside Temperature: 89°F

Diversions during the time of observation: Yes X No     

	Yes	No	If No, explain:
<b>Facility Equipment</b>			
Is the Fish Return System satisfactory?	<u>X</u>		
Are the Bar Screens satisfactory?	<u>X</u>		
Are the Traveling Screens satisfactory?	<u>X</u>		
Are the Electrical Components satisfactory?	<u>X</u>		
Are the Pumps and Motors satisfactory?	<u>X</u>		
	Yes	No	If Yes, explain:
<b>Wildlife and Environment</b>			
Is there a presence of foam?		<u>X</u>	
Are there any fish mortalities ?		<u>X</u>	
Is there any oil sheen?		<u>X</u>	

Inspector: R. R.

Date: 6/12/23

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Inspections are to be conducted on a weekly basis. Observations SHALL be performed of the Reservoir Makeup Pump Facility as required per the STP TPDES Permit WQ00019008000.

Observation Date: 6/20/23

Time of Observation: 13:20

River Flow Conditions: No Flow

Weather Conditions: Partly Cloudy

Outside Temperature: 90°F

Diversions during the time of observation: Yes ☐ No ☒

	Yes	No	If No, explain:
<b>Facility Equipment</b>			
Is the Fish Return System satisfactory?	<input checked="" type="checkbox"/>		
Are the Bar Screens satisfactory?	<input checked="" type="checkbox"/>		
Are the Traveling Screens satisfactory?	<input checked="" type="checkbox"/>		
Are the Electrical Components satisfactory?	<input checked="" type="checkbox"/>		
Are the Pumps and Motors satisfactory?	<input checked="" type="checkbox"/>		
	Yes	No	If Yes, explain:
<b>Wildlife and Environment</b>			
Is there a presence of foam?		<input checked="" type="checkbox"/>	
Are there any fish mortalities ?		<input checked="" type="checkbox"/>	
Is there any oil sheen?		<input checked="" type="checkbox"/>	

Inspector: R. R. [Signature]

Date: 6/20/23

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Inspections are to be conducted on a weekly basis. Observations SHALL be performed of the Reservoir Makeup Pump Facility as required per the STP TPDES Permit WQ00019008000.

Observation Date: 6/26/23

Time of Observation: 15:14

River Flow Conditions: NO Flow.

Weather Conditions: Partly Cloudy

Outside Temperature: 92°F.

Diversions during the time of observation: Yes ☐ No ☒

	Yes	No	If No, explain:
<b>Facility Equipment</b>			
Is the Fish Return System satisfactory?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	
Are the Bar Screens satisfactory?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	
Are the Traveling Screens satisfactory?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	
Are the Electrical Components satisfactory?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	
Are the Pumps and Motors satisfactory?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	
	Yes	No	If Yes, explain:
<b>Wildlife and Environment</b>			
Is there a presence of foam?	<input type="checkbox"/>	<input checked="" type="checkbox"/>	
Are there any fish mortalities ?	<input type="checkbox"/>	<input checked="" type="checkbox"/>	
Is there any oil sheen?	<input type="checkbox"/>	<input checked="" type="checkbox"/>	

Inspector: 

Date: 6/26/23

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Inspections are to be conducted on a weekly basis. Observations SHALL be performed of the Reservoir Makeup Pump Facility as required per the STP TPDES Permit WQ00019008000.

Observation Date: 7/3/23

Time of Observation: 11:30 AM

River Flow Conditions: Slight Flow

Weather Conditions: Partly Cloudy

Outside Temperature: 89°

Diversions during the time of observation: Yes ☐ No ☒

	Yes	No	If No, explain:
<b>Facility Equipment</b>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	
Is the Fish Return System satisfactory?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	
Are the Bar Screens satisfactory?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	
Are the Traveling Screens satisfactory?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	
Are the Electrical Components satisfactory?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	
Are the Pumps and Motors satisfactory?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	
	Yes	No	If Yes, explain:
<b>Wildlife and Environment</b>			
Is there a presence of foam?	<input type="checkbox"/>	<input checked="" type="checkbox"/>	
Are there any fish mortalities ?	<input type="checkbox"/>	<input checked="" type="checkbox"/>	
Is there any oil sheen?	<input type="checkbox"/>	<input checked="" type="checkbox"/>	

Inspector: Rafel Garcia

Date: 7/3/23

This Form, when completed, SHALL be retained in accordance with the Document Type List Notification.

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Inspections are to be conducted on a weekly basis. Observations SHALL be performed of the Reservoir Makeup Pump Facility as required per the STP TPDES Permit WQ00019008000.

Observation Date: 7/10/23

Time of Observation: 11:00 AM

River Flow Conditions: Slight flow

Weather Conditions: Sunny

Outside Temperature: 91°

Diversions during the time of observation: Yes ☐ No ☒

	Yes	No	If No, explain:
<b>Facility Equipment</b>			
Is the Fish Return System satisfactory?	✓		
Are the Bar Screens satisfactory?	✓		
Are the Traveling Screens satisfactory?	✓		
Are the Electrical Components satisfactory?	✓		
Are the Pumps and Motors satisfactory?	✓		
	Yes	No	If Yes, explain:
<b>Wildlife and Environment</b>			
Is there a presence of foam?		✓	
Are there any fish mortalities ?		✓	
Is there any oil sheen?		✓	

Inspector: Daphne Garcia

Date: 7/10/23

This Form, when completed, SHALL be retained in accordance with the Document Type List Notification.



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Inspections are to be conducted on a weekly basis. Observations SHALL be performed of the Reservoir Makeup Pump Facility as required per the STP TPDES Permit WQ00019008000.

Observation Date: 7/17/23

Time of Observation: 15:25

River Flow Conditions: Slight Flow

Weather Conditions: Partly Cloudy

Outside Temperature: 97° F.

Diversions during the time of observation: Yes ☐ No ☒

	Yes	No	If No, explain:
<b>Facility Equipment</b>			
Is the Fish Return System satisfactory?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	
Are the Bar Screens satisfactory?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	
Are the Traveling Screens satisfactory?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	
Are the Electrical Components satisfactory?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	
Are the Pumps and Motors satisfactory?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	
	Yes	No	If Yes, explain:
<b>Wildlife and Environment</b>			
Is there a presence of foam?	<input type="checkbox"/>	<input checked="" type="checkbox"/>	
Are there any fish mortalities ?	<input type="checkbox"/>	<input checked="" type="checkbox"/>	
Is there any oil sheen?	<input type="checkbox"/>	<input checked="" type="checkbox"/>	

Inspector: R. P. [Signature]

Date: 7/17/23

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Inspections are to be conducted on a weekly basis. Observations SHALL be performed of the Reservoir Makeup Pump Facility as required per the STP TPDES Permit WQ00019008000.

Observation Date: <sup>7-24-23</sup> 7/4/23 <sup>8-29-23</sup> JAL

Time of Observation: 0:45

River Flow Conditions: sl: ht Flow

Weather Conditions: Partl cloudy

Outside Temperature: 87°F.

Diversions during the time of observation: Yes \_\_\_\_\_ No X

	Yes	No	If No, explain:
<b>Facility Equipment</b>			
Is the Fish Return System satisfactory?	<u>✓</u>		
Are the Bar Screens satisfactory?	<u>✓</u>		
Are the Traveling Screens satisfactory?	<u>✓</u>		
Are the Electrical Components satisfactory?	<u>✓</u>		
Are the Pumps and Motors satisfactory?	<u>✓</u>		
	Yes	No	If Yes, explain:
<b>Wildlife and Environment</b>			
Is there a presence of foam?		<u>✓</u>	
Are there any fish mortalities ?		<u>✓</u>	
Is there any oil sheen?		<u>✓</u>	

Inspector: R. P. [Signature]

Date: 7/24/23



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Inspections are to be conducted on a weekly basis. Observations SHALL be performed of the Reservoir Makeup Pump Facility as required per the STP TPDES Permit WQ00019008000.

Observation Date: 7/31/23

Time of Observation: 11:50 AM

River Flow Conditions: Very Slight Flow

Weather Conditions: Sunny

Outside Temperature: 95° F

Diversions during the time of observation: Yes ☐ No ☒

	Yes	No	If No, explain:
<b>Facility Equipment</b>			
Is the Fish Return System satisfactory?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	
Are the Bar Screens satisfactory?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	
Are the Traveling Screens satisfactory?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	
Are the Electrical Components satisfactory?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	
Are the Pumps and Motors satisfactory?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	
	Yes	No	If Yes, explain:
<b>Wildlife and Environment</b>			
Is there a presence of foam?	<input type="checkbox"/>	<input checked="" type="checkbox"/>	
Are there any fish mortalities ?	<input type="checkbox"/>	<input checked="" type="checkbox"/>	
Is there any oil sheen?	<input type="checkbox"/>	<input checked="" type="checkbox"/>	

Inspector: Rafael Garcia

Date: 7/31/23

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Inspections are to be conducted on a weekly basis. Observations SHALL be performed of the Reservoir Makeup Pump Facility as required per the STP TPDES Permit WQ00019008000.

Observation Date: 8/7/23

Time of Observation: 14:40

River Flow Conditions: No Flow

Weather Conditions: Partly Cloudy

Outside Temperature: 98°F

Diversions during the time of observation: Yes ☐ No ☒

	Yes	No	If No, explain:
<b>Facility Equipment</b>			
Is the Fish Return System satisfactory?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	
Are the Bar Screens satisfactory?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	
Are the Traveling Screens satisfactory?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	
Are the Electrical Components satisfactory?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	
Are the Pumps and Motors satisfactory?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	
	Yes	No	If Yes, explain:
<b>Wildlife and Environment</b>			
Is there a presence of foam?	<input type="checkbox"/>	<input checked="" type="checkbox"/>	
Are there any fish mortalities ?	<input type="checkbox"/>	<input checked="" type="checkbox"/>	
Is there any oil sheen?	<input type="checkbox"/>	<input checked="" type="checkbox"/>	

Inspector: 

Date: 8/7/23

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Inspections are to be conducted on a weekly basis. Observations SHALL be performed of the Reservoir Makeup Pump Facility as required per the STP TPDES Permit WQ00019008000.

Observation Date: 8/14/23

Time of Observation: 10:39

River Flow Conditions: No Flow

Weather Conditions: Cloudy

Outside Temperature: 91°F

Diversions during the time of observation: Yes ☐ No ☒

	Yes	No	If No, explain:
<b>Facility Equipment</b>			
Is the Fish Return System satisfactory?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	
Are the Bar Screens satisfactory?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	
Are the Traveling Screens satisfactory?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	
Are the Electrical Components satisfactory?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	
Are the Pumps and Motors satisfactory?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	
	Yes	No	If Yes, explain:
<b>Wildlife and Environment</b>			
Is there a presence of foam?	<input type="checkbox"/>	<input checked="" type="checkbox"/>	
Are there any fish mortalities ?	<input type="checkbox"/>	<input checked="" type="checkbox"/>	
Is there any oil sheen?	<input type="checkbox"/>	<input checked="" type="checkbox"/>	

Inspector: 

Date: 8/14/23

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Inspections are to be conducted on a weekly basis. Observations SHALL be performed of the Reservoir Makeup Pump Facility as required per the STP TPDES Permit WQ00019008000.

Observation Date: 8/21/23

Time of Observation: 10:15

River Flow Conditions: NO FLOW

Weather Conditions: PARTLY CLOUDY

Outside Temperature: 89°F

Diversions during the time of observation: Yes \_\_\_ No X

	Yes	No	If No, explain:
<b>Facility Equipment</b>			
Is the Fish Return System satisfactory?	✓		
Are the Bar Screens satisfactory?	✓		
Are the Traveling Screens satisfactory?	✓		
Are the Electrical Components satisfactory?	✓		
Are the Pumps and Motors satisfactory?	✓		
	Yes	No	If Yes, explain:
<b>Wildlife and Environment</b>			
Is there a presence of foam?		✓	
Are there any fish mortalities ?		✓	
Is there any oil sheen?		✓	

Inspector: 

Date: 8/21/23

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Inspections are to be conducted on a weekly basis. Observations SHALL be performed of the Reservoir Makeup Pump Facility as required per the STP TPDES Permit WQ00019008000.

Observation Date: 8/28/23

Time of Observation: 09:00

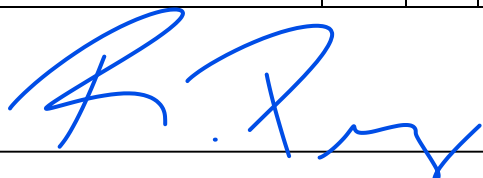
River Flow Conditions: No Flow

Weather Conditions: overcast

Outside Temperature: 83°F

Diversions during the time of observation: Yes \_\_\_\_\_ No X

	Yes	No	If No, explain:
<b>Facility Equipment</b>			
Is the Fish Return System satisfactory?	<u>✓</u>		
Are the Bar Screens satisfactory?	<u>✓</u>		
Are the Traveling Screens satisfactory?	<u>✓</u>		
Are the Electrical Components satisfactory?	<u>✓</u>		
Are the Pumps and Motors satisfactory?	<u>✓</u>		
	Yes	No	If Yes, explain:
<b>Wildlife and Environment</b>			
Is there a presence of foam?		<u>✓</u>	
Are there any fish mortalities ?		<u>✓</u>	
Is there any oil sheen?		<u>✓</u>	

Inspector: 

Date: 8/28/23

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Inspections are to be conducted on a weekly basis. Observations SHALL be performed of the Reservoir Makeup Pump Facility as required per the STP TPDES Permit WQ00019008000.

Observation Date: 9/5/23

Time of Observation: 14:50

River Flow Conditions: NO Flow

Weather Conditions: Partly Cloudy

Outside Temperature: 95°F

Diversions during the time of observation: Yes ☐ No ☒

	Yes	No	If No, explain:
<b>Facility Equipment</b>			
Is the Fish Return System satisfactory?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	
Are the Bar Screens satisfactory?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	
Are the Traveling Screens satisfactory?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	
Are the Electrical Components satisfactory?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	
Are the Pumps and Motors satisfactory?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	
	Yes	No	If Yes, explain:
<b>Wildlife and Environment</b>			
Is there a presence of foam?	<input type="checkbox"/>	<input checked="" type="checkbox"/>	
Are there any fish mortalities ?	<input type="checkbox"/>	<input checked="" type="checkbox"/>	
Is there any oil sheen?	<input type="checkbox"/>	<input checked="" type="checkbox"/>	

Inspector: R. P. [Signature]

Date: 9/5/23

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Inspections are to be conducted on a weekly basis. Observations SHALL be performed of the Reservoir Makeup Pump Facility as required per the STP TPDES Permit WQ00019008000.

Observation Date: 9/14/23

Time of Observation: 15:24


River Flow Conditions: Slight Flow

Weather Conditions: Cloudy, Overcast

Outside Temperature: 87°F

Diversions during the time of observation: Yes\_\_\_ No X

	Yes	No	If No, explain:
<b>Facility Equipment</b>			
Is the Fish Return System satisfactory?	<input checked="" type="checkbox"/>		
Are the Bar Screens satisfactory?	<input checked="" type="checkbox"/>		
Are the Traveling Screens satisfactory?	<input checked="" type="checkbox"/>		
Are the Electrical Components satisfactory?	<input checked="" type="checkbox"/>		
Are the Pumps and Motors satisfactory?	<input checked="" type="checkbox"/>		
	Yes	No	If Yes, explain:
<b>Wildlife and Environment</b>			
Is there a presence of foam?		<input checked="" type="checkbox"/>	
Are there any fish mortalities ?		<input checked="" type="checkbox"/>	
Is there any oil sheen?		<input checked="" type="checkbox"/>	

Inspector: 

Date: 9/14/23

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Inspections are to be conducted on a weekly basis. Observations SHALL be performed of the Reservoir Makeup Pump Facility as required per the STP TPDES Permit WQ00019008000.

Observation Date: 9/18/23

Time of Observation: 11:40

River Flow Conditions: Moderate Flow.

Weather Conditions: Partly cloudy

Outside Temperature: 91°F.

Diversions during the time of observation: Yes ☐ No ☒

	Yes	No	If No, explain:
<b>Facility Equipment</b>			
Is the Fish Return System satisfactory?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	
Are the Bar Screens satisfactory?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	
Are the Traveling Screens satisfactory?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	
Are the Electrical Components satisfactory?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	
Are the Pumps and Motors satisfactory?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	
	Yes	No	If Yes, explain:
<b>Wildlife and Environment</b>			
Is there a presence of foam?	<input type="checkbox"/>	<input checked="" type="checkbox"/>	
Are there any fish mortalities ?	<input type="checkbox"/>	<input checked="" type="checkbox"/>	
Is there any oil sheen?	<input type="checkbox"/>	<input checked="" type="checkbox"/>	

Inspector: R. Rm

Date: 9/18/23



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Inspections are to be conducted on a weekly basis. Observations SHALL be performed of the Reservoir Makeup Pump Facility as required per the STP TPDES Permit WQ00019008000.

Observation Date: 9/25/23

Time of Observation: 10:30

River Flow Conditions: slight flow

Weather Conditions: cloudy

Outside Temperature: 88°F

Diversions during the time of observation: Yes ☐ No ☒

	Yes	No	If No, explain:
<b>Facility Equipment</b>			
Is the Fish Return System satisfactory?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	
Are the Bar Screens satisfactory?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	
Are the Traveling Screens satisfactory?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	
Are the Electrical Components satisfactory?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	
Are the Pumps and Motors satisfactory?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	
	Yes	No	If Yes, explain:
<b>Wildlife and Environment</b>			
Is there a presence of foam?	<input type="checkbox"/>	<input checked="" type="checkbox"/>	
Are there any fish mortalities ?	<input type="checkbox"/>	<input checked="" type="checkbox"/>	
Is there any oil sheen?	<input type="checkbox"/>	<input checked="" type="checkbox"/>	

Inspector: A. P. [Signature]

Date: 9/25/23

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Inspections are to be conducted on a weekly basis. Observations SHALL be performed of the Reservoir Makeup Pump Facility as required per the STP TPDES Permit WQ00019008000.

Observation Date: 10/2/23

Time of Observation: 07:17

River Flow Conditions: slight

Weather Conditions: Cloudy

Outside Temperature: 72°F.

Diversions during the time of observation: Yes ☐ No ☒

	Yes	No	If No, explain:
<b>Facility Equipment</b>			
Is the Fish Return System satisfactory?	✓		
Are the Bar Screens satisfactory?	✓		
Are the Traveling Screens satisfactory?	✓		
Are the Electrical Components satisfactory?	✓		
Are the Pumps and Motors satisfactory?	✓		
	Yes	No	If Yes, explain:
<b>Wildlife and Environment</b>			
Is there a presence of foam?		✓	
Are there any fish mortalities ?		✓	
Is there any oil sheen?		✓	

Inspector: R. R.

Date: 10/2/23

This Form, when completed, SHALL be retained in accordance with the Document Type List Notification.

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Inspections are to be conducted on a weekly basis. Observations SHALL be performed of the Reservoir Makeup Pump Facility as required per the STP TPDES Permit WQ00019008000.

Observation Date: 10/9/23

Time of Observation: 12:15

River Flow Conditions: slight low flow

Weather Conditions: PARTLY CLOUDY

Outside Temperature: 79°F

Diversions during the time of observation: Yes \_\_\_ No X

	Yes	No	If No, explain:
<b>Facility Equipment</b>			
Is the Fish Return System satisfactory?	✓		
Are the Bar Screens satisfactory?	✓		
Are the Traveling Screens satisfactory?	✓		
Are the Electrical Components satisfactory?	✓		
Are the Pumps and Motors satisfactory?	✓		
	Yes	No	If Yes, explain:
<b>Wildlife and Environment</b>		✓	
Is there a presence of foam?		✓	
Are there any fish mortalities ?		✓	
Is there any oil sheen?		✓	

Inspector: 

Date: 10/9/23

This Form, when completed, SHALL be retained in accordance with the Document Type List Notification.

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Inspections are to be conducted on a weekly basis. Observations SHALL be performed of the Reservoir Makeup Pump Facility as required per the STP TPDES Permit WQ00019008000.

Observation Date: 10/16/23

Time of Observation: 10115

River Flow Conditions: Slight Flow

Weather Conditions: Sunny

Outside Temperature: 78°

Diversions during the time of observation: Yes ☐ No ☒

	Yes	No	If No, explain:
<b>Facility Equipment</b>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	
Is the Fish Return System satisfactory?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	
Are the Bar Screens satisfactory?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	
Are the Traveling Screens satisfactory?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	
Are the Electrical Components satisfactory?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	
Are the Pumps and Motors satisfactory?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	
	Yes	No	If Yes, explain:
<b>Wildlife and Environment</b>	<input type="checkbox"/>	<input type="checkbox"/>	
Is there a presence of foam?	<input type="checkbox"/>	<input checked="" type="checkbox"/>	
Are there any fish mortalities ?	<input type="checkbox"/>	<input checked="" type="checkbox"/>	
Is there any oil sheen?	<input type="checkbox"/>	<input checked="" type="checkbox"/>	

Inspector: Rafael Garcia

Date: 10/16/23

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Inspections are to be conducted on a weekly basis. Observations SHALL be performed of the Reservoir Makeup Pump Facility as required per the STP TPDES Permit WQ00019008000.

Observation Date: 10/23/23

Time of Observation: 13:56

River Flow Conditions: No Flow

Weather Conditions: Partly Cloudy

Outside Temperature: 89°F.

Diversions during the time of observation: Yes ☐ No ☒

	Yes	No	If No, explain:
<b>Facility Equipment</b>			
Is the Fish Return System satisfactory?	✓		
Are the Bar Screens satisfactory?	✓		
Are the Traveling Screens satisfactory?	✓		
Are the Electrical Components satisfactory?	✓		
Are the Pumps and Motors satisfactory?	✓		
	Yes	No	If Yes, explain:
<b>Wildlife and Environment</b>			
Is there a presence of foam?		✓	
Are there any fish mortalities ?		✓	
Is there any oil sheen?		✓	

Inspector: 

Date: 10/23/23

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Inspections are to be conducted on a weekly basis. Observations SHALL be performed of the Reservoir Makeup Pump Facility as required per the STP TPDES Permit WQ00019008000.

Observation Date: 10/31/23

Time of Observation: 15:05

River Flow Conditions: sligh Flow

Weather Conditions: cloudy, overcast

Outside Temperature: 56°F.

Diversions during the time of observation: Yes ☐ No ☒

	Yes	No	If No, explain:
<b>Facility Equipment</b>			
Is the Fish Return System satisfactory?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	
Are the Bar Screens satisfactory?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	
Are the Traveling Screens satisfactory?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	
Are the Electrical Components satisfactory?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	
Are the Pumps and Motors satisfactory?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	
	Yes	No	If Yes, explain:
<b>Wildlife and Environment</b>			
Is there a presence of foam?	<input type="checkbox"/>	<input checked="" type="checkbox"/>	
Are there any fish mortalities ?	<input type="checkbox"/>	<input checked="" type="checkbox"/>	
Is there any oil sheen?	<input type="checkbox"/>	<input checked="" type="checkbox"/>	

Inspector: 

Date: 10/31/23



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Inspections are to be conducted on a weekly basis. Observations SHALL be performed of the Reservoir Makeup Pump Facility as required per the STP TPDES Permit WQ00019008000.

Observation Date: 11/6/23

Time of Observation: 2:40pm

River Flow Conditions: Slight Flow

Weather Conditions: Sunny

Outside Temperature: 78°

Diversions during the time of observation: Yes ☐ No ☒

	Yes	No	If No, explain:
<b>Facility Equipment</b>			
Is the Fish Return System satisfactory?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	
Are the Bar Screens satisfactory?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	
Are the Traveling Screens satisfactory?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	
Are the Electrical Components satisfactory?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	
Are the Pumps and Motors satisfactory?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	
	Yes	No	If Yes, explain:
<b>Wildlife and Environment</b>			
Is there a presence of foam?	<input type="checkbox"/>	<input checked="" type="checkbox"/>	
Are there any fish mortalities ?	<input type="checkbox"/>	<input checked="" type="checkbox"/>	
Is there any oil sheen?	<input type="checkbox"/>	<input checked="" type="checkbox"/>	

Inspector: Rafael Garcia

Date: 11/6/23

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Inspections are to be conducted on a weekly basis. Observations SHALL be performed of the Reservoir Makeup Pump Facility as required per the STP TPDES Permit WQ00019008000.

Observation Date: 11/13/23

Time of Observation: 11:40 AM

River Flow Conditions: Slight Flow

Weather Conditions: Rainy

Outside Temperature: \_\_\_\_\_

Diversions during the time of observation: Yes \_\_\_\_\_ No ✓

	Yes	No	If No, explain:
<b>Facility Equipment</b>			
Is the Fish Return System satisfactory?	✓		
Are the Bar Screens satisfactory?	✓		
Are the Traveling Screens satisfactory?	✓		
Are the Electrical Components satisfactory?	✓		
Are the Pumps and Motors satisfactory?	✓		
	Yes	No	If Yes, explain:
<b>Wildlife and Environment</b>			
Is there a presence of foam?		✓	
Are there any fish mortalities ?		✓	
Is there any oil sheen?		✓	

Inspector: Rafael Garcia

Date: 11/13/23



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Inspections are to be conducted on a weekly basis. Observations SHALL be performed of the Reservoir Makeup Pump Facility as required per the STP TPDES Permit WQ00019008000.

Observation Date: 11/20/23

Time of Observation: 11:40 AM

River Flow Conditions: Slight Flow

Weather Conditions: Cloudy

Outside Temperature: 75°

Diversions during the time of observation: Yes ☐ No ☒

	Yes	No	If No, explain:
<b>Facility Equipment</b>			
Is the Fish Return System satisfactory?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	
Are the Bar Screens satisfactory?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	
Are the Traveling Screens satisfactory?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	
Are the Electrical Components satisfactory?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	
Are the Pumps and Motors satisfactory?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	
	Yes	No	If Yes, explain:
<b>Wildlife and Environment</b>			
Is there a presence of foam?	<input type="checkbox"/>	<input checked="" type="checkbox"/>	
Are there any fish mortalities ?	<input type="checkbox"/>	<input checked="" type="checkbox"/>	
Is there any oil sheen?	<input type="checkbox"/>	<input checked="" type="checkbox"/>	

Inspector: Rafael Garcia

Date: 11/20/23

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Inspections are to be conducted on a weekly basis. Observations SHALL be performed of the Reservoir Makeup Pump Facility as required per the STP TPDES Permit WQ00019008000.

Observation Date: 11/27/23

Time of Observation: 11:15 am

River Flow Conditions: Slight Flow

Weather Conditions: Cloudy

Outside Temperature: 60°

Diversions during the time of observation: Yes ☐ No ☒

	Yes	No	If No, explain:
<b>Facility Equipment</b>			
Is the Fish Return System satisfactory?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	
Are the Bar Screens satisfactory?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	
Are the Traveling Screens satisfactory?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	
Are the Electrical Components satisfactory?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	
Are the Pumps and Motors satisfactory?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	
	Yes	No	If Yes, explain:
<b>Wildlife and Environment</b>			
Is there a presence of foam?	<input type="checkbox"/>	<input checked="" type="checkbox"/>	
Are there any fish mortalities ?	<input type="checkbox"/>	<input checked="" type="checkbox"/>	
Is there any oil sheen?	<input type="checkbox"/>	<input checked="" type="checkbox"/>	

Inspector: Rafael Garcia

Date: 11/27/23

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Inspections are to be conducted on a weekly basis. Observations SHALL be performed of the Reservoir Makeup Pump Facility as required per the STP TPDES Permit WQ00019008000.

Observation Date: 12/4/23

Time of Observation: 10:00 am

River Flow Conditions: Good Flow

Weather Conditions: Sunny

Outside Temperature: 65°

Diversions during the time of observation: Yes \_\_\_ No ✓

	Yes	No	If No, explain:
<b>Facility Equipment</b>			
Is the Fish Return System satisfactory?	✓		
Are the Bar Screens satisfactory?	✓		
Are the Traveling Screens satisfactory?	✓		
Are the Electrical Components satisfactory?	✓		
Are the Pumps and Motors satisfactory?	✓		
	Yes	No	If Yes, explain:
<b>Wildlife and Environment</b>			
Is there a presence of foam?		✓	
Are there any fish mortalities ?		✓	
Is there any oil sheen?		✓	

Inspector: Rafael Garcia

Date: 12/4/23

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Inspections are to be conducted on a weekly basis. Observations SHALL be performed of the Reservoir Makeup Pump Facility as required per the STP TPDES Permit WQ00019008000.

Observation Date: 12/11/23

Time of Observation: 11:50

River Flow Conditions: Slight Flow

Weather Conditions: 65° Sunny

Outside Temperature: 65°

Diversions during the time of observation: Yes ☐ No ☒

	Yes	No	If No, explain:
<b>Facility Equipment</b>			
Is the Fish Return System satisfactory?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	
Are the Bar Screens satisfactory?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	
Are the Traveling Screens satisfactory?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	
Are the Electrical Components satisfactory?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	
Are the Pumps and Motors satisfactory?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	
	Yes	No	If Yes, explain:
<b>Wildlife and Environment</b>			
Is there a presence of foam?	<input type="checkbox"/>	<input checked="" type="checkbox"/>	
Are there any fish mortalities ?	<input type="checkbox"/>	<input checked="" type="checkbox"/>	
Is there any oil sheen?	<input type="checkbox"/>	<input checked="" type="checkbox"/>	

Inspector: 

Date: 12/11/23

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Inspections are to be conducted on a weekly basis. Observations SHALL be performed of the Reservoir Makeup Pump Facility as required per the STP TPDES Permit WQ00019008000.

Observation Date: 12/18/23

Time of Observation: 14:00


River Flow Conditions: Slight flow

Weather Conditions: Cloudy

Outside Temperature: 60°

Diversions during the time of observation: Yes ☐ No ☒

	Yes	No	If No, explain:
<b>Facility Equipment</b>			
Is the Fish Return System satisfactory?	<input checked="" type="checkbox"/>		
Are the Bar Screens satisfactory?	<input checked="" type="checkbox"/>		
Are the Traveling Screens satisfactory?	<input checked="" type="checkbox"/>		
Are the Electrical Components satisfactory?	<input checked="" type="checkbox"/>		
Are the Pumps and Motors satisfactory?	<input checked="" type="checkbox"/>		
	Yes	No	If Yes, explain:
<b>Wildlife and Environment</b>			
Is there a presence of foam?		<input checked="" type="checkbox"/>	
Are there any fish mortalities?		<input checked="" type="checkbox"/>	
Is there any oil sheen?		<input checked="" type="checkbox"/>	

Inspector: 

Date: 12/18/23

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Inspections are to be conducted on a weekly basis. Observations SHALL be performed of the Reservoir Makeup Pump Facility as required per the STP TPDES Permit WQ00019008000.

Observation Date: 12/26/23

Time of Observation: 13:15

River Flow Conditions: Slight Flow

Weather Conditions: Overcast

Outside Temperature: 58°

Diversions during the time of observation: Yes ☐ No ☒

	Yes	No	If No, explain:
<b>Facility Equipment</b>			
Is the Fish Return System satisfactory?	<input checked="" type="checkbox"/>		
Are the Bar Screens satisfactory?	<input checked="" type="checkbox"/>		
Are the Traveling Screens satisfactory?	<input checked="" type="checkbox"/>		
Are the Electrical Components satisfactory?	<input checked="" type="checkbox"/>		
Are the Pumps and Motors satisfactory?	<input checked="" type="checkbox"/>		
	Yes	No	If Yes, explain:
<b>Wildlife and Environment</b>			
Is there a presence of foam?		<input checked="" type="checkbox"/>	
Are there any fish mortalities ?		<input checked="" type="checkbox"/>	
Is there any oil sheen?		<input checked="" type="checkbox"/>	

Inspector: Robert Davis

Date: 12/26/23

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Inspections are to be conducted on a weekly basis. Observations SHALL be performed of the Reservoir Makeup Pump Facility as required per the STP TPDES Permit WQ00019008000.

Observation Date: 1/2/24

Time of Observation: 14:55

River Flow Conditions: Slight Flow

Weather Conditions: Overcast

Outside Temperature: 58°

Diversions during the time of observation: Yes ☐ No ☒

	Yes	No	If No, explain:
<b>Facility Equipment</b>			
Is the Fish Return System satisfactory?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	
Are the Bar Screens satisfactory?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	
Are the Traveling Screens satisfactory?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	
Are the Electrical Components satisfactory?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	
Are the Pumps and Motors satisfactory?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	
	Yes	No	If Yes, explain:
<b>Wildlife and Environment</b>			
Is there a presence of foam?	<input type="checkbox"/>	<input checked="" type="checkbox"/>	
Are there any fish mortalities ?	<input type="checkbox"/>	<input checked="" type="checkbox"/>	
Is there any oil sheen?	<input type="checkbox"/>	<input checked="" type="checkbox"/>	

Inspector: Rafael Garcia

Date: 1/2/24

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Inspections are to be conducted on a weekly basis. Observations SHALL be performed of the Reservoir Makeup Pump Facility as required per the STP TPDES Permit WQ00019008000.

Observation Date: 1/8/24

Time of Observation: 11:00

River Flow Conditions: Slight Flow

Weather Conditions: Cloudy

Outside Temperature: 65°

Diversions during the time of observation: Yes ☐ No ☒

	Yes	No	If No, explain:
<b>Facility Equipment</b>			
Is the Fish Return System satisfactory?	<input checked="" type="checkbox"/>		
Are the Bar Screens satisfactory?	<input checked="" type="checkbox"/>		
Are the Traveling Screens satisfactory?	<input checked="" type="checkbox"/>		
Are the Electrical Components satisfactory?	<input checked="" type="checkbox"/>		
Are the Pumps and Motors satisfactory?	<input checked="" type="checkbox"/>		
	Yes	No	If Yes, explain:
<b>Wildlife and Environment</b>			
Is there a presence of foam?	<input checked="" type="checkbox"/>		
Are there any fish mortalities ?	<input checked="" type="checkbox"/>		
Is there any oil sheen?	<input checked="" type="checkbox"/>		

Inspector: [Signature]

Date: 1/8/24

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Inspections are to be conducted on a weekly basis. Observations SHALL be performed of the Reservoir Makeup Pump Facility as required per the STP TPDES Permit WQ00019008000.

Observation Date: 1/15/24

Time of Observation: 10:35


River Flow Conditions: Good Flow

Weather Conditions: Overcast

Outside Temperature: 62°

Diversions during the time of observation: Yes ☐ No ☒

	Yes	No	If No, explain:
<b>Facility Equipment</b>			
Is the Fish Return System satisfactory?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	
Are the Bar Screens satisfactory?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	
Are the Traveling Screens satisfactory?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	
Are the Electrical Components satisfactory?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	
Are the Pumps and Motors satisfactory?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	
	Yes	No	If Yes, explain:
<b>Wildlife and Environment</b>			
Is there a presence of foam?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	
Are there any fish mortalities ?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	
Is there any oil sheen?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	

Inspector: 

Date: 1/15/24

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Inspections are to be conducted on a weekly basis. Observations SHALL be performed of the Reservoir Makeup Pump Facility as required per the STP TPDES Permit WQ00019008000.

Observation Date: 1/22/24

Time of Observation: 11:30 Am

River Flow Conditions: Good Flow

Weather Conditions: Sunny

Outside Temperature: 68°C

Diversions during the time of observation: Yes ☐ No ☒

	Yes	No	If No, explain:
<b>Facility Equipment</b>			
Is the Fish Return System satisfactory?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	
Are the Bar Screens satisfactory?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	
Are the Traveling Screens satisfactory?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	
Are the Electrical Components satisfactory?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	
Are the Pumps and Motors satisfactory?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	
	Yes	No	If Yes, explain:
<b>Wildlife and Environment</b>			
Is there a presence of foam?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	
Are there any fish mortalities ?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	
Is there any oil sheen?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	

Inspector: 

Date: 1/22/24

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Inspections are to be conducted on a weekly basis. Observations SHALL be performed of the Reservoir Makeup Pump Facility as required per the STP TPDES Permit WQ00019008000.

Observation Date: 1/29/24

Time of Observation: 13150

River Flow Conditions: Good Flow

Weather Conditions: Sunny

Outside Temperature: 65°

Diversions during the time of observation: Yes ☒ No ☐

	Yes	No	If No, explain:
<b>Facility Equipment</b>			
Is the Fish Return System satisfactory?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	
Are the Bar Screens satisfactory?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	
Are the Traveling Screens satisfactory?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	
Are the Electrical Components satisfactory?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	
Are the Pumps and Motors satisfactory?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	
	Yes	No	If Yes, explain:
<b>Wildlife and Environment</b>			
Is there a presence of foam?	<input type="checkbox"/>	<input checked="" type="checkbox"/>	
Are there any fish mortalities ?	<input type="checkbox"/>	<input checked="" type="checkbox"/>	
Is there any oil sheen?	<input type="checkbox"/>	<input checked="" type="checkbox"/>	

Inspector: Rafael Garcia

Date: 1/29/24

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Inspections are to be conducted on a weekly basis. Observations SHALL be performed of the Reservoir Makeup Pump Facility as required per the STP TPDES Permit WQ00019008000.

Observation Date: 2/6/24

Time of Observation: 14:20


River Flow Conditions: Good Flow

Weather Conditions: Cloudy

Outside Temperature: 65°

Diversions during the time of observation: Yes ☒ No ☐

	Yes	No	If No, explain:
<b>Facility Equipment</b>			
Is the Fish Return System satisfactory?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	
Are the Bar Screens satisfactory?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	
Are the Traveling Screens satisfactory?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	
Are the Electrical Components satisfactory?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	
Are the Pumps and Motors satisfactory?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	
	Yes	No	If Yes, explain:
<b>Wildlife and Environment</b>			
Is there a presence of foam?	<input type="checkbox"/>	<input checked="" type="checkbox"/>	
Are there any fish mortalities ?	<input type="checkbox"/>	<input checked="" type="checkbox"/>	
Is there any oil sheen?	<input type="checkbox"/>	<input checked="" type="checkbox"/>	

Inspector: 

Date: 2/6/24

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Inspections are to be conducted on a weekly basis. Observations SHALL be performed of the Reservoir Makeup Pump Facility as required per the STP TPDES Permit WQ00019008000.

Observation Date: 2/12/24

Time of Observation: 13:30

River Flow Conditions: Slight Flow

Weather Conditions: Sunny

Outside Temperature: 60°

Diversions during the time of observation: Yes ☒ No ☐

	Yes	No	If No, explain:
<b>Facility Equipment</b>			
Is the Fish Return System satisfactory?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	
Are the Bar Screens satisfactory?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	
Are the Traveling Screens satisfactory?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	
Are the Electrical Components satisfactory?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	
Are the Pumps and Motors satisfactory?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	
	Yes	No	If Yes, explain:
<b>Wildlife and Environment</b>			
Is there a presence of foam?	<input type="checkbox"/>	<input checked="" type="checkbox"/>	
Are there any fish mortalities ?	<input type="checkbox"/>	<input checked="" type="checkbox"/>	
Is there any oil sheen?	<input type="checkbox"/>	<input checked="" type="checkbox"/>	

Inspector: Reed J. Garcia

Date: 2/12/24

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Inspections are to be conducted on a weekly basis. Observations SHALL be performed of the Reservoir Makeup Pump Facility as required per the STP TPDES Permit WQ00019008000.

Observation Date: 2/19/24

Time of Observation: 9:55 AM

River Flow Conditions: Very Slight Flow

Weather Conditions: Sunny

Outside Temperature: 60°

Diversions during the time of observation: Yes ☒ No ☐

	Yes	No	If No, explain:
<b>Facility Equipment</b>			
Is the Fish Return System satisfactory?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	
Are the Bar Screens satisfactory?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	
Are the Traveling Screens satisfactory?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	
Are the Electrical Components satisfactory?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	
Are the Pumps and Motors satisfactory?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	
	Yes	No	If Yes, explain:
<b>Wildlife and Environment</b>			
Is there a presence of foam?	<input type="checkbox"/>	<input checked="" type="checkbox"/>	
Are there any fish mortalities ?	<input type="checkbox"/>	<input checked="" type="checkbox"/>	
Is there any oil sheen?	<input type="checkbox"/>	<input checked="" type="checkbox"/>	

Inspector: 

Date: 2/19/24

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Inspections are to be conducted on a weekly basis. Observations SHALL be performed of the Reservoir Makeup Pump Facility as required per the STP TPDES Permit WQ00019008000.

Observation Date: 2/27/24

Time of Observation: 11:35

River Flow Conditions: Good Flow

Weather Conditions: Cloudy

Outside Temperature: 60°

Diversions during the time of observation: Yes ☒ No ☐

	Yes	No	If No, explain:
<b>Facility Equipment</b>			
Is the Fish Return System satisfactory?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	
Are the Bar Screens satisfactory?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	
Are the Traveling Screens satisfactory?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	
Are the Electrical Components satisfactory?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	
Are the Pumps and Motors satisfactory?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	
	Yes	No	If Yes, explain:
<b>Wildlife and Environment</b>			
Is there a presence of foam?	<input type="checkbox"/>	<input checked="" type="checkbox"/>	
Are there any fish mortalities ?	<input type="checkbox"/>	<input checked="" type="checkbox"/>	
Is there any oil sheen?	<input type="checkbox"/>	<input checked="" type="checkbox"/>	

Inspector: Rafael Garcia

Date: 2/29/24

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Inspections are to be conducted on a weekly basis. Observations SHALL be performed of the Reservoir Makeup Pump Facility as required per the STP TPDES Permit WQ00019008000.

Observation Date: 3/6/24

Time of Observation: 08:25

River Flow Conditions: Slight Flow

Weather Conditions: Cloudy

Outside Temperature: 65°F.

Diversions during the time of observation: Yes ☐ No ☒

	Yes	No	If No, explain:
<b>Facility Equipment</b>			
Is the Fish Return System satisfactory?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	
Are the Bar Screens satisfactory?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	
Are the Traveling Screens satisfactory?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	
Are the Electrical Components satisfactory?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	
Are the Pumps and Motors satisfactory?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	
	Yes	No	If Yes, explain:
<b>Wildlife and Environment</b>			
Is there a presence of foam?	<input type="checkbox"/>	<input checked="" type="checkbox"/>	
Are there any fish mortalities ?	<input type="checkbox"/>	<input checked="" type="checkbox"/>	
Is there any oil sheen?	<input type="checkbox"/>	<input checked="" type="checkbox"/>	

Inspector: 

Date: 3/6/24



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Inspections are to be conducted on a weekly basis. Observations SHALL be performed of the Reservoir Makeup Pump Facility as required per the STP TPDES Permit WQ00019008000.

Observation Date: 3/11/24

Time of Observation: 11:27

River Flow Conditions: NO Flow

Weather Conditions: Partly cloudy

Outside Temperature: 66°F.

Diversions during the time of observation: Yes ☐ No ☒

	Yes	No	If No, explain:
<b>Facility Equipment</b>			
Is the Fish Return System satisfactory?	✓		
Are the Bar Screens satisfactory?	✓		
Are the Traveling Screens satisfactory?	✓		
Are the Electrical Components satisfactory?	✓		
Are the Pumps and Motors satisfactory?	✓		
	Yes	No	If Yes, explain:
<b>Wildlife and Environment</b>			
Is there a presence of foam?		✓	
Are there any fish mortalities ?		✓	
Is there any oil sheen?		✓	

Inspector: 

Date: 3/11/24

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Inspections are to be conducted on a weekly basis. Observations SHALL be performed of the Reservoir Makeup Pump Facility as required per the STP TPDES Permit WQ00019008000.

Observation Date: 3/18/24

Time of Observation: 11:31

River Flow Conditions: slight Flow

Weather Conditions: Partly cloudy

Outside Temperature: 65°F.

Diversions during the time of observation: Yes ☐ No ☒

	Yes	No	If No, explain:
<b>Facility Equipment</b>			
Is the Fish Return System satisfactory?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	
Are the Bar Screens satisfactory?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	
Are the Traveling Screens satisfactory?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	
Are the Electrical Components satisfactory?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	
Are the Pumps and Motors satisfactory?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	
	Yes	No	If Yes, explain:
<b>Wildlife and Environment</b>			
Is there a presence of foam?	<input type="checkbox"/>	<input checked="" type="checkbox"/>	
Are there any fish mortalities ?	<input type="checkbox"/>	<input checked="" type="checkbox"/>	
Is there any oil sheen?	<input type="checkbox"/>	<input checked="" type="checkbox"/>	

Inspector: R. T. [Signature]

Date: 3/18/24

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Inspections are to be conducted on a weekly basis. Observations SHALL be performed of the Reservoir Makeup Pump Facility as required per the STP TPDES Permit WQ00019008000.

Observation Date: 3/25/24

Time of Observation: 11:40

River Flow Conditions: High Flow

Weather Conditions: Cloudy

Outside Temperature: 70°F

Diversions during the time of observation: Yes ☒ No ☐

	Yes	No	If No, explain:
<b>Facility Equipment</b>			
Is the Fish Return System satisfactory?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	
Are the Bar Screens satisfactory?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	
Are the Traveling Screens satisfactory?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	
Are the Electrical Components satisfactory?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	
Are the Pumps and Motors satisfactory?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	
	Yes	No	If Yes, explain:
<b>Wildlife and Environment</b>			
Is there a presence of foam?	<input type="checkbox"/>	<input checked="" type="checkbox"/>	
Are there any fish mortalities ?	<input type="checkbox"/>	<input checked="" type="checkbox"/>	
Is there any oil sheen?	<input type="checkbox"/>	<input checked="" type="checkbox"/>	

Inspector: R. R. [Signature]

Date: 3/25/24

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Inspections are to be conducted on a weekly basis. Observations SHALL be performed of the Reservoir Makeup Pump Facility as required per the STP TPDES Permit WQ00019008000.

Observation Date: 4/1/24

Time of Observation: 10:57

River Flow Conditions: Moderate.

Weather Conditions: cloudy.

Outside Temperature: 75°F.

Diversions during the time of observation: Yes ☐ No ☒

	Yes	No	If No, explain:
<b>Facility Equipment</b>			
Is the Fish Return System satisfactory?	✓		
Are the Bar Screens satisfactory?	✓		
Are the Traveling Screens satisfactory?	✓		
Are the Electrical Components satisfactory?	✓		
Are the Pumps and Motors satisfactory?	✓		
	Yes	No	If Yes, explain:
<b>Wildlife and Environment</b>			
Is there a presence of foam?		✓	
Are there any fish mortalities ?		✓	
Is there any oil sheen?		✓	

Inspector: 

Date: 4/1/24

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Inspections are to be conducted on a weekly basis. Observations SHALL be performed of the Reservoir Makeup Pump Facility as required per the STP TPDES Permit WQ00019008000.

Observation Date: 4/9/24

Time of Observation: 16:00

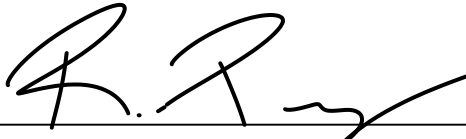
River Flow Conditions: NO Flow

Weather Conditions: CLOUDY

Outside Temperature: 79°F

Diversions during the time of observation: Yes ☐ No ☒

	Yes	No	If No, explain:
<b>Facility Equipment</b>			
Is the Fish Return System satisfactory?	✓		
Are the Bar Screens satisfactory?	✓		
Are the Traveling Screens satisfactory?	✓		
Are the Electrical Components satisfactory?	✓		
Are the Pumps and Motors satisfactory?	✓		
	Yes	No	If Yes, explain:
<b>Wildlife and Environment</b>			
Is there a presence of foam?		✓	
Are there any fish mortalities ?		✓	
Is there any oil sheen?		✓	

Inspector: 

Date: 4/9/24

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Inspections are to be conducted on a weekly basis. Observations SHALL be performed of the Reservoir Makeup Pump Facility as required per the STP TPDES Permit WQ00019008000.

Observation Date: 4/15/24

Time of Observation: 13:46

River Flow Conditions: Moderate

Weather Conditions: cloudy

Outside Temperature: 80°F.

Diversions during the time of observation: Yes ☒ No ☐

	Yes	No	If No, explain:
<b>Facility Equipment</b>			
Is the Fish Return System satisfactory?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	
Are the Bar Screens satisfactory?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	
Are the Traveling Screens satisfactory?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	
Are the Electrical Components satisfactory?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	
Are the Pumps and Motors satisfactory?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	
	Yes	No	If Yes, explain:
<b>Wildlife and Environment</b>			
Is there a presence of foam?	<input type="checkbox"/>	<input checked="" type="checkbox"/>	
Are there any fish mortalities ?	<input type="checkbox"/>	<input checked="" type="checkbox"/>	
Is there any oil sheen?	<input type="checkbox"/>	<input checked="" type="checkbox"/>	

Inspector: A. R. [Signature]

Date: 4/15/23

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Observation Date: 4/24/24

Time of Observation: 16:13

River Flow Conditions: Slight Flow

Weather Conditions: Sunny

Outside Temperature: 80°

Diversions during the time of observation: Yes \_\_\_ No ☒

	Yes	No	If No, explain:
<b>Facility Equipment</b>			
Is the Fish Return System satisfactory?	<input checked="" type="checkbox"/>		
Are the Bar Screens satisfactory?	<input checked="" type="checkbox"/>		
Are the Traveling Screens satisfactory?	<input checked="" type="checkbox"/>		
Are the Electrical Components satisfactory?	<input checked="" type="checkbox"/>		
Are the Pumps and Motors satisfactory?	<input checked="" type="checkbox"/>		
	Yes	No	If Yes, explain:
<b>Wildlife and Environment</b>			
Is there a presence of foam?		<input checked="" type="checkbox"/>	
Are there any fish mortalities ?		<input checked="" type="checkbox"/>	
Is there any oil sheen?		<input checked="" type="checkbox"/>	

Inspector: Rafael Garcia

Date: 4/24/24

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Observation Date: 4.29.24

Time of Observation: 14:32

River Flow Conditions: Moderate Flow

Weather Conditions: Partly Cloudy

Outside Temperature: 81°F

Diversions during the time of observation: Yes ☒ No ☐

	Yes	No	If No, explain:
<b>Facility Equipment</b>			
Is the Fish Return System satisfactory?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	
Are the Bar Screens satisfactory?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	
Are the Traveling Screens satisfactory?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	
Are the Electrical Components satisfactory?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	
Are the Pumps and Motors satisfactory?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	
	Yes	No	If Yes, explain:
<b>Wildlife and Environment</b>			
Is there a presence of foam?	<input type="checkbox"/>	<input checked="" type="checkbox"/>	
Are there any fish mortalities ?	<input type="checkbox"/>	<input checked="" type="checkbox"/>	
Is there any oil sheen?	<input type="checkbox"/>	<input checked="" type="checkbox"/>	

Inspector: 

Date: 4.29.24



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Observation Date: 5/6/24

Time of Observation: 09:57

River Flow Conditions: Moderate

Weather Conditions: Cloudy

Outside Temperature: 80°F.

Diversions during the time of observation: Yes ☐ No ☒

Mark Facility Equipment as N/A if equipment is not currently in service.				
	Yes	No	N/A [Not In Service]	If No, explain:
<b>Facility Equipment</b>				
Is the Fish Return System satisfactory?			✓	
Are the Bar Screens satisfactory?			✓	
Are the Traveling Screens satisfactory?			✓	
Are the Electrical Components satisfactory?			✓	
Are the Pumps and Motors satisfactory?			✓	
	Yes	No		If Yes, explain:
<b>Wildlife and Environment</b>				
Is there a presence of foam?		✓		
Are there any fish mortalities ?		✓		
Is there any oil sheen?		✓		

Inspector: R. Perry

Date: 5/6/24

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Observation Date: 5/13/24

Time of Observation: 10:35

River Flow Conditions: Minimal flow

Weather Conditions: Cloudy

Outside Temperature: 83°F.

Diversions during the time of observation: Yes ☐ No ☒

Mark Facility Equipment as N/A if equipment is not currently in service.				
	Yes	No	N/A [Not In Service]	If No, explain:
<b>Facility Equipment</b>				
Is the Fish Return System satisfactory?			✓	
Are the Bar Screens satisfactory?			✓	
Are the Traveling Screens satisfactory?			✓	
Are the Electrical Components satisfactory?			✓	
Are the Pumps and Motors satisfactory?			✓	
	Yes	No		If Yes, explain:
<b>Wildlife and Environment</b>				
Is there a presence of foam?		✓		
Are there any fish mortalities ?		✓		
Is there any oil sheen?		✓		

Inspector: R. D. [Signature]

Date: 5/13/24

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Inspections are to be conducted on a weekly basis. Observations SHALL be performed of the Reservoir Makeup Pump Facility as required per the STP TPDES Permit WQ00019008000.

Observation Date: 5/20/24

Time of Observation: 07:20

River Flow Conditions: slight flow

Weather Conditions: Sunny

Outside Temperature: 74°F.

Diversions during the time of observation: Yes ☐ No ☒

Mark Facility Equipment as N/A if equipment is not currently in service.				
	Yes	No	N/A [Not In Service]	If No, explain:
<b>Facility Equipment</b>				
Is the Fish Return System satisfactory?			✓	
Are the Bar Screens satisfactory?			✓	
Are the Traveling Screens satisfactory?			✓	
Are the Electrical Components satisfactory?			✓	
Are the Pumps and Motors satisfactory?			✓	
	Yes	No		If Yes, explain:
<b>Wildlife and Environment</b>				
Is there a presence of foam?		✓		
Are there any fish mortalities ?		✓		
Is there any oil sheen?		✓		

Inspector: R. [Signature]

Date: 5/20/24

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Inspections are to be conducted on a weekly basis. Observations SHALL be performed of the Reservoir Makeup Pump Facility as required per the STP TPDES Permit WQ00019008000.

Observation Date: 5/28/24

Time of Observation: 09:41

River Flow Conditions: Minimal

Weather Conditions: Clear

Outside Temperature: 86°F.

Diversions during the time of observation: Yes      No X

Mark Facility Equipment as N/A if equipment is not currently in service.				
	Yes	No	N/A [Not In Service]	If No, explain:
<b>Facility Equipment</b>				
Is the Fish Return System satisfactory?			✓	
Are the Bar Screens satisfactory?			✓	
Are the Traveling Screens satisfactory?			✓	
Are the Electrical Components satisfactory?			✓	
Are the Pumps and Motors satisfactory?			✓	
	Yes	No		If Yes, explain:
<b>Wildlife and Environment</b>				
Is there a presence of foam?		✓		
Are there any fish mortalities ?		✓		
Is there any oil sheen?		✓		

Inspector: 

Date: 5/28/24

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RP.

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Inspections are to be conducted on a weekly basis. Observations SHALL be performed of the Reservoir Makeup Pump Facility as required per the STP TPDES Permit WQ00019008000.

Observation Date: 6/5/24

Time of Observation: 07:20

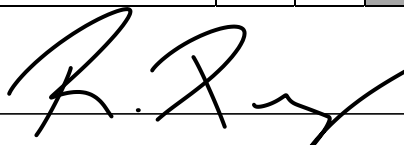
River Flow Conditions: Moderate flow.

Weather Conditions: cloudy

Outside Temperature: 82°F.

Diversions during the time of observation: Yes ☐ No ☒

Mark Facility Equipment as N/A if equipment is not currently in service.				
	Yes	No	N/A [Not In Service]	If No, explain:
<b>Facility Equipment</b>				
Is the Fish Return System satisfactory?			✓	
Are the Bar Screens satisfactory?			✓	
Are the Traveling Screens satisfactory?			✓	
Are the Electrical Components satisfactory?			✓	
Are the Pumps and Motors satisfactory?			✓	
	Yes	No		If Yes, explain:
<b>Wildlife and Environment</b>				
Is there a presence of foam?		✓		
Are there any fish mortalities ?		✓		
Is there any oil sheen?		✓		

Inspector: 

Date: 6/5/24

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Inspections are to be conducted on a weekly basis. Observations SHALL be performed of the Reservoir Makeup Pump Facility as required per the STP TPDES Permit WQ00019008000.

Observation Date: 6/12/24

Time of Observation: 16:00

River Flow Conditions: minimal flow.

Weather Conditions: CLOUDY.

Outside Temperature: 81°F.

Diversions during the time of observation: Yes ☐ No ☒

Mark Facility Equipment as N/A if equipment is not currently in service.				
	Yes	No	N/A [Not In Service]	If No, explain:
<b>Facility Equipment</b>				
Is the Fish Return System satisfactory?			✓	
Are the Bar Screens satisfactory?			✓	
Are the Traveling Screens satisfactory?			✓	
Are the Electrical Components satisfactory?			✓	
Are the Pumps and Motors satisfactory?			✓	
	Yes	No		If Yes, explain:
<b>Wildlife and Environment</b>				
Is there a presence of foam?		✓		
Are there any fish mortalities ?		✓		
Is there any oil sheen?		✓		

Inspector: R.R.

Date: 6/12/24

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Inspections are to be conducted on a weekly basis. Observations SHALL be performed of the Reservoir Makeup Pump Facility as required per the STP TPDES Permit WQ00019008000.

Observation Date: 6/17/24

Time of Observation: 09:38

River Flow Conditions: No flow

Weather Conditions: Partly cloudy

Outside Temperature: 87°F.

Diversions during the time of observation: Yes ☐ No ☒

Mark Facility Equipment as N/A if equipment is not currently in service.				
	Yes	No	N/A [Not In Service]	If No, explain:
<b>Facility Equipment</b>				
Is the Fish Return System satisfactory?			✓	
Are the Bar Screens satisfactory?			✓	
Are the Traveling Screens satisfactory?			✓	
Are the Electrical Components satisfactory?			✓	
Are the Pumps and Motors satisfactory?			✓	
	Yes	No		If Yes, explain:
<b>Wildlife and Environment</b>				
Is there a presence of foam?		✓		
Are there any fish mortalities ?		✓		
Is there any oil sheen?		✓		

Inspector: R. R.

Date: 6/17/24

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Observation Date: 6/24/24  
Time of Observation: 07:25  
River Flow Conditions: High Flow.  
Weather Conditions: Partly Cloudy  
Outside Temperature: 79°F.  
Diversions during the time of observation: Yes ☒ No ☐

Mark Facility Equipment as N/A if equipment is not currently in service.				
	Yes	No	N/A [Not In Service]	If No, explain:
<b>Facility Equipment</b>				
Is the Fish Return System satisfactory?	✓			
Are the Bar Screens satisfactory?	✓			
Are the Traveling Screens satisfactory?	✓			
Are the Electrical Components satisfactory?	✓			
Are the Pumps and Motors satisfactory?	✓			
	Yes	No		If Yes, explain:
<b>Wildlife and Environment</b>				
Is there a presence of foam?		✓		
Are there any fish mortalities ?		✓		
Is there any oil sheen?		✓		

Inspector: R. R. Date: 6/24/24

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Inspections are to be conducted on a weekly basis. Observations SHALL be performed of the Reservoir Makeup Pump Facility as required per the STP TPDES Permit WQ00019008000.

Observation Date: 7/1/24

Time of Observation: 9:30 am

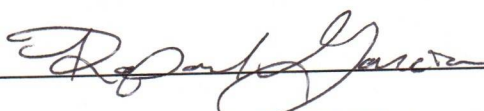
River Flow Conditions: Slight Flow

Weather Conditions: Sunny

Outside Temperature: 95°

Diversions during the time of observation: Yes \_\_\_ No ✓

Mark Facility Equipment as N/A if equipment is not currently in service.				
	Yes	No	N/A [Not In Service]	If No, explain:
<b>Facility Equipment</b>				
Is the Fish Return System satisfactory?	✓			
Are the Bar Screens satisfactory?	✓			
Are the Traveling Screens satisfactory?	✓			
Are the Electrical Components satisfactory?	✓			
Are the Pumps and Motors satisfactory?	✓			
	Yes	No		If Yes, explain:
<b>Wildlife and Environment</b>				
Is there a presence of foam?		✓		
Are there any fish mortalities ?		✓		
Is there any oil sheen?		✓		

Inspector: 

Date: 7/1/24

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Inspections are to be conducted on a weekly basis. Observations SHALL be performed of the Reservoir Makeup Pump Facility as required per the STP TPDES Permit WQ00019008000.

Observation Date: 7/8/24

Time of Observation: 15:03

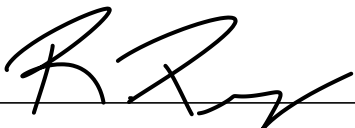
River Flow Conditions: High Flow

Weather Conditions: cloudy, Hurricane Beryl

Outside Temperature: 79°F.

Diversions during the time of observation: Yes ☐ No ☒

Mark Facility Equipment as N/A if equipment is not currently in service.				
	Yes	No	N/A [Not In Service]	If No, explain:
<b>Facility Equipment</b>				
Is the Fish Return System satisfactory?			✓	
Are the Bar Screens satisfactory?			✓	
Are the Traveling Screens satisfactory?			✓	
Are the Electrical Components satisfactory?			✓	
Are the Pumps and Motors satisfactory?			✓	
	Yes	No		If Yes, explain:
<b>Wildlife and Environment</b>				
Is there a presence of foam?		✓		
Are there any fish mortalities ?		✓		
Is there any oil sheen?		✓		

Inspector: 

Date: 7/8/24

This Form, when completed, SHALL be retained in accordance with the Document Type List Notification.

**ATTACHMENT A**

**WASTEWATER GENERATING PROCESS**

## **Attachment A**

### **Wastewater Generating Processes**

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

#### **Outfall 001 – Main Cooling Reservoir**

Outfall 001 is the discharge point for the 7,000-acre main cooling reservoir. This reservoir is part of the main recirculating cooling water loop used to remove heat from the steam-electric generating units. There has not been a discharge from Outfall 001 since March 1997 other than minor permitted leakage through the closed spillway gates and relief wells. If a discharge were to occur, blowdown from the main cooling reservoir would make up the largest percentage of wastewater. A discharge from Outfall 001 would flow to the Colorado River (Colorado River Tidal in Segment 1401 of the Colorado River Basin).

All internal outfalls (Outfalls 101, 201, 401, and 601) discharge to the main cooling reservoir. Outfall 501 would also discharge to the reservoir via Outfall 101 but has not discharged since 1992.

#### **Outfalls 101 and 201 – Low Volume Wastewater**

Low volume wastewater results from water treatment operations, boiler blowdown, HVAC blowdown, floor drains, SPCC sources and their associated oily water treatment system discharges, and other miscellaneous sources. Boiler blowdown is from one auxiliary steam boiler, released to reduce impurities in the water that can cause corrosion and boiler tube failure. Service water is demineralized and regeneration of the demineralizer resin beds produces an acidic and caustic wastewater that is treated at the neutralization basins along with boiler blowdown. The floor drain system captures condensate and water from production and maintenance areas that may contain oil or grease, which is then transported to the oily waste treatment system where the oil is separated from the water. The first flush of stormwater from some production and storage areas is also treated in the oily waste system. Other non-process stormwater flow is directed through designated storm water outfalls.

#### **Outfalls 401 and 601 – Treated Domestic Wastewater**

Domestic wastewater is treated onsite in two package treatment systems consisting of aeration, clarification, and disinfection. Car wash water, air conditioning condensate, HVAC cooling tower blowdown, and stormwater are commingled with the domestic wastewater prior to treatment.

#### **Outfall 501 – Metal Cleaning Waste**

Metal cleaning waste has not been discharged since 1992. Metal cleaning using chemical or nonchemical liquids produces a waste that would be discharged through Outfall 501 to the neutralization basins (Outfall 101). Stormwater may also be discharge through Outfall 501.

#### **Outfalls 002 through 006 – Main Cooling Reservoir (MCR) Relief Well Effluent**

MCR relief well effluent is collected from the perimeter of the MCR and discharged via Outfalls 002 through 006 without treatment. Outfall 002 is also authorized to discharge demineralized water from instrumentation.

**ATTACHMENT B**

**WASTEWATER TREATMENT PROCESS**

**Attachment B**  
**Wastewater Treatment Process**

2.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.

<b>Treatment System</b>	<b>Outfall</b>	<b>Unit Dimensions</b>	<b>Treatment Processes</b>
Main Cooling Reservoir	001	7,000 acre pond (irregular)	Heat Dissipation Reuse/Recycle
Low Volume Waste Metal Cleaning Wastes** Neutralization Basin	101	2-Neutralization Basins (300,000 gallons each) 68' x 42' x 16'	Neutralization* Mixing* Sedimentation
Low Volume Waste Oily Waste Treatment System	201	Gross Oil Separator (API) 13,000 gallons 24" x 8' x 7'	Equalization Flotation Skimming* Sedimentation
		Tricellerator (DAF) 3,800 gallons 9' dia x 8'	Dissolved air flotation Coagulation*
		Effluent Tank 850 gallons 5' dia x 6'	Multi-media Filtration
West Sanitary Waste Treatment System	401	2-Aeration Basins 63" x 12" x 11'6"	Screening Activated Sludge
		2 Clarifiers 16' dia x 11'6"	Sedimentation
		Primary Chlorine Contact Chamber 6" x 12' x 11'6"	Disinfection***
		Secondary Chlorine Contact Chamber 4' dia x 4'3"	Disinfection***
Metal Cleaning Waste**	501	Organic Basin Approx. 1,000,000 gallons 100' x 80' x 17'6"	Equalization Mixing* Aeration*
		Inorganic Basin Approx. 50,000 gallons 25' x 25' x 13'3"	Coagulation* Chemical Precipitation* Sedimentation
		Treatment Tanks (possible future use)	Not determined at this time.
Training Sanitary Waste Treatment System	601	2-Aeration Basins 54'6" x 12' x 13'3"	Screening Activated Sludge
		1-Clarifier 20' dia x 13'3"	Sedimentation
		Chlorine Contact Chamber 5.9' x 3.4' x 11.2'	Disinfection***

Note: Chlorine may be used intermittently to control algae growth in treatment units.

\* Treatment process may be used based on influent characteristics.

\*\* Outfall 501 is routed to Outfall 101. There have been no discharges from Outfall 501 since December 1992.

\*\*\* Disinfection may include sodium hypochlorite or calcium hypochlorite.

**ATTACHMENT C**  
**CHEMICAL SUMMARY AND SDS**

**Attachment C**  
**Chemical Summary and SDS**

5.b. 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.

**Treatment Chemicals (Outfall 001)**

Product Name	Manufacturer	Use	Components Listed in SDS	CAS	Frequency of Use	Toxicity Data In SDS	Product Concentration
Sodium Hypochlorite	Univar	Biocide	Sodium Hypochlorite	7681-52-9	3 times per day for 20 minutes	Yes	0.15 ppm to 1 ppm total residual chlorine and free chlorine to ECW and CW open loop systems
			Sodium Hydroxide	1310-73-2			
1359 Plus	Nalco	Corrosion inhibitor	Sodium nitrite	7632-00-0	As needed to maintain concentration	No	500 ppm to 1500 ppm sodium nitrite concentration to closed loop systems
			Sodium metaborate	7775-19-1			
19H	Nalco	Oxygen scavenger	Hydrazine	302-01-2	Continuous	Yes	0.1 ppm to feedwater
LCS-60	Nalco	Corrosion inhibitor	Sodium Nitrite	7632-00-0	As needed to maintain concentration	No	500 ppm to 1500 ppm sodium nitrite concentration to closed loop systems
			Sodium Tetraborate	1330-43-4			
9353	Nalco	Scale inhibitor/dispersant	Polyacrylic Acid	N/A	Continuous	No	0.25 ppm federate as product to CW and ECW open loop systems
ACTI-BROM 1318	Nalco	Biocide	Sodium bromide	7647-15-6	3 times per day for 20 minutes	Yes	0.15 ppm to 1 ppm total residual chlorine and free chlorine to ECW and CW open loop systems
B-2200	Varichem	Algaecide	Ethyl Alcohol	64-17-S	Batch treated as needed	No	5 ppm to NSC cooling tower
Bromo Tabs	Varichem	Biocide	2,4-Imidazolidinedione, 1-Bromo-3-chloro-5,5-dimethyl-	16079-88-2	Continuous	No	0.5 ppm to 2 ppm to NSC cooling tower
SC-2310	Varichem	Scale and corrosion inhibitor	None listed	N/A	Continuous	No	80 ppm to 120 ppm



**Attachment C**  
**Chemical Summary and SDS**

Product Name	Manufacturer	Use	Components Listed in SDS	CAS	Frequency of Use	Toxicity Data In SDS	Product Concentration
H-130M	Nalco	Biocide	Didecyl-Dimethyl-Ammonium chloride	7173-51-5	Batch treatment 2x a year	Yes	4 ppm as product (2.5 ppm as active) to aux. cooling system for 8 hours twice per year.
			Ethanol	64-17-5			
77352NA	Nalco	Isothiazolin	Magnesium Nitrate	10377-60-3	Batch treated as needed	Yes	300 ppm in closed loop systems
			2-Methyl-4-Isothiazolin-3-one	2682-20-4			
			5-Chloro-2-Methyl-4-Isothiazolin-3-one	26172-55-4			
			Magnesium Chloride	7786-30-3			
Optisperse PWR6600	GE Betz	Dispersant	Monoethanolamine	141-43-5	Batch treatment 2x per unit per refueling cycle	Yes	3.5 ppb to feedwater
			Polyacrylic Acid	N/A			
3D Trasar 3DT198	Nalco	Corrosion Inhibitor	Sodium Tolytriazole	64665-57-2	Continuous	Yes	25 to 100 ppm in cooling systems
Monoethanolamine (ETA) 7080HP	Nalco	Corrosion inhibitor/pH control	Monoethanolamine	141-43-5	Continuous	Yes	4 ppm in the secondary system
Ferrous Sulfate	Brenntag	Corrosion Inhibitor	Ferric Sulfate Solution	7782-63-0	Batch 1x per week	No	1 ppm to ECW open loop system
3D Trasar 3DT397	Nalco	Corrosion Inhibitor	Modified benzimidazole salt	N/A	Batch treatment as needed	Yes	1 ppm to ECW open loop system
			Organic Sulfonic Acid	N/A			
			Acetic Acid	64-19-7			
Nalco H-550	Nalco	Biocide	Glutaraldehyde	111-30-8	Batch treat as needed	Yes	100-200 ppm in closed loop systems
			Methanol	67-56-1			
3D Trasar 3DT465	Nalco	Corrosion/Scale Inhibitor	2-phosphono-1,2,4-Butanetricarboxylic acid Sodium HEDP	37971-36-1 29329-71-3	Batch treat as needed	Yes	2 ppm to 4.5 ppm to temporary cooling towers
3D Trasar 3DT265	Nalco	Corrosion/Scale Inhibitor	2-Phosphono-1,2,4-Butanetricarboxylic Acid	37971-36-1	Batch treat as needed	Yes	2 ppm to 4.5 ppm to temporary cooling towers

**Attachment C**  
**Chemical Summary and SDS**

Product Name	Manufacturer	Use	Components Listed in SDS	CAS	Frequency of Use	Toxicity Data In SDS	Product Concentration
Cat Flocc 8103 Plus	Nalco	Water Treatment Flocculant	N/A	N/A	Continuous	Yes	0.5 ppm to 3 ppm to fresh water system
Nalco GR-105	Nalco	Water Treatment Polymer	Hydrotreated Light Distillate	64742-47-8	Continuous	Yes	2 ppm to 30 ppm in the oily waste system
			Oxyalkylated alcohol	N/A			
Ultrion 8187	Nalco	Water Clarification	Aluminum Chloride Hydroxide	12042-91-0	Continuous	Yes	50 ppm to 80 ppm to oily waste system
Quantum Organic Descaler	Wheelhouse	Scale Remover/Condenser Cleaning	Deionized Water	7732-18-5	Batch only during condenser chemical cleaning, expected 1x per unit during the next 5 years	Yes	Concentrated, used for cleaning, then disposed to the Reservoir
			Alcohol Solvent	N/A			
			Alkanolamine	144538-83-0			
			Organic Acid	N/A			
			Tall Oil Fatty Acid Potassium	61790-12-3			
			Surfactant	N/A			
			Nonionic Surfactant	N/A			
			Citric Acid	77-92-9			
			Formic Acid	64-18-6			
Purate	Nalco	Biocide Precursor	Sodium Chlorate	7775-09-9	Batch treat daily	Yes	0.4 ppm to 0.7 ppm to Reservoir as chlorine dioxide
			Hydrogen Peroxide	7722-84-1			
Sulfuric Acid	Brenntag	Biocide Precursor	Sulfuric Acid	7664-93-9	Batch treat daily	No	0.4 ppm to 0.7 ppm to Reservoir as chlorine dioxide



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.

### Manufacturer/Importer/Supplier/Distributor Information

Univar

3075 Highland Pkwy STE 200

Downers Grove, IL 60515

425-889-3400

**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 metal Category 1

#### Health Hazards

Acute toxicity (Oral) Category 5

Skin Corrosion/Irritation Category 1

Serious Eye Damage/Eye Irritation Category 1

**Environmental Hazards** Acute hazards to the aquatic environment Category 1

Chronic hazards to the aquatic environment Category 1

environment

## 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.  
May be harmful if swallowed.  
Very toxic to aquatic life with long lasting effects.  
Very toxic to aquatic life.

### Precautionary Statements

### 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 [or shower]. Immediately call a POISON CENTER/doctor. 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

**General information:** Get medical advice/attention.

**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.

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**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:** Use personal protective equipment as required. Do not taste or swallow. Wash hands thoroughly after handling. 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/m <sup>3</sup>	US. Tennessee. OELs. Occupational Exposure Limits, Table Z1A (06 2008)
Sodium hydroxide - Particulate.	ST ESL	20 µg/m <sup>3</sup>	US. Texas. Effects Screening Levels (Texas Commission on Environmental Quality) (02 2013)
	AN ESL	2 µg/m <sup>3</sup>	US. Texas. Effects Screening Levels (Texas Commission on Environmental Quality) (02 2013)
Sodium hydroxide	Ceiling	2 mg/m <sup>3</sup>	US. California Code of Regulations, Title 8, Section 5155. Airborne Contaminants (02 2012)
	Ceiling	2 mg/m <sup>3</sup>	US. ACGIH Threshold Limit Values (03 2016)
	Ceil_Tim e	2 mg/m <sup>3</sup>	US. NIOSH: Pocket Guide to Chemical Hazards (2010)
	PEL	2 mg/m <sup>3</sup>	US. OSHA Table Z-1 Limits for Air Contaminants (29 CFR 1910.1000) (03 2016)
	Ceiling	2 mg/m <sup>3</sup>	US. OSHA Table Z-1-A (29 CFR 1910.1000) (1989)

#### Appropriate Engineering Controls

Adequate ventilation should be provided so that exposure limits are not exceeded.

#### 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:

Chemical resistant clothing

**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

<b>Physical state:</b>	liquid
<b>Form:</b>	liquid
<b>Color:</b>	Pale yellow-green, Clear
<b>Odor:</b>	Odor of chlorine
<b>Odor threshold:</b>	No data available.
<b>pH:</b>	10 - 12
<b>Melting point/freezing point:</b>	-20 °C
<b>Initial boiling point and boiling range:</b>	> 107 °C
<b>Flash Point:</b>	No data available.
<b>Evaporation rate:</b>	No data available.
<b>Flammability (solid, gas):</b>	No data available.
<b>Upper/lower limit on flammability or explosive limits</b>	
<b>Flammability limit - upper (%):</b>	No data available.
<b>Flammability limit - lower (%):</b>	No data available.
<b>Explosive limit - upper (%):</b>	No data available.
<b>Explosive limit - lower (%):</b>	No data available.
<b>Vapor pressure:</b>	No data available.
<b>Vapor density:</b>	No data available.
<b>Relative density:</b>	1.224
<b>Solubility(ies)</b>	
<b>Solubility in water:</b>	Soluble
<b>Solubility (other):</b>	No data available.
<b>Partition coefficient (n-octanol/water):</b>	No data available.
<b>Auto-ignition temperature:</b>	No data available.
<b>Decomposition temperature:</b>	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:	Stable
Conditions to avoid:	Avoid heat or contamination.
Incompatible Materials:	Oxidizers, acids Ammonia. Amines.
Hazardous Decomposition Products:	By heating and fire, toxic vapors/gases may be formed.

## 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:	LD 50 (Rat): 3 - 5 g/kg
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##### Dermal

Product:	LD 50 (Rabbit): > 2 g/kg
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##### Inhalation

Product:	May be harmful if inhaled.
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##### Repeated dose toxicity

Product:	No data available.
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##### Skin Corrosion/Irritation

Product:	Causes severe skin burns.
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##### Serious Eye Damage/Eye Irritation

Product:	Causes serious eye damage.
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##### Respiratory or Skin Sensitization

Product:	Not a skin sensitizer.
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##### Carcinogenicity

Product:	No data available.
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**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:** LC 50 (Shiner perch (*Cymatogaster aggregata*), 96 h): 0.033 - 0.097 mg/l LC 50 (Bluegill (*Lepomis macrochirus*), 48 h): 0.6 mg/l

**Aquatic Invertebrates**

**Product:** LC 50 (Aquatic crustacea): 1 mg/l LC 50 (*Daphnia magna*, 96 h): 2.1 mg/l

**Chronic hazards to the aquatic environment:**

**Fish**

**Product:** No data available.

**Aquatic Invertebrates**

**Product:** No data available.

**Toxicity to Aquatic Plants**

**Product:** EC 50 (Green algae (*Dunaliella bioculata*), 24 h): 0.6 mg/l

**Persistence and Degradability**

**Biodegradation**

<b>Product:</b>	The product solely consists of inorganic compounds which are not biodegradable.
<b>BOD/COD Ratio</b>	
<b>Product:</b>	No data available.
<b>Bioaccumulative potential</b>	
<b>Bioconcentration Factor (BCF)</b>	
<b>Product:</b>	The product is not bioaccumulating.
<b>Partition Coefficient n-octanol / water (log Kow)</b>	
<b>Product:</b>	No data available.
<b>Mobility in soil:</b>	No data available.
<b>Known or predicted distribution to environmental compartments</b>	
Sodium hypochlorite	No data available.
Sodium hydroxide	No data available.
Water	No data available.
<b>Known or predicted distribution to environmental compartments</b>	
Water	No data available.

### 13. Disposal considerations

<b>Disposal instructions:</b>	Discharge, treatment, or disposal may be subject to national, state, or local laws.
<b>Contaminated Packaging:</b>	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(Sodium hypochlorite)
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(Sodium hypochlorite)  
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 Regulations 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):**

Sodium hypochlorite Reportable quantity: 100 lbs.  
Sodium hydroxide Reportable quantity: 1000 lbs.

**Superfund Amendments and Reauthorization Act of 1986 (SARA)**

**Hazard categories**

☒ Acute (Immediate) ☐ Chronic (Delayed) ☐ Fire ☐ Reactive ☐ Pressure Generating

**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.

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## 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

<b>Inventory Status:</b> Australia AICS:	On or in compliance with the inventory
Canada DSL Inventory List:	On or in compliance with the inventory
EU EINECS List:	On or in compliance with the inventory
EU ELINCS List:	On or in compliance with the inventory
Japan (ENCS) List:	On or in compliance with the inventory
EU No Longer Polymers List:	Not in compliance with the inventory.
China Inv. Existing Chemical Substances:	On or in compliance with the inventory
Korea Existing Chemicals Inv. (KECI):	On or in compliance with the inventory
Canada NDSL Inventory:	Not in compliance with the inventory.
Philippines PICCS:	On or in compliance with the inventory
New Zealand Inventory of Chemicals:	On or 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**

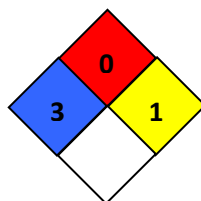
**HMIS Hazard ID**





<b>Health</b>	<b>3</b>
<b>Flammability</b>	<b>0</b>
<b>Physical Hazards</b>	<b>1</b>
<b>PERSONAL PROTECTION</b>	<b>B</b>

B - Safety Glasses & Gloves

Hazard rating: 0 - Minimal; 1 - Slight; 2 - Moderate; 3 - Serious; 4 - Severe; RNP - Rating not possible; \*Chronic health effect

**NFPA Hazard ID**



	Flammability
	Health
	Reactivity
	Special hazard.

Hazard rating: 0 - Minimal; 1 - Slight; 2 - Moderate; 3 - Serious; 4 - Severe; RNP - Rating not possible

**Issue Date:** 08/08/2019  
**Revision Date:** No data available.  
**Version #:** 1.9  
**Further Information:** No data available.



# Univar USA Inc Safety Data Sheet

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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

PRODUCT

NALCO 1359 PLUS

EMERGENCY TELEPHONE NUMBER(S)

(800) 424-9300 (24 Hours) CHEMTREC

**1. CHEMICAL PRODUCT AND COMPANY IDENTIFICATION**

PRODUCT NAME : NALCO 1359 PLUS

APPLICATION : CORROSION INHIBITOR

COMPANY IDENTIFICATION :  
Nalco Company  
1601 W. Diehl Road  
Naperville, Illinois  
60563-1198

EMERGENCY TELEPHONE NUMBER(S) : (800) 424-9300 (24 Hours) CHEMTREC

NFPA 704M/HMIS RATING

HEALTH : 3 / 3 FLAMMABILITY : 0 / 0 INSTABILITY : 0 / 0 OTHER :  
0 = Insignificant 1 = Slight 2 = Moderate 3 = High 4 = Extreme \* = Chronic Health Hazard

**2. COMPOSITION/INFORMATION ON INGREDIENTS**

Our hazard evaluation has identified the following chemical substance(s) as hazardous. Consult Section 15 for the nature of the hazard(s).

Hazardous Substance(s)	CAS NO	% (w/w)
Sodium Nitrite	7632-00-0	10.0 - 30.0
Sodium Metaborate	7775-19-1	5.0 - 10.0

**3. HAZARDS IDENTIFICATION****\*\*EMERGENCY OVERVIEW\*\*****DANGER**

Toxic if swallowed. Irritating to eyes and skin. Contains sodium nitrite. Substances in the product can lead to the formation of methemoglobin. Unborn children are particularly sensitive to methemoglobinemia.

Do not get in eyes, on skin, on clothing. Do not take internally. Use with adequate ventilation. In case of contact with eyes, rinse immediately with plenty of water and seek medical advice. After contact with skin, wash immediately with plenty of water.

Wear suitable protective clothing.

Not flammable or combustible. May evolve oxides of nitrogen (NOx) under fire conditions. If product is allowed to dry, the sodium nitrite is an oxidizing agent and can initiate the combustion of other materials.

PRIMARY ROUTES OF EXPOSURE :

Eye, Skin

HUMAN HEALTH HAZARDS - ACUTE :

EYE CONTACT :

Irritating, and may injure eye tissue if not removed promptly.

Nalco Company 1601 W. Diehl Road • Naperville, Illinois 60563-1198 • (630)305-1000

For additional copies of an MSDS visit [www.nalco.com](http://www.nalco.com) and request access.



## SAFETY DATA SHEET

PRODUCT

**NALCO 1359 PLUS**

EMERGENCY TELEPHONE NUMBER(S)

(800) 424-9300 (24 Hours) CHEMTREC

### SKIN CONTACT :

Can cause mild irritation.

### INGESTION :

Not a likely route of exposure. Large exposures may be fatal. Ingestion of sodium nitrite can cause methemoglobinemia which can lead to cyanosis and possible death. Pregnant women and their fetuses are particularly sensitive to the effects of methemoglobinemia.

### INHALATION :

Not a likely route of exposure. Aerosols or product mist may irritate the upper respiratory tract.

### SYMPTOMS OF EXPOSURE :

#### Acute :

A review of available data does not identify any symptoms from exposure not previously mentioned.

#### Chronic :

A review of available data does not identify any symptoms from exposure not previously mentioned.

### AGGRAVATION OF EXISTING CONDITIONS :

Sodium Nitrite. Pregnant women are particularly sensitive to methemoglobinemia.

### HUMAN HEALTH HAZARDS - CHRONIC :

Repeated ingestion of small amounts of sodium nitrite causes drops in blood pressure, rapid pulse, headaches and visual disturbances. It may also react with organic amines in the body to form carcinogenic nitrosamines.

## 4. FIRST AID MEASURES

### EYE CONTACT :

Immediately flush eye with water for at least 15 minutes while holding eyelids open. If irritation persists, repeat flushing. Get medical attention.

### SKIN CONTACT :

Immediately flush with plenty of water for at least 15 minutes. If symptoms persist, call a physician.

### INGESTION :

Do not induce vomiting without medical advice. If conscious, washout mouth and give water to drink. Get immediate medical attention.

### INHALATION :

Remove to fresh air, treat symptomatically. If symptoms develop, seek medical advice.

### NOTE TO PHYSICIAN :

Based on the individual reactions of the patient, the physician's judgement should be used to control symptoms and clinical condition. Measures against circulatory shock, respiratory depression and convulsions may be needed.



## SAFETY DATA SHEET

PRODUCT

**NALCO 1359 PLUS**

EMERGENCY TELEPHONE NUMBER(S)

(800) 424-9300 (24 Hours) CHEMTREC

### 5. FIRE FIGHTING MEASURES

FLASH POINT : None

EXTINGUISHING MEDIA :

Not expected to burn. Use extinguishing media appropriate for surrounding fire.

FIRE AND EXPLOSION HAZARD :

Not flammable or combustible. May evolve oxides of nitrogen (NO<sub>x</sub>) under fire conditions. If product is allowed to dry, the sodium nitrite is an oxidizing agent and can initiate the combustion of other materials.

SPECIAL PROTECTIVE EQUIPMENT FOR FIRE FIGHTING :

In case of fire, wear a full face positive-pressure self contained breathing apparatus and protective suit.

### 6. ACCIDENTAL RELEASE MEASURES

PERSONAL PRECAUTIONS :

Restrict access to area as appropriate until clean-up operations are complete. Ensure clean-up is conducted by trained personnel only. Ventilate spill area if possible. Do not touch spilled material. Stop or reduce any leaks if it is safe to do so. Use personal protective equipment recommended in Section 8 (Exposure Controls/Personal Protection). Notify appropriate government, occupational health and safety and environmental authorities.

METHODS FOR CLEANING UP :

**SMALL SPILLS:** Soak up spill with absorbent material. Place residues in a suitable, covered, properly labeled container. Wash affected area. **LARGE SPILLS:** Contain liquid using absorbent material, by digging trenches or by diking. Reclaim into recovery or salvage drums or tank truck for proper disposal. Wash site of spillage thoroughly with water. Contact an approved waste hauler for disposal of contaminated recovered material. Dispose of material in compliance with regulations indicated in Section 13 (Disposal Considerations).

ENVIRONMENTAL PRECAUTIONS :

Do not contaminate surface water.

### 7. HANDLING AND STORAGE

HANDLING :

Do not get in eyes, on skin, on clothing. Do not take internally. Use with adequate ventilation. Do not breathe vapors/gases/dust. Keep the containers closed when not in use. Have emergency equipment (for fires, spills, leaks, etc.) readily available. Ensure all containers are labeled.

STORAGE CONDITIONS :

Store the containers tightly closed. Store in suitable labeled containers. Store separately from acids. Store separately from reducing agents.

### 8. EXPOSURE CONTROLS/PERSONAL PROTECTION

OCCUPATIONAL EXPOSURE LIMITS :

This product does not contain any substance that has an established exposure limit.

**SAFETY DATA SHEET****PRODUCT****NALCO 1359 PLUS****EMERGENCY TELEPHONE NUMBER(S)****(800) 424-9300 (24 Hours) CHEMTREC****ENGINEERING MEASURES :**

General ventilation is recommended.

**RESPIRATORY PROTECTION :**

Respiratory protection is not normally needed.

**HAND PROTECTION :**

When handling this product, the use of chemical gauntlets is recommended. The choice of work glove depends on work conditions and what chemicals are handled, but we have positive experience under light handling conditions using gloves made from Neoprene PVC or nitrile. Gloves should be replaced immediately if signs of degradation are observed. Breakthrough time not determined as preparation, consult PPE manufacturers.

**SKIN PROTECTION :**

When handling this product, the use of overalls, a chemical resistant apron and rubber boots is recommended. A full slicker suit is recommended if gross exposure is possible.

**EYE PROTECTION :**

Wear chemical splash goggles.

**HYGIENE RECOMMENDATIONS :**

Use good work and personal hygiene practices to avoid exposure. Keep an eye wash fountain available. Keep a safety shower available. If clothing is contaminated, remove clothing and thoroughly wash the affected area. Launder contaminated clothing before reuse. Always wash thoroughly after handling chemicals. When handling this product never eat, drink or smoke.

**HUMAN EXPOSURE CHARACTERIZATION :**

Based on our recommended product application and personal protective equipment, the potential human exposure is: Moderate

**9. PHYSICAL AND CHEMICAL PROPERTIES**

PHYSICAL STATE      Liquid

APPEARANCE          Light yellow

ODOR

SPECIFIC GRAVITY      1.305 @ 72 °F / 22.2 °C

DENSITY                10.84 lb/gal

SOLUBILITY IN WATER   Complete

pH (100 %)            &gt;= 11.4

VISCOSITY              Max 7 cps @ 73 °F / 22.8 °C

FREEZING POINT       &lt; -50 °F / -45.5 °C

VAPOR PRESSURE       Same as water

Note: These physical properties are typical values for this product and are subject to change.



## SAFETY DATA SHEET

### PRODUCT

**NALCO 1359 PLUS**

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## 10. STABILITY AND REACTIVITY

### STABILITY :

Stable under normal conditions.

### HAZARDOUS POLYMERIZATION :

Hazardous polymerization will not occur.

### CONDITIONS TO AVOID :

Freezing temperatures. Do not allow product to evaporate to dryness. Dried product residue can act as an oxidizer.

### MATERIALS TO AVOID :

Contact with reducing agents (e.g. hydrazine, sulfites, sulfide, aluminum or magnesium dust) may generate heat, fires, explosions and toxic vapors. Do not mix with amines. Sodium nitrite can react with certain amines to produce N-nitrosamines, many of which are cancer-causing agents to laboratory animals. Contact with strong acids (e.g. sulfuric, phosphoric, nitric, hydrochloric, chromic, sulfonic) may generate heat, splattering or boiling and toxic vapors.

### HAZARDOUS DECOMPOSITION PRODUCTS :

Under fire conditions: Oxides of nitrogen

## 11. TOXICOLOGICAL INFORMATION

No toxicity studies have been conducted on this product.

### SENSITIZATION :

This product is not expected to be a sensitizer.

### CARCINOGENICITY :

None of the substances in this product are listed as carcinogens by the International Agency for Research on Cancer (IARC), the National Toxicology Program (NTP) or the American Conference of Governmental Industrial Hygienists (ACGIH).

### HUMAN HAZARD CHARACTERIZATION :

Based on our hazard characterization, the potential human hazard is: High

## 12. ECOLOGICAL INFORMATION

### ECOTOXICOLOGICAL EFFECTS :

No toxicity studies have been conducted on this product.

### MOBILITY :

The environmental fate was estimated using a level III fugacity model embedded in the EPI (estimation program interface) Suite <sup>TM</sup>, provided by the US EPA. The model assumes a steady state condition between the total input and output. The level III model does not require equilibrium between the defined media. The information provided is intended to give the user a general estimate of the environmental fate of this product under the defined conditions of the models.

**SAFETY DATA SHEET****PRODUCT****NALCO 1359 PLUS****EMERGENCY TELEPHONE NUMBER(S)****(800) 424-9300 (24 Hours) CHEMTREC**

If released into the environment this material is expected to distribute to the air, water and soil/sediment in the approximate respective percentages;

Air	Water	Soil/Sediment
<5%	30 - 50%	50 - 70%

The portion in water is expected to be soluble or dispersible.

**ENVIRONMENTAL HAZARD AND EXPOSURE CHARACTERIZATION**

Based on our hazard characterization, the potential environmental hazard is: Moderate

Based on our recommended product application and the product's characteristics, the potential environmental exposure is: High

If released into the environment, see CERCLA/SUPERFUND in Section 15.

**13. DISPOSAL CONSIDERATIONS**

If this product becomes a waste, it could meet the criteria of a hazardous waste as defined by the Resource Conservation and Recovery Act (RCRA) 40 CFR 261. Before disposal, it should be determined if the waste meets the criteria of a hazardous waste.

Hazardous Waste: D002

Hazardous wastes must be transported by a licensed hazardous waste transporter and disposed of or treated in a properly licensed hazardous waste treatment, storage, disposal or recycling facility. Consult local, state, and federal regulations for specific requirements.

**14. TRANSPORT INFORMATION**

The information in this section is for reference only and should not take the place of a shipping paper (bill of lading) specific to an order. Please note that the proper Shipping Name / Hazard Class may vary by packaging, properties, and mode of transportation. Typical Proper Shipping Names for this product are as follows.

**LAND TRANSPORT :**

Proper Shipping Name :	CORROSIVE LIQUID, TOXIC, N.O.S
Technical Name(s) :	SODIUM NITRITE
UN/ID No :	UN 2922
Hazard Class - Primary :	8
Hazard Class - Secondary :	6.1
Packing Group :	III
Flash Point :	None
Reportable Quantity (per package) :	430 lbs
RQ Component :	SODIUM NITRITE

**AIR TRANSPORT (ICAO/IATA) :**

Proper Shipping Name :	CORROSIVE LIQUID, TOXIC, N.O.S
------------------------	--------------------------------

**Nalco Company** 1601 W. Diehl Road • Naperville, Illinois 60563-1198 • (630)305-1000

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**SAFETY DATA SHEET**

PRODUCT

**NALCO 1359 PLUS**

EMERGENCY TELEPHONE NUMBER(S)

(800) 424-9300 (24 Hours) CHEMTREC

Technical Name(s) :	SODIUM NITRITE
UN/ID No :	UN 2922
Hazard Class - Primary :	8
Hazard Class - Secondary :	6.1
Packing Group :	III
Reportable Quantity (per package) :	430 lbs
RQ Component :	SODIUM NITRITE

**MARINE TRANSPORT (IMDG/IMO) :**

Proper Shipping Name :	CORROSIVE LIQUID, TOXIC, N.O.S
Technical Name(s) :	SODIUM NITRITE
UN/ID No :	UN 2922
Hazard Class - Primary :	8
Hazard Class - Secondary :	6.1
Packing Group :	III

**15. REGULATORY INFORMATION**

This section contains additional information that may have relevance to regulatory compliance. The information in this section is for reference only. It is not exhaustive, and should not be relied upon to take the place of an individualized compliance or hazard assessment. Nalco accepts no liability for the use of this information.

**NATIONAL REGULATIONS, USA :****OSHA HAZARD COMMUNICATION RULE, 29 CFR 1910.1200 :**

Based on our hazard evaluation, the following substance(s) in this product is/are hazardous and the reason(s) is/are shown below.

Sodium Nitrite : Target Organ Effect - Kidney, Target Organ Effect - Nervous system, Target Organ Effect - Blood  
Sodium Metaborate : Irritant

**CERCLA/SUPERFUND, 40 CFR 302 :**

This product contains the following Reportable Quantity (RQ) Substance. Also listed is the RQ for the product.

<u>RQ Substance</u>	<u>RQ</u>
Sodium Nitrite	430 lbs

**SARA/SUPERFUND AMENDMENTS AND REAUTHORIZATION ACT OF 1986 (TITLE III) - SECTIONS 302, 311, 312, AND 313 :**

**SECTION 302 - EXTREMELY HAZARDOUS SUBSTANCES (40 CFR 355) :**

This product does not contain substances listed in Appendix A and B as an Extremely Hazardous Substance.

**SECTIONS 311 AND 312 - MATERIAL SAFETY DATA SHEET REQUIREMENTS (40 CFR 370) :**

Our hazard evaluation has found this product to be hazardous. The product should be reported under the following indicated EPA hazard categories:

X	Immediate (Acute) Health Hazard
---	---------------------------------

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- X Delayed (Chronic) Health Hazard
- Fire Hazard
- Sudden Release of Pressure Hazard
- Reactive Hazard

Under SARA 311 and 312, the EPA has established threshold quantities for the reporting of hazardous chemicals. The current thresholds are: 500 pounds or the threshold planning quantity (TPQ), whichever is lower, for extremely hazardous substances and 10,000 pounds for all other hazardous chemicals.

**SECTION 313 - LIST OF TOXIC CHEMICALS (40 CFR 372) :**

This product contains the following substance(s), (with CAS # and % range) which appear(s) on the List of Toxic Chemicals

<u>Hazardous Substance(s)</u>	<u>CAS NO</u>	<u>% (w/w)</u>
Sodium Nitrite	7632-00-0	10.0 - 30.0

**TOXIC SUBSTANCES CONTROL ACT (TSCA) :**

The substances in this preparation are included on or exempted from the TSCA 8(b) Inventory (40 CFR 710)

FEDERAL WATER POLLUTION CONTROL ACT, CLEAN WATER ACT, 40 CFR 401.15 / formerly Sec. 307, 40 CFR 116.4 / formerly Sec. 311 :

This product contains the following substances listed in the regulation. Additional components may be unintentionally present at trace levels.

Substance(s)	Citations
<ul style="list-style-type: none"><li>Sodium Nitrite</li><li>Sodium Hydroxide</li></ul>	Sec. 311

CLEAN AIR ACT, Sec. 112 (Hazardous Air Pollutants, as amended by 40 CFR 63), Sec. 602 (40 CFR 82, Class I and II Ozone Depleting Substances) :

Substances listed under this regulation are not intentionally added or expected to be present in this product. Listed components may be present at trace levels.

**CALIFORNIA PROPOSITION 65 :**

Substances listed under California Proposition 65 are not intentionally added or expected to be present in this product.

**MICHIGAN CRITICAL MATERIALS :**

Substances listed under this regulation are not intentionally added or expected to be present in this product. Listed components may be present at trace levels.

**STATE RIGHT TO KNOW LAWS :**

The following substances are disclosed for compliance with State Right to Know Laws:

Sodium Nitrite	7632-00-0
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### INTERNATIONAL CHEMICAL CONTROL LAWS :

#### CANADIAN ENVIRONMENTAL PROTECTION ACT (CEPA) :

The substances in this preparation are listed on the Domestic Substances List (DSL), are exempt, or have been reported in accordance with the New Substances Notification Regulations.

#### AUSTRALIA

All substances in this product comply with the National Industrial Chemicals Notification & Assessment Scheme (NICNAS).

#### EUROPE

The substances in this preparation have been reviewed for compliance with the EINECS or ELINCS inventories.

#### JAPAN

All substances in this product comply with the Law Regulating the Manufacture and Importation Of Chemical Substances and are listed on the Existing and New Chemical Substances list (ENCS).

#### KOREA

All substances in this product comply with the Toxic Chemical Control Law (TCCL) and are listed on the Existing Chemicals List (ECL)

#### PHILIPPINES

All substances in this product comply with the Republic Act 6969 (RA 6969) and are listed on the Philippines Inventory of Chemicals & Chemical Substances (PICCS).

## 16. OTHER INFORMATION

Due to our commitment to Product Stewardship, we have evaluated the human and environmental hazards and exposures of this product. Based on our recommended use of this product, we have characterized the product's general risk. This information should provide assistance for your own risk management practices. We have evaluated our product's risk as follows:

\* The human risk is: Moderate

\* The environmental risk is: Moderate

Any use inconsistent with our recommendations may affect the risk characterization. Our sales representative will assist you to determine if your product application is consistent with our recommendations. Together we can implement an appropriate risk management process.

This product material safety data sheet provides health and safety information. The product is to be used in applications consistent with our product literature. Individuals handling this product should be informed of the recommended safety precautions and should have access to this information. For any other uses, exposures should be evaluated so that appropriate handling practices and training programs can be established to insure safe workplace operations. Please consult your local sales representative for any further information.

### REFERENCES

**SAFETY DATA SHEET****PRODUCT****NALCO 1359 PLUS****EMERGENCY TELEPHONE NUMBER(S)****(800) 424-9300 (24 Hours) CHEMTREC**

Threshold Limit Values for Chemical Substances and Physical Agents and Biological Exposure Indices, American Conference of Governmental Industrial Hygienists, OH., (Ariel Insight™ CD-ROM Version), Ariel Research Corp., Bethesda, MD.

Hazardous Substances Data Bank, National Library of Medicine, Bethesda, Maryland (TOMES CPS™ CD-ROM Version), Micromedex, Inc., Englewood, CO.

IARC Monographs on the Evaluation of the Carcinogenic Risk of Chemicals to Man, Geneva: World Health Organization, International Agency for Research on Cancer.

Integrated Risk Information System, U.S. Environmental Protection Agency, Washington, D.C. (TOMES CPS™ CD-ROM Version),  
Micromedex, Inc., Englewood, CO.

Annual Report on Carcinogens, National Toxicology Program, U.S. Department of Health and Human Services, Public Health Service.

Title 29 Code of Federal Regulations, Part 1910, Subpart Z, Toxic and Hazardous Substances, Occupational Safety and Health Administration (OSHA), (Ariel Insight™ CD-ROM Version), Ariel Research Corp., Bethesda, MD.

Registry of Toxic Effects of Chemical Substances, National Institute for Occupational Safety and Health, Cincinnati, OH,  
(TOMES CPS™ CD-ROM Version), Micromedex, Inc., Englewood, CO.

Ariel Insight™ (An integrated guide to industrial chemicals covered under major regulatory and advisory programs), North American Module, Western European Module, Chemical Inventories Module and the Generics Module (Ariel Insight™ CD-ROM Version), Ariel Research Corp., Bethesda, MD.

The Teratogen Information System, University of Washington, Seattle, WA (TOMES CPS™ CD-ROM Version), Micromedex, Inc., Englewood, CO.

Prepared By : Product Safety Department

Date issued : 03/01/2012

Version Number : 2.2

## SAFETY DATA SHEET

### NALCO® 19H OXYGEN SCAVENGER

#### Section: 1. PRODUCT AND COMPANY IDENTIFICATION

Product name : NALCO® 19H OXYGEN SCAVENGER

Other means of identification : Not applicable.

Recommended use : OXYGEN SCAVENGER

Restrictions on use : Refer to available product literature or ask your local Sales Representative for restrictions on use and dose limits.

Company : Nalco Company  
1601 W. Diehl Road  
Naperville, Illinois 60563-1198  
USA  
TEL: (630) 305-1000

Emergency telephone number : (800) 424-9300 (24 Hours) CHEMTREC

Issuing date : 01/08/2021

#### Section: 2. HAZARDS IDENTIFICATION

##### GHS Classification

Acute toxicity (Oral) : Category 3  
Acute toxicity (Inhalation) : Category 4  
Acute toxicity (Dermal) : Category 3  
Skin corrosion : Category 1B  
Serious eye damage : Category 1  
Skin sensitization : Category 1  
Carcinogenicity : Category 2

##### GHS Label element

Hazard pictograms : 

Signal Word : Danger

Hazard Statements : Toxic if swallowed or in contact with skin.  
Causes severe skin burns and eye damage.  
May cause an allergic skin reaction.  
Harmful if inhaled.  
Suspected of causing cancer.

Precautionary Statements : **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. Avoid breathing dust/ fume/ gas/ mist/ vapours/ spray. Wash skin thoroughly after handling. Do not eat, drink or smoke when using this product. Use only outdoors or in a well-ventilated area. Contaminated work

## SAFETY DATA SHEET

### NALCO® 19H OXYGEN SCAVENGER

clothing must not be allowed out of the workplace. Wear protective gloves/ protective clothing/ eye protection/ face protection.

**Response:**

IF SWALLOWED: Immediately call a POISON CENTER. Rinse mouth. 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. Immediately call a POISON CENTER/doctor. 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 or doctor/ physician. IF exposed or concerned: Get medical advice/attention. If skin irritation or rash occurs: Get medical attention. Take off immediately all contaminated clothing and wash it before reuse. In case of fire: Use dry sand, dry chemical or alcohol-resistant foam for extinction.

**Storage:**

Store in a well-ventilated place. Keep cool. Store locked up. Protect product from freezing.

**Disposal:**

Dispose of contents/ container to an approved waste disposal plant.

**Other hazards** : None known.

### Section: 3. COMPOSITION/INFORMATION ON INGREDIENTS

Chemical Name	CAS-No.	Concentration: (%)
Hydrazine Monohydrate	7803-57-8	30 - 60

### Section: 4. FIRST AID MEASURES

In case of eye contact	: Rinse immediately with plenty of water, also under the eyelids, for at least 15 minutes. Remove contact lenses, if present and easy to do. Continue rinsing. Get medical attention immediately.
In case of skin contact	: Wash off immediately with plenty of water for at least 15 minutes. Wash clothing before reuse. Thoroughly clean shoes before reuse. Get medical attention immediately.
If swallowed	: Rinse mouth with water. Do NOT induce vomiting. Never give anything by mouth to an unconscious person. Get medical attention immediately.
If inhaled	: Remove to fresh air. Treat symptomatically. Get medical attention immediately.
Protection of first-aiders	: In event of emergency assess the danger before taking action. Do not put yourself at risk of injury. If in doubt, contact emergency responders. Use personal protective equipment as required.
Notes to physician	: Treat symptomatically.
Most important symptoms and effects, both acute and delayed	: See Section 11 for more detailed information on health effects and symptoms.

### Section: 5. FIREFIGHTING MEASURES

## SAFETY DATA SHEET

### NALCO® 19H OXYGEN SCAVENGER

- Suitable extinguishing media : Use extinguishing measures that are appropriate to local circumstances and the surrounding environment.
- Unsuitable extinguishing media : None known.
- Specific hazards during firefighting : Not flammable or combustible.
- Hazardous combustion products : Decomposition products may include the following materials: nitrogen oxides (NOx) Ammonia gas may be liberated at high temperatures. Hydrogen
- Special protective equipment for firefighters : Use personal protective equipment.
- Specific extinguishing methods : Collect contaminated fire extinguishing water separately. This must not be discharged into drains. Fire residues and contaminated fire extinguishing water must be disposed of in accordance with local regulations. In the event of fire and/or explosion do not breathe fumes.

#### Section: 6. ACCIDENTAL RELEASE MEASURES

- Personal precautions, protective equipment and emergency procedures : Ensure adequate ventilation. Keep people away from and upwind of spill/leak. Avoid inhalation, ingestion and contact with skin and eyes. When workers are facing concentrations above the exposure limit they must use appropriate certified respirators. Ensure clean-up is conducted by trained personnel only. Refer to protective measures listed in sections 7 and 8.
- Environmental precautions : Do not allow contact with soil, surface or ground water.
- Methods and materials for containment and cleaning up : Stop leak if safe to do so. Contain spillage, and then collect with non-combustible absorbent material, (e.g. sand, earth, diatomaceous earth, vermiculite) and place in container for disposal according to local / national regulations (see section 13). For large spills, dike spilled material or otherwise contain material to ensure runoff does not reach a waterway. Flush away traces with water.

#### Section: 7. HANDLING AND STORAGE

- Advice on safe handling : Do not ingest. Do not breathe dust/fume/gas/mist/vapours/spray. Do not get in eyes, on skin, or on clothing. Wash hands thoroughly after handling. Use only with adequate ventilation.
- Conditions for safe storage : Keep away from heat and sources of ignition. Keep away from oxidizing agents. Keep out of reach of children. Keep container tightly closed. Store in suitable labelled containers. Protect product from freezing.
- Suitable material : The following compatibility data is suggested based on similar product data and/or industry experience: Polypropylene, Polyethylene, Stainless Steel 304, Stainless Steel 316L, Compatibility with Plastic Materials can vary; we therefore recommend that compatibility is tested prior to use.
- Unsuitable material : The following compatibility data is suggested based on similar product data and/or industry experience: Copper, Brass, Aluminum

## SAFETY DATA SHEET

### NALCO® 19H OXYGEN SCAVENGER

#### Section: 8. EXPOSURE CONTROLS/PERSONAL PROTECTION

##### Components with workplace control parameters

Components	CAS-No.	Form of exposure	Permissible concentration	Basis
Hydrazine	302-01-2	TWA	0.01 ppm	ACGIH
		Ceiling	0.03 ppm 0.04 mg/m3	NIOSH REL
		TWA	1 ppm 1.3 mg/m3	OSHA Z1

Engineering measures : Effective exhaust ventilation system. Maintain air concentrations below occupational exposure standards.

##### Personal protective equipment

Eye protection : Safety goggles  
Face-shield

Hand protection : Wear the following personal protective equipment:  
Standard glove type.  
Gloves should be discarded and replaced if there is any indication of degradation or chemical breakthrough.

Skin protection : Personal protective equipment comprising: suitable protective gloves, safety goggles and protective clothing

Respiratory protection : When workers are facing concentrations above the exposure limit they must use appropriate certified respirators.

Hygiene measures : Handle in accordance with good industrial hygiene and safety practice. Remove and wash contaminated clothing before re-use. Wash face, hands and any exposed skin thoroughly after handling. Provide suitable facilities for quick drenching or flushing of the eyes and body in case of contact or splash hazard.

The Personal Protective Equipment (PPE) recommendations provided above have been made in good faith based on typical expected conditions of use. PPE selection should always be completed in conjunction with a proper risk assessment and in accordance with a PPE management program.

#### Section: 9. PHYSICAL AND CHEMICAL PROPERTIES

Appearance : Liquid

Colour : colourless

Odour : Ammoniacal

Flash point : does not flash

pH : 10.1 - 10.7,(1 %)

Odour Threshold : no data available

Melting point/freezing point : Freezing Point: -65 °C

## SAFETY DATA SHEET

### NALCO® 19H OXYGEN SCAVENGER

Initial boiling point and boiling range : 109 °C, (760 mm Hg)

Evaporation rate : no data available

Flammability (solid, gas) : Not applicable.

Upper explosion limit : > 99.9 V%

Lower explosion limit : 4.7 V%

Vapour pressure : 22 mm Hg, (25 °C),

Relative vapour density : no data available

Relative density : 1.03, (15.6 °C),

Density : 8.56 lb/gal

Water solubility : completely soluble

Solubility in other solvents : no data available

Partition coefficient: n-octanol/water : no data available

Auto-ignition temperature : no data available

Thermal decomposition : no data available

Viscosity, dynamic : 2 mPa.s (15.6 °C)

Viscosity, kinematic : no data available

Molecular weight : no data available

VOC : no data available

### Section: 10. STABILITY AND REACTIVITY

Reactivity : No dangerous reaction known under conditions of normal use.

Chemical stability : Stable under normal conditions.

Possibility of hazardous reactions : No dangerous reaction known under conditions of normal use.

Conditions to avoid : Heat, flames and sparks.  
Freezing temperatures.

Incompatible materials : Contact with strong acids (e.g. sulfuric, phosphoric, nitric, hydrochloric, chromic, sulfonic) may generate heat, splattering or boiling and toxic vapors.  
Contact with strong oxidizers (e.g. chlorine, peroxides, chromates, nitric acid, perchlorate, concentrated oxygen, permanganate) may generate heat, fires, explosions and/or toxic vapors.  
Organic materials  
Gives off hydrogen by reaction with metals.  
Avoid contact with metal oxides such as those of iron, copper, lead, manganese and molybdenum. Such contact may lead to decomposition.

Hazardous decomposition products : In case of fire, hazardous decomposition products may be produced such as: nitrogen oxides (NOx)  
Ammonia gas may be liberated at high temperatures.

## SAFETY DATA SHEET

### NALCO® 19H OXYGEN SCAVENGER

Hydrogen

#### Section: 11. TOXICOLOGICAL INFORMATION

Information on likely routes of exposure : Inhalation, Eye contact, Skin contact

##### Potential Health Effects

Eyes : Causes serious eye damage.

Skin : Toxic in contact with skin. Causes severe skin burns. May cause allergic skin reaction.

Ingestion : Toxic if swallowed. Causes digestive tract burns.

Inhalation : Toxic if inhaled. Harmful if inhaled. May cause nose, throat, and lung irritation.

Chronic Exposure : Suspected of causing genetic defects. Suspected of causing cancer.

##### Experience with human exposure

Eye contact : Redness, Pain, Corrosion

Skin contact : Redness, Pain, Irritation, Corrosion, Allergic reactions

Ingestion : Corrosion, Abdominal pain

Inhalation : Respiratory irritation, Cough

##### Toxicity

###### Product

Acute oral toxicity : LD50 rat: 185 mg/kg  
Test substance: Product

Acute inhalation toxicity : LC50 rat: 1.9 mg/l  
Exposure time: 4 hrs  
Test atmosphere: dust/mist  
Test substance: Product

Acute dermal toxicity : LD50 rabbit: 420 mg/kg  
Test substance: Product

Skin corrosion/irritation : no data available

Serious eye damage/eye irritation : no data available

Respiratory or skin sensitization : no data available

Carcinogenicity

IARC

**Group 2A: Probably carcinogenic to humans**

Hydrazine Monohydrate

7803-57-8

OSHA

No component of this product present at levels greater than or equal to 0.1% is



## SAFETY DATA SHEET

### NALCO® 19H OXYGEN SCAVENGER

on OSHA's list of regulated carcinogens.

NTP

**Reasonably anticipated to be a human carcinogen**  
Hydrazine Monohydrate 7803-57-8

Reproductive effects : no data available  
Germ cell mutagenicity : An ingredient in this product has shown positive results in a screening test for mutagenicity.  
Teratogenicity : no data available  
STOT - single exposure : no data available  
STOT - repeated exposure : no data available  
Aspiration toxicity : no data available

### Section: 12. ECOLOGICAL INFORMATION

#### Toxicity

Environmental Effects : Very toxic to aquatic life with long lasting effects.

#### Product

Toxicity to fish : LC50 *Lepomis macrochirus* (Bluegill sunfish): 4.2 mg/l  
Exposure time: 96 hrs  
Test substance: Product

LC50 *Oncorhynchus mykiss* (rainbow trout): 4.3 mg/l  
Exposure time: 96 hrs  
Test substance: Product

LC50 *Leuciscus idus* (Golden orfe): 0.75 mg/l  
Exposure time: 96 hrs  
Test substance: Product

Toxicity to daphnia and other aquatic invertebrates : LC50 *Daphnia magna* (Water flea): 0.46 mg/l  
Exposure time: 48 hrs  
Test substance: Product

LC50 *Daphnia magna* (Water flea): 0.81 mg/l  
Exposure time: 48 hrs  
Test substance: Product

#### Persistence and degradability

The organic portion of this preparation is expected to be readily biodegradable.

#### Mobility

The environmental fate was estimated using a level III fugacity model embedded in the EPI (estimation program interface) Suite TM, provided by the US EPA. The model assumes a steady state condition between the total input and output. The level III model does not require equilibrium between the defined media. The information provided is intended to give the user a general estimate of the environmental fate of this product under the defined conditions of the models.

## SAFETY DATA SHEET

### NALCO® 19H OXYGEN SCAVENGER

If released into the environment this material is expected to distribute to the air, water and soil/sediment in the approximate respective percentages;

Air	: <5%
Water	: 30 - 50%
Soil	: 50 - 70%

The portion in water is expected to be soluble or dispersible.

#### Bioaccumulative potential

This preparation or material is not expected to bioaccumulate.

#### Other information

no data available

### Section: 13. DISPOSAL CONSIDERATIONS

If this product becomes a waste, it could meet the criteria of a hazardous waste as defined by the Resource Conservation and Recovery Act (RCRA) 40 CFR 261. Before disposal, it should be determined if the waste meets the criteria of a hazardous waste.

Disposal methods : The product should not be allowed to enter drains, water courses or the soil. Where possible recycling is preferred to disposal or incineration. If recycling is not practicable, dispose of in compliance with local regulations. Dispose of wastes in an approved waste disposal facility.

Disposal considerations : Dispose of as unused product. Empty containers should be taken to an approved waste handling site for recycling or disposal. Do not re-use empty containers.

### Section: 14. TRANSPORT INFORMATION

The shipper/consignor/sender is responsible to ensure that the packaging, labeling, and markings are in compliance with the selected mode of transport.

The presence of an RQ component (Reportable Quantity for U.S. DOT) in this product causes it to be regulated with an additional description of RQ for road, or as Environmentally hazardous for road and air, ONLY when the net weight in the package exceeds the calculated RQ for the product.

#### Land transport (DOT)

Proper shipping name	: HYDRAZINE, AQUEOUS SOLUTION
Technical name(s)	:
UN/ID No.	: UN 3293
Transport hazard class(es)	: 6.1
Packing group	: III
Reportable Quantity (per package)	: 1 lbs
RQ Component	: HYDRAZINE

#### Air transport (IATA)

Proper shipping name	: HYDRAZINE, AQUEOUS SOLUTION
Technical name(s)	: Hydrazine

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### NALCO® 19H OXYGEN SCAVENGER

UN/ID No. : UN 3293  
Transport hazard class(es) : 6.1  
Packing group : III  
Reportable Quantity (per package) : 1 lbs  
RQ Component : HYDRAZINE

#### Sea transport (IMDG/IMO)

Proper shipping name : HYDRAZINE, AQUEOUS SOLUTION  
Technical name(s) : Hydrazine  
UN/ID No. : UN 3293  
Transport hazard class(es) : 6.1  
Packing group : III

\*Marine pollutant : HYDRAZINE

\* Note: This product is regulated as a Marine Pollutant when shipped by Rail or Highway (in bulk quantities), and when shipped by water in all quantities.

### Section: 15. REGULATORY INFORMATION

**TSCA list** : No substances are subject to a Significant New Use Rule.

No substances are subject to TSCA 12(b) export notification requirements.

#### EPCRA - Emergency Planning and Community Right-to-Know Act

##### CERCLA Reportable Quantity

Components	CAS-No.	Component RQ (lbs)	Calculated product RQ (lbs)
Hydrazine Monohydrate	7803-57-8	1	1

##### SARA 304 Extremely Hazardous Substances Reportable Quantity

Components	CAS-No.	Component RQ (lbs)	Calculated product RQ (lbs)
Hydrazine Monohydrate	7803-57-8	1	1

**SARA 311/312 Hazards** : Acute toxicity (any route of exposure)  
Respiratory or skin sensitisation  
Carcinogenicity  
Skin corrosion or irritation  
Serious eye damage or eye irritation

**SARA 302** : The following components are subject to reporting levels established by SARA Title III, Section 302:  
Hydrazine Monohydrate 7803-57-8


**SARA 313** : The following components are subject to reporting levels established by SARA Title III, Section 313:

## SAFETY DATA SHEET

### NALCO® 19H OXYGEN SCAVENGER

Hydrazine Monohydrate      7803-57-8      50 - 70 %

#### California Prop. 65

 **WARNING:** Cancer - [www.P65Warnings.ca.gov](http://www.P65Warnings.ca.gov)

Hydrazine Monohydrate      7803-57-8

#### INTERNATIONAL CHEMICAL CONTROL LAWS :

##### United States TSCA Inventory

On or in compliance with the active portion of the TSCA inventory

##### Australia. Australian Industrial Chemicals Introduction Scheme (AICIS)

All substances in this product comply with the Australian Industrial Chemicals Introduction Scheme (AICIS)

##### Canadian Domestic Substances List (DSL)

The substance(s) in this preparation are included in or exempted from the Domestic Substance List (DSL).

##### Japan. ENCS - Existing and New Chemical Substances Inventory

All substances in this product comply with the Law Regulating the Manufacture and Importation Of Chemical Substances and are listed on the Existing and New Chemical Substances list (ENCS).

##### Korea. Korean Existing Chemicals Inventory (KECI)

All substances in this product comply with the Chemical Control Act (CCA) and are listed on the Existing Chemicals List (ECL)

##### Philippines Inventory of Chemicals and Chemical Substances (PICCS)

All substances in this product comply with the Republic Act 6969 (RA 6969) and are listed on the Philippines Inventory of Chemicals & Chemical Substances (PICCS).

##### China Inventory of Existing Chemical Substances

All substances in this product comply with the Provisions on the Environmental Administration of New Chemical Substances and are listed on or exempt from the Inventory of Existing Chemical Substances China (IECSC).

##### Taiwan Chemical Substance Inventory

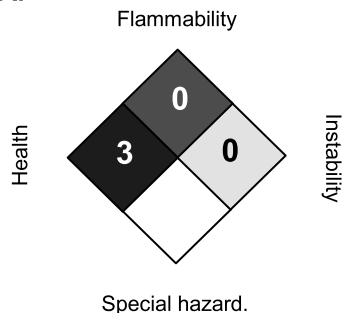
All substances in this product comply with the Taiwan Existing Chemical Substances Inventory (ECSI).

#### Section: 16. OTHER INFORMATION

## SAFETY DATA SHEET

### NALCO® 19H OXYGEN SCAVENGER

#### NFPA:



#### HMIS III:

HEALTH	3*
FLAMMABILITY	0
PHYSICAL HAZARD	0

0 = not significant, 1 = Slight,  
2 = Moderate, 3 = High  
4 = Extreme, \* = Chronic

Revision Date : 01/08/2021  
Version Number : 1.5  
Prepared By : Regulatory Affairs

REVISED INFORMATION: Significant changes to regulatory or health information for this revision is indicated by a bar in the left-hand margin of the SDS.

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. For additional copies of an SDS visit [www.nalco.com](http://www.nalco.com) and request access.

**Section: 1. PRODUCT AND COMPANY IDENTIFICATION**



Product name : LCS-60  
 Other means of identification : Not applicable.  
 Recommended use : WATER TREATMENT  
 Restrictions on use : Refer to available product literature or ask your local Sales Representative for restrictions on use and dose limits.  
 Company : Nalco Company  
 1601 W. Diehl Road  
 Naperville, Illinois 60563-1198  
 USA  
 TEL: (630)305-1000  
 Emergency telephone number : (800) 424-9300 (24 Hours) CHEMTREC  
 Issuing date : 04/22/2014

**Section: 2. HAZARDS IDENTIFICATION**

**GHS Classification**

Acute toxicity (Oral) : Category 4  
 Reproductive toxicity (Oral) : Category 1B  
 Specific target organ toxicity - single exposure (Oral) : Category 1 (Blood)

**GHS Label element**

Hazard pictograms :  

Signal Word : Danger

Hazard Statements : Harmful if swallowed.  
 May damage fertility or the unborn child if swallowed.  
 Causes damage to organs (Blood) if swallowed.

Precautionary Statements : **Prevention:**  
 Obtain special instructions before use. Do not handle until all safety precautions have been read and understood. Do not breathe dust/fume/gas/mist/vapours/spray. Wash skin thoroughly after handling. Do not eat, drink or smoke when using this product. Use personal protective equipment as required.  
**Response:**  
 IF SWALLOWED: Call a POISON CENTER or doctor/ physician if you feel unwell. IF exposed: Call a POISON CENTER or doctor/ physician. Rinse mouth.  
**Storage:**  
 Store locked up.

## SAFETY DATA SHEET

**LCS-60**

### Disposal:

Dispose of contents/ container to an approved waste disposal plant.

**Other hazards** : None known.

### Section: 3. COMPOSITION/INFORMATION ON INGREDIENTS

Chemical Name	CAS-No.	Concentration: (%)
Sodium Nitrite	7632-00-0	5 - 10
Sodium Tetraborate	1330-43-4	0.1 - 1

### Section: 4. FIRST AID MEASURES

In case of eye contact	: Rinse with plenty of water. Get medical attention if symptoms occur.
In case of skin contact	: Wash off with soap and plenty of water. Get medical attention if symptoms occur.
If swallowed	: Do NOT induce vomiting. Rinse mouth with water. Never give anything by mouth to an unconscious person. Get medical attention immediately.
If inhaled	: Get medical attention if symptoms occur.
Protection of first-aiders	: In event of emergency assess the danger before taking action. Do not put yourself at risk of injury. If in doubt, contact emergency responders. Use personal protective equipment as required.
Notes to physician	: Treat symptomatically.

**See toxicological information (Section 11)**

### Section: 5. FIREFIGHTING MEASURES

Suitable extinguishing media	: Use extinguishing measures that are appropriate to local circumstances and the surrounding environment.
Unsuitable extinguishing media	: None known.
Specific hazards during firefighting.	: Not flammable or combustible.
Hazardous combustion products	: Carbon oxides
Special protective equipment for firefighters	: Use personal protective equipment
Specific extinguishing methods	: Fire residues and contaminated fire extinguishing water must be disposed of in accordance with local regulations. In the event of fire and/or explosion do not breathe fumes.

### Section: 6. ACCIDENTAL RELEASE MEASURES

Personal precautions, protective equipment and	: Ensure adequate ventilation. Keep people away from and upwind of spill/leak. Avoid inhalation, ingestion and contact with skin and eyes.
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## SAFETY DATA SHEET

### LCS-60

emergency procedures	When workers are facing concentrations above the exposure limit they must use appropriate certified respirators. Ensure clean-up is conducted by trained personnel only. Refer to protective measures listed in sections 7 and 8.
Environmental precautions	: Do not allow contact with soil, surface or ground water.
Methods and materials for containment and cleaning up	: Stop leak if safe to do so. Contain spillage, and then collect with non-combustible absorbent material, (e.g. sand, earth, diatomaceous earth, vermiculite) and place in container for disposal according to local / national regulations (see section 13). Flush away traces with water. For large spills, dike spilled material or otherwise contain material to ensure runoff does not reach a waterway.

### Section: 7. HANDLING AND STORAGE

Advice on safe handling	: Do not ingest. Wash hands thoroughly after handling. Use only with adequate ventilation.
Conditions for safe storage	: Keep out of reach of children. Keep container tightly closed. Store in suitable labeled containers.
Packaging material	: Suitable material: Compatibility with Plastic Materials can vary; we therefore recommend that compatibility is tested prior to use.  Keep in properly labelled containers.  Unsuitable material: not determined

### Section: 8. EXPOSURE CONTROLS/PERSONAL PROTECTION

#### Components with workplace control parameters

Contains no substances with occupational exposure limit values.

Engineering measures	: Effective exhaust ventilation system. Maintain air concentrations below occupational exposure standards.
----------------------	--

#### Personal protective equipment

Eye protection	: Safety glasses
Hand protection	: Gloves should be discarded and replaced if there is any indication of degradation or chemical breakthrough.
Skin protection	: Wear suitable protective clothing.
Respiratory protection	: No personal respiratory protective equipment normally required.
Hygiene measures	: Handle in accordance with good industrial hygiene and safety practice. Remove and wash contaminated clothing before re-use. Wash face, hands and any exposed skin thoroughly after handling.

### Section: 9. PHYSICAL AND CHEMICAL PROPERTIES

Appearance	: Liquid
Colour	: Clear



## SAFETY DATA SHEET

**LCS-60**

	Light yellow
Odour	: None
Flash point	: Not applicable.
pH	: 8 - 9, 100 %
Odour Threshold	: no data available
Melting point/freezing point	: no data available
Initial boiling point and boiling range	: no data available
Evaporation rate	: no data available
Flammability (solid, gas)	: no data available
Upper explosion limit	: no data available
Lower explosion limit	: no data available
Vapour pressure	: similar to water
Relative vapour density	: no data available
Relative density	: 1.076 (25 °C)
Density	: no data available
Water solubility	: completely soluble
Solubility in other solvents	: no data available
Partition coefficient: n-octanol/water	: no data available
Auto-ignition temperature	: no data available
Thermal decomposition	: Carbon oxides
Viscosity, dynamic	: no data available
Viscosity, kinematic	: no data available
VOC	: 0 %

### Section: 10. STABILITY AND REACTIVITY

Chemical stability	: Stable under normal conditions.
Possibility of hazardous reactions	: No dangerous reaction known under conditions of normal use.
Conditions to avoid	: None known.
Incompatible materials	<p>: Contact with reducing agents (e.g. hydrazine, sulfites, sulfide, aluminum or magnesium dust) may generate heat, fires, explosions and toxic vapors.</p> <p>Do not mix with amines. Sodium nitrite can react with certain amines to produce N-nitrosamines, many of which are cancer-causing agents to laboratory animals.</p> <p>Contact with strong acids (e.g. sulfuric, phosphoric, nitric, hydrochloric, chromic, sulfonic) may generate heat, splattering or boiling and toxic vapors.</p>
Hazardous decomposition products	: Oxides of nitrogen Oxides of sodium

## SAFETY DATA SHEET

**LCS-60**

### Section: 11. TOXICOLOGICAL INFORMATION

Information on likely routes of exposure : Inhalation, Eye contact, Skin contact

#### Potential Health Effects

Eyes : Health injuries are not known or expected under normal use.

Skin : Health injuries are not known or expected under normal use.

Ingestion : Harmful if swallowed. Produces methemoglobin.

Inhalation : Health injuries are not known or expected under normal use.

Chronic Exposure : May damage fertility or the unborn child if swallowed. May cause damage to organs. May damage the unborn child. May damage fertility.

#### Experience with human exposure

Eye contact : No symptoms known or expected

Skin contact : No symptoms known or expected

Ingestion : No information available.

Inhalation : No symptoms known or expected

#### Toxicity

##### Product

Acute oral toxicity : Acute toxicity estimate : 1,895 mg/kg

Acute inhalation toxicity : no data available

Acute dermal toxicity : no data available

Skin corrosion/irritation : no data available

Serious eye damage/eye irritation : no data available

Respiratory or skin sensitization : 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.

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.

NTP No component of this product present at levels greater than or equal to 0.1% is identified as a known or anticipated carcinogen

## SAFETY DATA SHEET

**LCS-60**

by NTP.

Reproductive effects : no data available

Germ cell mutagenicity : no data available

Teratogenicity : Experimental animal studies with sodium nitrite have shown reproductive effects in the offspring of treated parents. These effects are not transmissible.

STOT - single exposure : no data available

STOT - repeated exposure : no data available

Aspiration toxicity : no data available

### Section: 12. ECOLOGICAL INFORMATION

#### Ecotoxicity

Environmental Effects : This product has no known ecotoxicological effects.

#### Product

Toxicity to fish : LC50 Rainbow Trout: 20 mg/l  
Exposure time: 96 hrs

Toxicity to daphnia and other aquatic invertebrates. : LC50 Daphnia magna: 340 mg/l  
Exposure time: 48 hrs

EC50 Daphnia magna: 210 mg/l  
Exposure time: 48 hrs

Toxicity to algae : no data available

#### Persistence and degradability

Greater than 95% of this product consists of inorganic substances for which a biodegradation value is not applicable.

#### Mobility

The environmental fate was estimated using a level III fugacity model embedded in the EPI (estimation program interface) Suite TM, provided by the US EPA. The model assumes a steady state condition between the total input and output. The level III model does not require equilibrium between the defined media. The information provided is intended to give the user a general estimate of the environmental fate of this product under the defined conditions of the models.

If released into the environment this material is expected to distribute to the air, water and soil/sediment in the approximate respective percentages;

Air : <5%  
Water : 30 - 50%  
Soil : 50 - 70%

The portion in water is expected to be soluble or dispersible.

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**LCS-60**

### Bioaccumulative potential

This preparation or material is not expected to bioaccumulate.

### Other information

no data available

## Section: 13. DISPOSAL CONSIDERATIONS

If this product becomes a waste, it is not a hazardous waste as defined by the Resource Conservation and Recovery Act (RCRA) 40 CFR 261, since it does not have the characteristics of Subpart C, nor is it listed under Subpart D.

Disposal methods : Where possible recycling is preferred to disposal or incineration. If recycling is not practicable, dispose of in compliance with local regulations. Dispose of wastes in an approved waste disposal facility.

Disposal considerations : Dispose of as unused product. Empty containers should be taken to an approved waste handling site for recycling or disposal. Do not re-use empty containers.

## Section: 14. TRANSPORT INFORMATION

The shipper/consignor/sender is responsible to ensure that the packaging, labeling, and markings are in compliance with the selected mode of transport.

### Land transport (DOT)

The presence of an RQ component (Reportable Quantity for U.S. EPA and DOT) in this product causes it to be regulated with an additional description of RQ for road, or as a class 9 for road and air, ONLY when the net weight in the package exceeds the calculated RQ for the product.

Proper shipping name : ENVIRONMENTALLY HAZARDOUS SUBSTANCE, LIQUID, N.O.S.  
Technical name(s) : SODIUM NITRITE  
UN/ID No. : UN 3082  
Transport hazard class(es) : 9  
Packing group : III  
Reportable Quantity (per package) : 1,050 lbs  
RQ Component : SODIUM NITRITE

### Air transport (IATA)

The presence of an RQ component (Reportable Quantity for U.S. EPA and DOT) in this product causes it to be regulated with an additional description of RQ for road, or as a class 9 for road and air, ONLY when the net weight in the package exceeds the calculated RQ for the product.

Proper shipping name : ENVIRONMENTALLY HAZARDOUS SUBSTANCE, LIQUID, N.O.S.  
Technical name(s) : SODIUM NITRITE  
UN/ID No. : UN 3082  
Transport hazard class(es) : 9  
Packing group : III  
Reportable Quantity (per package) : 1,050 lbs

## SAFETY DATA SHEET

**LCS-60**

package)  
RQ Component : SODIUM NITRITE

### Sea Transport (IMDG/IMO)

Proper shipping name : ENVIRONMENTALLY HAZARDOUS SUBSTANCE, LIQUID,  
N.O.S.  
Technical name(s) : SODIUM NITRITE  
UN/ID No. : UN 3082  
Transport hazard class(es) : 9  
Packing group : III

## Section: 15. REGULATORY INFORMATION

### EPCRA - Emergency Planning and Community Right-to-Know Act

#### CERCLA Reportable Quantity

Components	CAS-No.	Component RQ (lbs)	Calculated product RQ (lbs)
Sodium Nitrite	7632-00-0	100	1053

#### SARA 304 Extremely Hazardous Substances Reportable Quantity

This material does not contain any components with a section 304 EHS RQ.

**SARA 311/312 Hazards** : Acute Health Hazard  
Chronic Health Hazard

**SARA 302** : SARA 302: No chemicals in this material are subject to the reporting requirements of SARA Title III, Section 302.

**SARA 313** : The following components are subject to reporting levels established by SARA Title III, Section 313:  
Sodium Nitrite 7632-00-0 9.5 %

#### California Prop 65

This product does not contain any chemicals known to State of California to cause cancer, birth defects, or any other reproductive harm.

#### INTERNATIONAL CHEMICAL CONTROL LAWS :

##### TOXIC SUBSTANCES CONTROL ACT (TSCA)

The substances in this preparation are included on or exempted from the TSCA 8(b) Inventory (40 CFR 710)

##### CANADIAN ENVIRONMENTAL PROTECTION ACT (CEPA)

The substances in this preparation are listed on the Domestic Substances List (DSL), are exempt, or have been reported in accordance with the New Substances Notification Regulations.

##### AUSTRALIA

All substances in this product comply with the National Industrial Chemicals Notification & Assessment Scheme (NICNAS).

##### CHINA

All substances in this product comply with the Provisions on the Environmental Administration of New Chemical Substances and are listed on or exempt from the Inventory of Existing Chemical Substances China (IECSC).

## SAFETY DATA SHEET

### LCS-60

#### EUROPE

The substances in this preparation have been reviewed for compliance with the EINECS or ELINCS inventories.

#### JAPAN

All substances in this product comply with the Law Regulating the Manufacture and Importation Of Chemical Substances and are listed on the Existing and New Chemical Substances list (ENCS).

#### KOREA

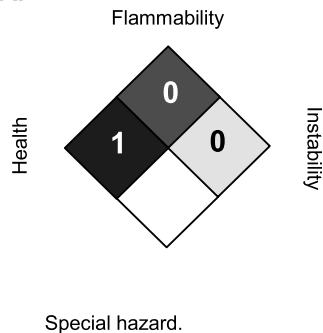
All substances in this product comply with the Toxic Chemical Control Law (TCCL) and are listed on the Existing Chemicals List (ECL)

#### PHILIPPINES

All substances in this product comply with the Republic Act 6969 (RA 6969) and are listed on the Philippines Inventory of Chemicals & Chemical Substances (PICCS).

### Section: 16. OTHER INFORMATION

#### NFPA:



#### HMIS III:

HEALTH	1
FLAMMABILITY	0
PHYSICAL HAZARD	0

0 = not significant, 1 = Slight,  
2 = Moderate, 3 = High  
4 = Extreme, \* = Chronic

Revision Date : 04/22/2014  
Version Number : 1.0  
Prepared By : Regulatory Affairs

REVISED INFORMATION: Significant changes to regulatory or health information for this revision is indicated by a bar in the left-hand margin of the SDS.

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.

For additional copies of an MSDS visit [www.nalco.com](http://www.nalco.com) and request access.

## SAFETY DATA SHEET

**NALCO® 9353**

### Section: 1. PRODUCT AND COMPANY IDENTIFICATION

Product name : NALCO® 9353

Other means of identification : Not applicable.

Recommended use : SCALE INHIBITOR/DISPERSANT

Restrictions on use : Refer to available product literature or ask your local Sales Representative for restrictions on use and dose limits.

Company : Nalco Company  
1601 W. Diehl Road  
Naperville, Illinois 60563-1198  
USA  
TEL: (630) 305-1000

Emergency telephone number : (800) 424-9300 (24 Hours) CHEMTREC

Issuing date : 01/08/2021

### Section: 2. HAZARDS IDENTIFICATION

#### GHS Classification

Not a hazardous substance or mixture.

#### GHS Label element

Precautionary Statements : **Prevention:**  
Wash hands thoroughly after handling.  
**Response:**  
Specific measures: consult SDS Section 4.  
**Storage:**  
Store in accordance with local regulations. Protect product from freezing.

**Other hazards** : None known.

### Section: 3. COMPOSITION/INFORMATION ON INGREDIENTS

Pure substance/mixture : Mixture

No hazardous ingredients

### Section: 4. FIRST AID MEASURES

In case of eye contact : Rinse with plenty of water. Get medical attention if symptoms occur.

In case of skin contact : Wash off with soap and plenty of water. Get medical attention if symptoms occur.

If swallowed : Rinse mouth. Get medical attention if symptoms occur.

If inhaled : Get medical attention if symptoms occur.

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**NALCO® 9353**

- Protection of first-aiders : In event of emergency assess the danger before taking action. Do not put yourself at risk of injury. If in doubt, contact emergency responders. Use personal protective equipment as required.
- Notes to physician : Treat symptomatically.  
Treat symptomatically.
- Most important symptoms and effects, both acute and delayed : See Section 11 for more detailed information on health effects and symptoms.

### Section: 5. FIREFIGHTING MEASURES

- Suitable extinguishing media : Use extinguishing measures that are appropriate to local circumstances and the surrounding environment.
- Unsuitable extinguishing media : None known.
- Specific hazards during firefighting : Not flammable or combustible.
- Hazardous combustion products : Decomposition products may include the following materials: Carbon oxides  
Sulphur oxides
- Special protective equipment for firefighters : Use personal protective equipment.
- Specific extinguishing methods : Fire residues and contaminated fire extinguishing water must be disposed of in accordance with local regulations.

### Section: 6. ACCIDENTAL RELEASE MEASURES

- Personal precautions, protective equipment and emergency procedures : Refer to protective measures listed in sections 7 and 8.
- Environmental precautions : No special environmental precautions required.
- Methods and materials for containment and cleaning up : Stop leak if safe to do so. Contain spillage, and then collect with non-combustible absorbent material, (e.g. sand, earth, diatomaceous earth, vermiculite) and place in container for disposal according to local / national regulations (see section 13). For large spills, dike spilled material or otherwise contain material to ensure runoff does not reach a waterway. Flush away traces with water.

### Section: 7. HANDLING AND STORAGE

- Advice on safe handling : For personal protection see section 8. Wash hands after handling.
- Conditions for safe storage : Keep out of reach of children. Keep container tightly closed. Store in suitable



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**NALCO® 9353**

labelled containers. Protect product from freezing.

Suitable material : The following compatibility data is suggested based on similar product data and/or industry experience: Compatibility with Plastic Materials can vary; we therefore recommend that compatibility is tested prior to use.

Unsuitable material : not determined

### Section: 8. EXPOSURE CONTROLS/PERSONAL PROTECTION

#### Components with workplace control parameters

Contains no substances with occupational exposure limit values.

Engineering measures : Good general ventilation should be sufficient to control worker exposure to airborne contaminants.

#### Personal protective equipment

Eye protection : Safety glasses

Hand protection : Wear protective gloves.  
Gloves should be discarded and replaced if there is any indication of degradation or chemical breakthrough.

Skin protection : Wear suitable protective clothing.

Respiratory protection : No personal respiratory protective equipment normally required.

Hygiene measures : Wash hands before breaks and immediately after handling the product.

The Personal Protective Equipment (PPE) recommendations provided above have been made in good faith based on typical expected conditions of use. PPE selection should always be completed in conjunction with a proper risk assessment and in accordance with a PPE management program.

### Section: 9. PHYSICAL AND CHEMICAL PROPERTIES

Appearance : Liquid

Colour : Clear to hazy colourless to amber

Odour : None

Flash point : > 100 °C, Method: ASTM D 93, Pensky-Martens closed cup

pH : 3.0,(100.0 %)

Odour Threshold : no data available

Melting point/freezing point : no data available

Initial boiling point and boiling range : no data available

Evaporation rate : no data available

Flammability (solid, gas) : Not applicable.

Upper explosion limit : no data available

## SAFETY DATA SHEET

### NALCO® 9353

Lower explosion limit	: no data available
Vapour pressure	: no data available
Relative vapour density	: no data available
Relative density	: 1.23 - 1.29, (25 °C),
Density	: 1.26 g/cm <sup>3</sup> , 10.5 lb/gal
Water solubility	: completely soluble
Solubility in other solvents	: no data available
Partition coefficient: n-octanol/water	: no data available
Auto-ignition temperature	: no data available
Thermal decomposition	: no data available
Viscosity, dynamic	: 275 mPa.s (22 °C)
Viscosity, kinematic	: no data available
Molecular weight	: no data available
VOC	: 0 %, Calculation method

#### Section: 10. STABILITY AND REACTIVITY

Reactivity	: No dangerous reaction known under conditions of normal use.
Chemical stability	: Stable under normal conditions.
Possibility of hazardous reactions	: No dangerous reaction known under conditions of normal use.
Conditions to avoid	: Freezing temperatures. Extremes of temperature
Incompatible materials	: None known.
Hazardous decomposition products	: In case of fire, hazardous decomposition products may be produced such as: Carbon oxides Sulphur oxides

#### Section: 11. TOXICOLOGICAL INFORMATION

Information on likely routes of exposure : Inhalation, Eye contact, Skin contact

##### Potential Health Effects

Eyes	: Health injuries are not known or expected under normal use.
Skin	: Health injuries are not known or expected under normal use.
Ingestion	: Health injuries are not known or expected under normal use.

## SAFETY DATA SHEET

**NALCO® 9353**

Inhalation : Health injuries are not known or expected under normal use.

Chronic Exposure : Health injuries are not known or expected under normal use.

### Experience with human exposure

Eye contact : No symptoms known or expected.

Skin contact : No symptoms known or expected.

Ingestion : No symptoms known or expected.

Inhalation : No symptoms known or expected.

### Toxicity

#### Product

Acute oral toxicity : no data available

Acute inhalation toxicity : no data available

Acute dermal toxicity : Acute toxicity estimate: > 5,000 mg/kg

Skin corrosion/irritation : no data available

Serious eye damage/eye irritation : no data available

Respiratory or skin sensitization : no data available

Carcinogenicity : no data available

Reproductive effects : No toxicity to reproduction

Germ cell mutagenicity : Contains no ingredient listed as a mutagen

Teratogenicity : no data available

STOT - single exposure : no data available

STOT - repeated exposure : no data available

Aspiration toxicity : No aspiration toxicity classification

## Section: 12. ECOLOGICAL INFORMATION

### Toxicity

Environmental Effects : This product has no known ecotoxicological effects.

#### Product

Toxicity to fish : LC50 Fathead Minnow: 700 mg/l  
Exposure time: 96 hrs  
Test substance: Product

NOEC Fathead Minnow: 250 mg/l  
Exposure time: 96 hrs  
Test substance: Product

## SAFETY DATA SHEET

### NALCO® 9353

Toxicity to daphnia and other aquatic invertebrates : LC50 Ceriodaphnia dubia: 375 mg/l  
Exposure time: 48 hrs  
Test substance: Product

NOEC Ceriodaphnia dubia: 250 mg/l  
Exposure time: 48 hrs  
Test substance: Product

#### Persistence and degradability

The organic portion of this preparation is expected to be poorly biodegradable.

#### Mobility

The environmental fate was estimated using a level III fugacity model embedded in the EPI (estimation program interface) Suite TM, provided by the US EPA. The model assumes a steady state condition between the total input and output. The level III model does not require equilibrium between the defined media. The information provided is intended to give the user a general estimate of the environmental fate of this product under the defined conditions of the models.

If released into the environment this material is expected to distribute to the air, water and soil/sediment in the approximate respective percentages;

Air	:	<5%
Water	:	10 - 30%
Soil	:	70 - 90%

The portion in water is expected to be soluble or dispersible.

#### Bioaccumulative potential

This preparation or material is not expected to bioaccumulate.

#### Other information

no data available

### Section: 13. DISPOSAL CONSIDERATIONS

If this product becomes a waste, it is not a hazardous waste as defined by the Resource Conservation and Recovery Act (RCRA) 40 CFR 261, since it does not have the characteristics of Subpart C, nor is it listed under Subpart D.

Disposal methods : Where possible recycling is preferred to disposal or incineration. If recycling is not practicable, dispose of in compliance with local regulations. Dispose of wastes in an approved waste disposal facility.

Disposal considerations : Dispose of as unused product. Empty containers should be taken to an approved waste handling site for recycling or disposal. Do not re-use empty containers.

### Section: 14. TRANSPORT INFORMATION

The shipper/consignor/sender is responsible to ensure that the packaging, labeling, and markings are in compliance with the selected mode of transport.

#### Land transport (DOT)

## SAFETY DATA SHEET

**NALCO® 9353**

Proper shipping name : PRODUCT IS NOT REGULATED DURING TRANSPORTATION

### Air transport (IATA)

Proper shipping name : PRODUCT IS NOT REGULATED DURING TRANSPORTATION

### Sea transport (IMDG/IMO)

Proper shipping name : PRODUCT IS NOT REGULATED DURING TRANSPORTATION

## Section: 15. REGULATORY INFORMATION

**TSCA list** : No substances are subject to a Significant New Use Rule.

No substances are subject to TSCA 12(b) export notification requirements.

### EPCRA - Emergency Planning and Community Right-to-Know Act

#### CERCLA Reportable Quantity

This product does not contain a RQ substance, or this product contains a substance with a RQ, however the calculated RQ exceeds the reasonably attainable upper limit.

#### SARA 304 Extremely Hazardous Substances Reportable Quantity

This material does not contain any components with a section 304 EHS RQ.

**SARA 311/312 Hazards** : No SARA Hazards

**SARA 302** : This material does not contain any components with a section 302 EHS TPQ.

**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.

### California Prop. 65

This product does not contain any chemicals known to State of California to cause cancer, birth defects, or any other reproductive harm.

## INTERNATIONAL CHEMICAL CONTROL LAWS :

### United States TSCA Inventory

On or in compliance with the active portion of the TSCA inventory

### Australia. Australian Industrial Chemicals Introduction Scheme (AICIS)

All substances in this product comply with the Australian Industrial Chemicals Introduction Scheme (AICIS)

### Canadian Domestic Substances List (DSL)

The substance(s) in this preparation are included in or exempted from the Domestic Substance List (DSL).

### Japan. ENCS - Existing and New Chemical Substances Inventory

All substances in this product comply with the Law Regulating the Manufacture and Importation Of Chemical Substances and are listed on the Existing and New Chemical Substances list (ENCS).

### Korea. Korean Existing Chemicals Inventory (KECI)

## SAFETY DATA SHEET

### NALCO® 9353

All substances in this product comply with the Chemical Control Act (CCA) and are listed on the Existing Chemicals List (ECL)

#### Philippines Inventory of Chemicals and Chemical Substances (PICCS)

All substances in this product comply with the Republic Act 6969 (RA 6969) and are listed on the Philippines Inventory of Chemicals & Chemical Substances (PICCS).

#### China Inventory of Existing Chemical Substances

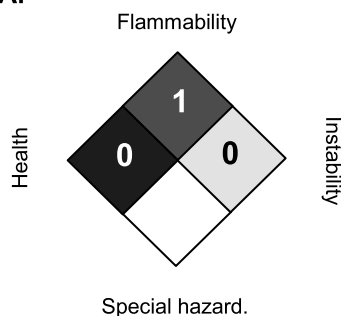
All substances in this product comply with the Provisions on the Environmental Administration of New Chemical Substances and are listed on or exempt from the Inventory of Existing Chemical Substances China (IECSC).

#### Taiwan Chemical Substance Inventory

All substances in this product comply with the Taiwan Existing Chemical Substances Inventory (ECSI).

### Section: 16. OTHER INFORMATION

#### NFPA:



#### HMIS III:

HEALTH	0
FLAMMABILITY	1
PHYSICAL HAZARD	0

0 = not significant, 1 = Slight,  
2 = Moderate, 3 = High  
4 = Extreme, \* = Chronic

Revision Date : 01/08/2021  
Version Number : 1.1  
Prepared By : Regulatory Affairs

REVISED INFORMATION: Significant changes to regulatory or health information for this revision is indicated by a bar in the left-hand margin of the SDS.

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. For additional copies of an SDS visit [www.nalco.com](http://www.nalco.com) and request access.

## SAFETY DATA SHEET

### ACTI-BROM™ 1318

#### Section: 1. PRODUCT AND COMPANY IDENTIFICATION

Product name : ACTI-BROM™ 1318

Other means of identification : Not applicable.

Recommended use : BIOCIDES

Restrictions on use : Refer to available product literature or ask your local Sales Representative for restrictions on use and dose limits.

Company : Nalco Company  
1601 W. Diehl Road  
Naperville, Illinois 60563-1198  
USA  
TEL: (630) 305-1000

Emergency telephone number : (800) 424-9300 (24 Hours) CHEMTREC

Issuing date : 04/27/2023

#### Section: 2. HAZARDS IDENTIFICATION

##### GHS Classification

Eye irritation : Category 2A

Reproductive toxicity : Category 2

Specific target organ toxicity : Category 3 (Respiratory system, Central Nervous System)

- single exposure

Specific target organ toxicity : Category 2 (Central Nervous System)

- repeated exposure (Oral)

##### GHS Label element

Hazard pictograms :



Signal Word : Warning

Hazard Statements : Causes serious eye irritation.  
May cause respiratory irritation.  
May cause drowsiness or dizziness.  
Suspected of damaging fertility or the unborn child.  
May cause damage to organs (Central Nervous System) through prolonged or repeated exposure if swallowed.

Precautionary Statements : **Prevention:**  
Do not breathe mist or vapours. Wash skin thoroughly after handling. Use only outdoors or in a well-ventilated area. Wear protective gloves/ protective clothing/ eye protection/ face protection.  
**Response:**  
IF INHALED: Remove person to fresh air and keep comfortable for breathing.

## SAFETY DATA SHEET

### ACTI-BROM™ 1318

Call a POISON CENTER or doctor/ physician if you feel unwell. IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing. IF exposed or concerned: Get medical advice/attention. If eye irritation persists: Get medical advice/ attention.

**Storage:**

Store locked up.

**Disposal:**

Dispose of contents/ container to an approved waste disposal plant.

**Other hazards** : None known.

### Section: 3. COMPOSITION/INFORMATION ON INGREDIENTS

Chemical Name	CAS-No.	Concentration: (%)
Sodium Bromide	7647-15-6	43

### Section: 4. FIRST AID MEASURES

In case of eye contact : Rinse immediately with plenty of water, also under the eyelids, for at least 15 minutes. Remove contact lenses, if present and easy to do. Continue rinsing. Get medical attention.

In case of skin contact : Wash off with soap and plenty of water. Get medical attention if symptoms occur.

If swallowed : If swallowed, call a poison control centre or doctor immediately. Give something to drink, if exposed person is able to swallow. Do NOT induce vomiting. Do not induce vomiting without medical advice. Never give anything by mouth to an unconscious person.

If inhaled : Remove to fresh air. Treat symptomatically. Get medical attention if symptoms occur.

Protection of first-aiders : In event of emergency assess the danger before taking action. Do not put yourself at risk of injury. If in doubt, contact emergency responders. Use personal protective equipment as required.

Notes to physician : Treat symptomatically.

Most important symptoms and effects, both acute and delayed : See Section 11 for more detailed information on health effects and symptoms.

### Section: 5. FIREFIGHTING MEASURES

Suitable extinguishing media : Use extinguishing measures that are appropriate to local circumstances and the surrounding environment.

Unsuitable extinguishing media : None known.

Specific hazards during firefighting : May evolve hydrogen bromide and bromine under fire conditions.



## SAFETY DATA SHEET

### ACTI-BROM™ 1318

Not flammable or combustible.

Hazardous combustion products : Decomposition products may include the following materials: Halogenated compounds

Special protective equipment for firefighters : Use personal protective equipment.

Specific extinguishing methods : Fire residues and contaminated fire extinguishing water must be disposed of in accordance with local regulations. In the event of fire and/or explosion do not breathe fumes.

#### Section: 6. ACCIDENTAL RELEASE MEASURES

Personal precautions, protective equipment and emergency procedures : Restrict access to area as appropriate until clean-up operations are complete. Use personal protective equipment recommended in Section 8 (Exposure Controls/Personal Protection). Stop or reduce any leaks if it is safe to do so. Keep people away from and upwind of spill/leak. Ventilate spill area if possible. Ensure clean-up is conducted by trained personnel only. Do not touch spilled material. Have emergency equipment (for fires, spills, leaks, etc.) readily available. Notify appropriate government, occupational health and safety and environmental authorities.

Environmental precautions : This pesticide is toxic to fish and aquatic organisms. Do not discharge effluent containing this product into lakes, streams, ponds, estuaries, oceans or other waters, unless in accordance with the requirements of a National Pollutant Discharge Elimination System (NPDES) permit and the permitting authority has been notified in writing prior to discharge. Do not discharge effluent containing this product to sewer systems without previously notifying the local sewage treatment plant authority. For guidance contact your State Water Board or Regional Office of the EPA.

Methods and materials for containment and cleaning up : Stop leak if safe to do so. Contain spillage, and then collect with non-combustible absorbent material, (e.g. sand, earth, diatomaceous earth, vermiculite) and place in container for disposal according to local / national regulations (see section 13). For large spills, dike spilled material or otherwise contain material to ensure runoff does not reach a waterway. Flush away traces with water.

#### Section: 7. HANDLING AND STORAGE

Advice on safe handling : Do not get in eyes, on skin, on clothing. Do not take internally. Use with adequate ventilation. Do not breathe vapors/gases/dust. Keep the containers closed when not in use. Have emergency equipment (for fires, spills, leaks, etc.) readily available. Ensure all containers are labeled.

Conditions for safe storage : Keep out of reach of children. Keep containers tightly closed in a dry, cool and well-ventilated place. Store in suitable labelled containers. Protect product from freezing.

## SAFETY DATA SHEET

### ACTI-BROM™ 1318

Suitable material : The following compatibility data is suggested based on similar product data and/or industry experience: Shipping and long term storage compatibility with construction materials can vary; we therefore recommend that compatibility is tested prior to use.

Unsuitable material : not determined

#### Section: 8. EXPOSURE CONTROLS/PERSONAL PROTECTION

##### Components with workplace control parameters

Contains no substances with occupational exposure limit values.

Engineering measures : Effective exhaust ventilation system. Maintain air concentrations below occupational exposure standards.

##### Personal protective equipment

Eye protection : Safety glasses with side-shields

Hand protection : Wear protective gloves.  
Gloves should be discarded and replaced if there is any indication of degradation or chemical breakthrough.

Skin protection : Wear suitable protective clothing.

Respiratory protection : When workers are facing concentrations above the exposure limit they must use appropriate certified respirators.

Hygiene measures : Handle in accordance with good industrial hygiene and safety practice. Remove and wash contaminated clothing before re-use. Wash face, hands and any exposed skin thoroughly after handling.

The Personal Protective Equipment (PPE) recommendations provided above have been made in good faith based on typical expected conditions of use. PPE selection should always be completed in conjunction with a proper risk assessment and in accordance with a PPE management program.

#### Section: 9. PHYSICAL AND CHEMICAL PROPERTIES

Appearance : Liquid

Colour : colourless

Odour : odourless

Flash point : does not flash

pH : 7.9,(100 %), Method: ASTM E 70

Odour Threshold : no data available

Melting point/freezing point : Freezing Point: -14 °C, ASTM D-1177

Initial boiling point and boiling range : 103.5 °C, Method: ASTM D 86

Evaporation rate : no data available

Flammability (solid, gas) : Not applicable.

## SAFETY DATA SHEET

### ACTI-BROM™ 1318

Upper explosion limit	: no data available
Lower explosion limit	: no data available
Vapour pressure	: 5.6 mm Hg, (20 °C), ASTM D 323,
Relative vapour density	: no data available
Relative density	: 1.45, (25 °C), ASTM D-1298
Density	: 12.1 lb/gal
Water solubility	: completely soluble
Solubility in other solvents	: no data available
Partition coefficient: n-octanol/water	: no data available
Auto-ignition temperature	: no data available
Thermal decomposition	: no data available
Viscosity, dynamic	: 5 mPa.s (20 °C)
Viscosity, kinematic	: no data available
Molecular weight	: no data available
VOC	: no data available

#### Section: 10. STABILITY AND REACTIVITY

Reactivity	: No dangerous reaction known under conditions of normal use.
Chemical stability	: Stable under normal conditions.
Possibility of hazardous reactions	: No dangerous reaction known under conditions of normal use.
Conditions to avoid	: Freezing temperatures.
Incompatible materials	: Strong acids Contact with strong oxidizers (e.g. chlorine, peroxides, chromates, nitric acid, perchlorate, concentrated oxygen, permanganate) may generate heat, fires, explosions and/or toxic vapors.
Hazardous decomposition products	: In case of fire, hazardous decomposition products may be produced such as: Hydrogen bromide

#### Section: 11. TOXICOLOGICAL INFORMATION

Information on likely routes of exposure	: Inhalation, Eye contact, Skin contact, Ingestion
--	--

##### Potential Health Effects

Eyes	: Causes serious eye irritation. Causes eye irritation.
Skin	: Health injuries are not known or expected under normal use.

## SAFETY DATA SHEET

### ACTI-BROM™ 1318

- Ingestion : Health injuries are not known or expected under normal use.
- Inhalation : May cause respiratory tract irritation. May cause nose, throat, and lung irritation. Inhalation may cause central nervous system effects.
- Chronic Exposure : Suspected of damaging fertility or the unborn child.

#### Experience with human exposure

- Eye contact : Redness, Pain, Irritation
- Skin contact : No symptoms known or expected.
- Ingestion : No symptoms known or expected.
- Inhalation : Respiratory irritation, Cough, Dizziness, Drowsiness

#### Toxicity

##### Product

- Acute oral toxicity : Acute toxicity estimate: > 5,000 mg/kg
- Acute inhalation toxicity : no data available
- Acute dermal toxicity : no data available
- Skin corrosion/irritation : Species: Rabbit  
Result: 0.0  
Method: Draize Test  
Test substance: Similar Product
- Serious eye damage/eye irritation : Species: rabbit  
Result: 16.0  
Method: Draize Test  
Test substance: Similar Product
- Respiratory or skin sensitization : no data available
- Carcinogenicity : no data available
- Reproductive effects : no data available
- Germ cell mutagenicity : no data available
- Teratogenicity : no data available
- STOT - single exposure : no data available
- STOT - repeated exposure : no data available
- Aspiration toxicity : no data available

#### Components

- Acute dermal toxicity : Sodium Bromide  
LD50 Rat: > 2,000 mg/kg

### Section: 12. ECOLOGICAL INFORMATION

#### Toxicity

## SAFETY DATA SHEET

### ACTI-BROM™ 1318

Environmental Effects : This product has no known ecotoxicological effects.

#### Product

Toxicity to fish : LC50 *Lepomis macrochirus* (Bluegill sunfish): > 1,000 mg/l  
Exposure time: 96 hrs  
Test substance: Similar Product

LC50 *Oncorhynchus mykiss* (rainbow trout): > 1,000 mg/l  
Exposure time: 96 hrs  
Test substance: Similar Product

LC50 *Pimephales promelas* (fathead minnow): > 5,000 mg/l  
Exposure time: 96 hrs  
Test substance: Product

NOEC *Pimephales promelas* (fathead minnow): 5,000 mg/l  
Exposure time: 96 hrs  
Test substance: Product

Toxicity to daphnia and other aquatic invertebrates : LC50 *Ceriodaphnia dubia*: > 5,000 mg/l  
Exposure time: 48 hrs  
Test substance: Product

NOEC *Ceriodaphnia dubia*: 5,000 mg/l  
Exposure time: 48 hrs  
Test substance: Product

#### Components

Toxicity to daphnia and other aquatic invertebrates (Chronic toxicity) : Sodium Bromide  
NOEC: 7.5 mg/l  
Exposure time: 21 d  
Species: *Daphnia magna* (Water flea)

#### Persistence and degradability

Greater than 95% of this product consists of inorganic substances for which a biodegradation value is not applicable.

Biochemical Oxygen Demand (BOD): This material is an oxidizing biocide and is not expected to persist in the environment.

#### Mobility

The environmental fate was estimated using a level III fugacity model embedded in the EPI (estimation program interface) Suite TM, provided by the US EPA. The model assumes a steady state condition between the total input and output. The level III model does not require equilibrium between the defined media. The information provided is intended to give the user a general estimate of the environmental fate of this product under the defined conditions of the models.

If released into the environment this material is expected to distribute to the air, water and soil/sediment in the approximate respective percentages;

Air : <5%  
Water : 30 - 50%  
Soil : 50 - 70%

## SAFETY DATA SHEET

### ACTI-BROM™ 1318

The portion in water is expected to be soluble or dispersible.

#### Bioaccumulative potential

This preparation or material is not expected to bioaccumulate.

#### Other information

no data available

### Section: 13. DISPOSAL CONSIDERATIONS

Disposal methods : As a pesticide waste, consult the FIFRA label for any additional handling, treatment, or disposal requirements. For disposal, contact a properly licensed waste treatment, storage, disposal or recycling facility.

Disposal considerations : DO NOT REUSE EMPTY CONTAINER. Triple rinse the container (or equivalent). Then offer for recycling or reconditioning, or puncture and dispose of in a sanitary landfill, or incinerate. Burn only if allowed by state and local authorities. If burned, stay out of smoke. Dispose of as unused product. Empty containers should be taken to an approved waste handling site for recycling or disposal. Do not re-use empty containers.

### Section: 14. TRANSPORT INFORMATION

The shipper/consignor/sender is responsible to ensure that the packaging, labeling, and markings are in compliance with the selected mode of transport.

#### Land transport (DOT)

Proper shipping name : PRODUCT IS NOT REGULATED DURING TRANSPORTATION

#### Air transport (IATA)

Proper shipping name : PRODUCT IS NOT REGULATED DURING TRANSPORTATION

#### Sea transport (IMDG/IMO)

Proper shipping name : PRODUCT IS NOT REGULATED DURING TRANSPORTATION

### Section: 15. REGULATORY INFORMATION

TSCA list : No substances are subject to a Significant New Use Rule.  
No substances are subject to TSCA 12(b) export notification requirements.

EPA Reg. No. : 83451-18-1706

EPCRA - Emergency Planning and Community Right-to-Know Act

## SAFETY DATA SHEET

### ACTI-BROM™ 1318

#### CERCLA Reportable Quantity

This product does not contain a RQ substance, or this product contains a substance with a RQ, however the calculated RQ exceeds the reasonably attainable upper limit.

#### SARA 304 Extremely Hazardous Substances Reportable Quantity

This material does not contain any components with a section 304 EHS RQ.

**SARA 311/312 Hazards** : Specific target organ toxicity (single or repeated exposure)  
Reproductive toxicity  
Serious eye damage or eye irritation

**SARA 302** : This material does not contain any components with a section 302 EHS TPQ.

**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.

#### California Prop. 65

This product does not contain any chemicals known to State of California to cause cancer, birth defects, or any other reproductive harm.

#### INTERNATIONAL CHEMICAL CONTROL LAWS :

##### United States TSCA Inventory

This product is exempted under TSCA and regulated under FIFRA. The inerts are on the Inventory List.

##### Australia. Australian Industrial Chemicals Introduction Scheme (AICIS)

All substances in this product comply with the Australian Industrial Chemicals Introduction Scheme (AICIS)

##### Canadian Domestic Substances List (DSL)

Substances regulated under the Pest Control Products Act are exempt from CEPA New Substance Notification requirements.

##### Japan. ENCS - Existing and New Chemical Substances Inventory

All substances in this product comply with the Law Regulating the Manufacture and Importation Of Chemical Substances and are listed on the Existing and New Chemical Substances list (ENCS).

##### Korea. Korean Existing Chemicals Inventory (KECI)

All substances in this product comply with the Chemical Control Act (CCA) and are listed on the Existing Chemicals List (ECL)

##### Philippines Inventory of Chemicals and Chemical Substances (PICCS)

All substances in this product comply with the Republic Act 6969 (RA 6969) and are listed on the Philippines Inventory of Chemicals & Chemical Substances (PICCS).

##### China Inventory of Existing Chemical Substances

All substances in this product comply with the Provisions on the Environmental Administration of New Chemical Substances and are listed on or exempt from the Inventory of Existing Chemical Substances China (IECSC).

##### Taiwan Chemical Substance Inventory

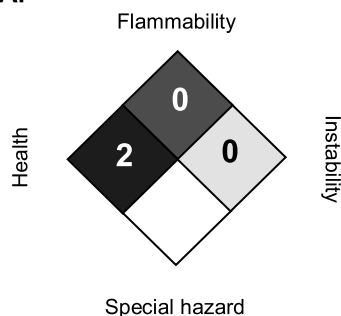
On the inventory, or in compliance with the inventory.

#### Section: 16. OTHER INFORMATION

# SAFETY DATA SHEET

**ACTI-BROM™ 1318**

## NFPA:



## HMIS III:

HEALTH	2*
FLAMMABILITY	0
PHYSICAL HAZARD	0

0 = not significant, 1 = Slight,  
2 = Moderate, 3 = High  
4 = Extreme, \* = Chronic

Revision Date : 04/27/2023  
Version Number : 2.0  
Prepared By : Regulatory Affairs

REVISED INFORMATION: Significant changes to regulatory or health information for this revision is indicated by a bar in the left-hand margin of the SDS.

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. For additional copies of an SDS visit [www.ecolab.com/sds](http://www.ecolab.com/sds) and request access.



Varichem International Inc.  
7833 HWY 35 N  
BAY CITY, TEXAS 77414

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MATERIAL SAFETY DATA SHEET  
EMERGENCY NO. 1-800-424-9300  
INFORMATION NO. 979-245-7278

=====

**SECTION I**

IDENTITY  
B-2200 Industrial Cooling Tower Algaecide

DATE PREPARED  
5-29-2013

SECTION II -- HAZARDOUS INGREDIENTS /IDENTITY INFORMATION  
MATERIAL OR COMPONENTS/ OSHA PEL ACGIH TLV OTHER LIMITS %  
Ethyl Alcohol, Denatured  
(Cas#64-17-S) (Flammable 1000 1000 none 2.2

\*DOT: UN1760, Corrosive liquids, n.o.s. (contains  
DIDECYL-Dimethyl-Ammonium-Chloride), 8, PG II

\*This product does not contain any Sara Section 313 listed chemicals

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SECTION III PHYSICAL/CHEMICAL CHARACTERISTICS  
BOILING POINT 212F SPECIFIC GRAVITY (H2O=1) .985  
VAPOR PRESSURE (MM Hg.) ND MELTING POINT NA  
VAPOR DENSITY (AIR = 1) heavier than air EVAPORATION RATE: Slower  
Ethyl Ether SOLUBILITY IN WATER: Soluble  
APPEARANCE AND ODOR: Clear light yellow liquid

SECTION IV-- FIRE AND EXPLOSION HAZARD DATA  
FLASH POINT (METHOD USED) >200F (set a flash) FLAMMABLE  
LIMITS LEL NA  
UEL NA  
EXTINGUISHING MEDIA: CO2, DRY CHEMICAL, FOAM OR WATER  
SPECIAL FIRE FIGHTING PROCEDURES: Use self-contained breathing  
apparatus for maximum respiratory protection.  
UNUSUAL FIRE AND EXPLOSION HAZARDS: Strong acids and bases react with  
aluminum to form hydrogen which is explosive if ignited.

Page 1

SECTION V -- REACTIVITY DATA  
STABILITY: UNSTABLE CONDITIONS TO AVOID:  
STABLE X  
INCOMPATIBILITY (MATERIALS TO AVOID): Strong Oxidizing agents  
HAZARDOUS DECOMPOSITION OR BY PRODUCTS: Nitrous oxides and ammoniacal  
vapors

HAZARDOUS MAY OCCUR CONDITIONS TO AVOID:  
POLYMERIZATION WILL NOT OCCUR: X None  
SECTION VI -- HEALTH HAZARD DATA  
ROUTE(S) OF ENTRY: INHALATION? X SKIN? X  
INGESTION? X HEALTH HAZARDS (ACUTE & CHRONIC):  
Severe eye irritant  
CARCINOGENICITY: No NTP? No  
IARC MONOGRAPHS? No OSHA Regulated? No

SIGNS AND SYMPTOMS OF EXPOSURE: Contact with eyes causes irritation.  
Prolonged or repeated contact with skin may cause  
irritation, Dust or Mist may irritate respiratory passages.

#### MEDICAL CONDITIONS

GENERALLY AGGRAVATED BY EXPOSURE: ND  
EMERGENCY and FIRST AID PROCEDURES: Eyes: flush immediately with  
water for 15 minutes. Skin: wash off and remove contaminated  
clothing. Ingestion: Consult A physician immediately.

SECTION VII -- PRECAUTIONS FOR SAFE HANDLING AND USE  
STEPS TO BE TAKEN IN CASE MATERIAL IS RELEASED OR SPILLED  
Contain all spills and leaks to prevent discharge to the environment.  
ventilate area. Soak up small spill with absorbent, shovel into waste  
containers. Recover large spills for reprocessing or disposal.  
WASTE DISPOSAL METHOD: Recover or dispose waste material, in  
accordance with all applicable, federal, state and local regulations  
and laws. May be disposed of in a permitted landfill.  
PRECAUTIONS TO BE TAKEN IN HANDLING AND STORING: Avoid over treating  
or freezing

OTHER PRECAUTIONS: ND  
SECTION VIII -- CONTROL MEASURES  
RESPIRATORY PROTECTION (SPECIFY TYPE): If vapor are present use a  
OSHA or NOSH approved respirator, fresh air or self-contained  
breathing apparatus.  
VENTILATION LOCAL EXHAUST Yes SPECIAL  
PROTECTIVE GLOVES: Impervious gloves EYE PROTECTION: Goggles  
or face shield OTHER PROTECTIVE CLOTHING OR EQUIPMENT:  
ND

WORK/HYGIENIC PRACTICES: Wash hands after using or transferring this  
product.

# SAFETY DATA SHEET

## Bromo Tabs

Page: 1  
Printed: 07/30/2015  
Revision: 03/03/2015

### 1. Product and Company Identification

**Product Code:** 00145  
**Product Name:** Bromo Tabs  
**Company Name:** VariChem International Inc  
7833 State Highway 35 North  
PHONE# 979-245-7278  
Bay City, TX 77414  
**Phone Number:** (979)245-7278  
**Web site address:** [www.varichemusa.com](http://www.varichemusa.com)  
**Email address:** [varichem@yahoo.com](mailto:varichem@yahoo.com)  
**Emergency Contact:** CHEMTREC (800)424-9300

### 2. Hazards Identification

**Acute Toxicity: Skin, Category 5**  
**Acute Toxicity: Inhalation, Category 5**  
**Acute Toxicity: Oral, Category 3**  
**Skin Corrosion/Irritation, Category 1C**  
**Oxidizing Solids, Category 2**



**GHS Signal Word:** Danger

**GHS Hazard Phrases:** H272 - May intensify fire; oxidizer.  
H301 - Toxic if swallowed.  
H313 - May be harmful in contact with skin.  
H314 - Causes severe skin burns and eye damage.  
H333 - May be harmful if inhaled.

**GHS Precaution Phrases:** P262 - Do not get in eyes, on skin, or on clothing.  
P210 - Keep away from heat/sparks/open flames/hot surfaces. - No smoking.  
P220 - Keep away from combustible materials.  
P221 - Take any precaution to avoid mixing with combustibles/...  
P260 - Do not breathe dust/fume/gas/mist/vapors/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+310 - IF SWALLOWED: Immediately call a POISON CENTER or doctor/physician.  
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.  
P330 - Rinse mouth.  
P363 - Wash contaminated clothing before reuse.

**GHS Storage and Disposal Phrases:** P405 - Store locked up.

# SAFETY DATA SHEET

## Bromo Tabs

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**OSHA Regulatory Status:** This material is classified as hazardous under OSHA regulations.

**Potential Health Effects (Acute and Chronic):**

**Inhalation:** Irritating to respiratory system. Can cause severe respiratory irritation. Harmful if inhaled. Material may be irritating to mucous membranes and upper respiratory tract.

**Skin Contact:** Do not get on skin. May cause severe skin burns and/or eye damage.

**Eye Contact:** May cause irreversible eye damage. Do not get in eyes.

**Ingestion:** Harmful if swallowed. May be fatal if swallowed and enters airways. May cause nausea and vomiting. Swallowing this product is HARMFUL.

### 3. Composition/Information on Ingredients

CAS #	Hazardous Components (Chemical Name)	Concentration
16079-88-2	2,4-Imidazolidinedione, 1-Bromo-3-chloro-5,5-dimethyl-	100.0 %

### 4. First Aid Measures

**Emergency and First Aid Procedures:** If inhaled, remove to fresh air. If breathing is difficult, give oxygen. If not breathing, give artificial respiration. In case of eye contact, immediately flush eyes with plenty of water for 15-20 minutes while holding eyelids open. In case of skin contact, flush skin with plenty of soap and water. In case of ingestion, DO NOT INDUCE VOMITING. Rinse mouth out with water. Get immediate medical attention. Seek medical advice for any of these occurrences.

**In Case of Inhalation:** Show this safety data sheet to the doctor in attendance. If breathed in, move person into fresh air. If not breathing, give artificial respiration. Get medical attention immediately.

**In Case of Skin Contact:** Immediately wash skin with plenty of soap and water while removing contaminated clothing and shoes. GET MEDICAL ATTENTION. Contaminated clothing should be discarded in a manner which limits further exposure.

**In Case of Eye Contact:** Hold eyelids open and flush for 15-20 minutes with plenty of water. seek medical attention. Remove contact lenses, if present and easy to do. Continue rinsing.

**In Case of Ingestion:** If swallowed, do not induce vomiting unless directed to do so by medical personnel. If swallowed, do NOT induce vomiting. Give victim a glass of water or milk. Call a physician or poison control center immediately. Never give anything by mouth to an unconscious person.

**Signs and Symptoms Of Exposure:** May cause irreversible eye damage.  
Can cause chemical burns to the respiratory tract.  
May cause severe skin burns.  
Ingestion is not expected to be a primary route of exposure.

# SAFETY DATA SHEET

## Bromo Tabs

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### 5. Fire Fighting Measures

<b>Flash Pt:</b>	No data.
<b>Explosive Limits:</b>	LEL: No data. UEL: No data.
<b>Autoignition Pt:</b>	No data.
<b>Suitable Extinguishing Media:</b>	Use water spray to cool unopened containers. CAUTION: Material may react with extinguishing agent. Cool all affected containers with flooding quantities of water. Do NOT use carbon dioxide or dry chemical. Suitable: Water spray. Use water only!
<b>Unsuitable Extinguishing Media:</b>	Ammonium Phosphate (ABC) fire extinguishers should not be used. Dry chemical or CO2.
<b>Fire Fighting Instructions:</b>	Wear a self-contained breathing apparatus (SCBA) to prevent contact with thermal decomposition products.
<b>Flammable Properties and Hazards:</b>	Fires fueled by other materials may release hydrogen bromide, bromine, hydrogen chloride or chlorine. This product may smolder for prolonged periods emitting a dense black smoke. Any spilled material should be considered contaminated. Neutralize to a non-oxidizing material for safe disposal.
<b>Hazardous Combustion Products:</b>	A dust explosion severity determination was performed using the Hartmann Dust Explosibility Bomb designed at the U.S. Bureau of Mines. The product was determined not to be ignitable.

### 6. Accidental Release Measures

<b>Steps To Be Taken In Case Material Is Released Or Spilled:</b>	Using appropriate protective clothing and safety equipment, contain the spilled material. Do not add water to spilled material. Using clean dedicated equipment, sweep and scoop all spilled material, contaminated soil, and other contaminated material and place into clean dry containers for disposal. Do not use floor sweeping compounds to clean up spills. Do not close containers containing wet or damp material. They should be left open to disperse any hazardous gases that may form. Do not transport wet or damp material. Keep product out of sewers, watersheds, and water systems. Do not contaminate water, food, or feed by storage, disposal, or cleaning of equipment. Dispose of according to local, state, and federal regulations.
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### 7. Handling and Storage

<b>Precautions To Be Taken in Handling:</b>	Strong Oxidizing Agent. Do not mix with other chemicals. Mix only with water. Never add water to product. Always add product to large quantities of water. Use clean dry utensils. Do not add this product to any dispensing device containing remnants of any other product. Contamination with moisture, organic matter, or other chemicals will start a chemical reaction and generate heat, hazardous gas, possible fire, and explosion. In case of contamination, do not reseal container. If possible, isolate container in open air or well ventilated area, away from heat or open flame.
<b>Precautions To Be Taken in Storing:</b>	Keep this product dry in the original container. Keep container tightly closed when not in use. Store in a cool, dry, well ventilated area, away from heat or open flame. Moisture may decompose this product and cause a violent reaction leading to fire and explosion.

### 8. Exposure Controls/Personal Protection

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CAS #	Partial Chemical Name	OSHA TWA	ACGIH TWA	Other Limits
16079-88-2	2,4-Imidazolidinedione, 1-Bromo-3-chloro-5,5-dimethyl-	No data.	No data.	No data.

**Respiratory Equipment** No data available.  
(Specify Type):

**Eye Protection:** No data available.

**Protective Gloves:** No data available.

**Other Protective Clothing:** No data available.

**Engineering Controls** No data available.  
(Ventilation etc.):

## 9. Physical and Chemical Properties

**Physical States:** ☐ Gas ☐ Liquid ☒ Solid

**Appearance and Odor:** Tablets. White.  
chlorine-like.

**Melting Point:** No data.

**Boiling Point:** No data.

**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):** No data.

**Solubility in Water:** No data.

**Percent Volatile:** No data.

**Autoignition Pt:** No data.

## 10. Stability and Reactivity

**Stability:** Unstable ☐ Stable ☒

**Conditions To Avoid -** High temperatures. Poor ventilation. Contamination. Moisture/high humidity.  
**Instability:**

**Incompatibility - Materials To Avoid:** Avoid contact with water on concentrated material in the container. Avoid contact with easily oxidizable material; ammonia, urea, or similar nitrogen containing compounds; inorganic reducing compounds; floor sweeping compounds; cyanuric acid containing compounds; calcium hypochlorite; alkalis. Avoid contact with all other chemicals.

**Hazardous Decomposition or Byproducts:** Hydrogen bromide, bromine, hydrogen chloride, chlorine.

**Possibility of Hazardous Reactions:** Will occur ☐ Will not occur ☒

**Conditions To Avoid -** No data available.  
**Hazardous Reactions:**

# SAFETY DATA SHEET

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### 11. Toxicological Information

**Toxicological Information:** No data available.  
**Symptoms related to** May cause irreversible eye damage.  
**Toxicological Characteristics:** May cause severe skin burns.  
May be irritating to nose and throat.  
**Chronic Toxicological Effects:** Toxicological studies indicate this product to be corrosive to eyes.  
**Carcinogenicity:** NTP? No IARC Monographs? No OSHA Regulated? No

### 12. Ecological Information

**General Ecological Information:** Toxic to aquatic life.

### 13. Disposal Considerations

**Waste Disposal Method:** No data available.

### 14. Transport Information

#### LAND TRANSPORT (US DOT):

**DOT Proper Shipping Name:** UN1479, Oxidizing Solid, n.o.s., (Bromo, chloro-5, 5-dimethylhydantoin), 5.1, PG II.  
(CHEMTREC 800-424-9300 -- CCN23740 )

**DOT Hazard Class:** 5.1 OXIDIZER

**UN/NA Number:** UN1479 **Packing Group:** II



### 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)
16079-88-2	2,4-Imidazolidinedione, 1-Bromo-3-chloro-5,5-dimethyl-	No	No	No

### 16. Other Information

**Revision Date:** 03/03/2015

#### Hazard Rating System:

HMIS:

HEALTH		3
FLAMMABILITY		1
PHYSICAL		1
PPE		C

Flammability 1 Instability 1  
Health 3 COR 0  
NFPA: Special Hazard

**Additional Information About** No data available.

**This Product:**

**Company Policy or Disclaimer:**

The information accumulated herein is believed to be accurate based on the information provided, although no guarantee or warranty, either expressed or implied is made as to the accuracy or completeness of this information, whether originating from this company or not. Recipients are advised to confirm, in advance of need, that the information is correct, applicable, and suitable to their circumstances. The conditions or methods of

# SAFETY DATA SHEET

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handling, storage, use, and disposal of the product and container are beyond our control and may be beyond our knowledge. For this and other reasons, we do not assume responsibility and expressly disclaim liability for loss, damage, or expense arising out of or in any way connected with the handling, storage, or use of this information or product. If the product is used as a component in another product, this information may not be applicable.



Material Safety Data Sheet  
May be used to comply with  
OSHA'S Hazard Communication Standard  
29 sCFR 1910, 1200. Standard Must be  
consulted for specific requirements.

U.S. Department of Labor  
Occupational Safety and Health Administration  
(Non-Mandatory Form)  
Form Approved  
OMB No. 1218-0072

IDENTITY (As used on Label and List)

SC-2310 Scale & Corrosion Inhibitor

Note: Blank spaces are not permitted. If any item is not applicable, or no information is available, the space must be marked to indicate that.

## Section I

Manufacturer's Name VariChem International, Inc.

Emergency Telephone Number 1-800-424-9300

Address (Number, Street, City, State, and Zip Code)

Telephone Number for information 1-979-245-7278

P.O. Box 528 / Hwy 35 West

Date Prepared January 2, 2013

Van Vleck, TX 77482

Signature of Preparer (optional)

## Section II -- Hazardous Ingredients / Identity Information

Hazardous Components (Specific Chemical Identity: Common Name(s))

OSHA PEL ACGIH TLV Other Limits  
Recommended % (Optional)

None

This product contains no hazardous components under current OSHA definitions.

DOT: Not Regulated

\*\* This product does not contain any SARA Section 313 listed Chemicals \*\*

## Section III -- Physical / Chemical Characteristics

Boiling Point

212°F

Specific Gravity (H<sub>2</sub>O = 1)

1.032

Vapor Pressure (mm Hg.)

16.6

Melting Point

N/A

Vapor Density (Air=1)

0.6

Evaporation Rate (Butyl Acetate = 1)

N/A

Solubility in Water

Complete

Appearance and Odor

Dark brown liquid with no distinct odor.

## Section IV -- Fire and Explosion Hazard Data

Flash Point (Method Used)

Above 200°F (PMCC)

Flammable Limits

%

LEL

N/DA

UEL

N/DA

Extinguishing Media

Water spray

Special Fire Fighting Procedures

Do not enter any enclosed fire space without proper protective equipment.

Unusual Fire and Explosion Hazards

None

(Reproduce Locally)

OSHA 174, Sept. 1985

**Section V -- Reactivity Data**

Stability	Unstable		Conditions to Avoid
	Stable	X	None

Incompatibility (Materials to Avoid) Strong acids, strong oxidizing agents.

Hazardous Decomposition or Byproducts Incomplete combustion may result in oxides of Phosphorus, Sulfur, & Nitrogen.

Hazardous	May Occur		Conditions to Avoid
Polymerization	Will Not Occur	X	None

**Section VI -- Health Hazard Data**

Route(s) of Entry:	Inhalation?	Yes	Skin?	Yes	Ingestion?	Yes
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Health Hazards (Acute and Chronic) This material may cause minor irritation upon contact with the eyes.

Carcinogenicity:	NTP?	No	IARC Monographs	No	OSHA Regulated?	No
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Signs and Symptoms of Exposure This material may cause minor irritation upon contact with the eyes. This material is not expected to present a skin contact hazard.

Medical Conditions  
Aggravated by Exposure None

Emergency and First Aid Procedures Eyes: Flush with water for 15 min. Seek medical attention if irritation persist.

Skin: Wash with soap & water. Ingestion: Seek medical attention.

**Section VII -- Precautions for Safe Handling and Use**

Steps to Be Taken in Case Material is Released or Spilled Eliminate all open flames in the vicinity of the spill or released vapor. Contain by diking with a Non-Combustible absorbent and dispose of in a DOT approved container.

Waste Disposal Method Flush with water. Absorb large spills with an absorbent, and dispose of in a DOT approved container.

Precautions to Be Taken in Handling and Storing Keep out of reach of Children. Avoid splashing in your eyes.

Other Precautions

None

**Section VIII -- Control Measures**

Respiratory Protection (Specify Type) Not normally required.

Ventilation	Local Exhaust	Sufficient	Special	None
	Mechanical (General)	None	Other	None

Protective Gloves Rubber Gloves

Eye Protection Goggles, Safety Glasses

Other Protective Clothing Equipment Not normally required.

Work/Hygienic Practices Eyewash should be available and ready for use.

## SAFETY DATA SHEET

**H-130M**

### Section: 1. PRODUCT AND COMPANY IDENTIFICATION

Product name : H-130M

Other means of identification : Not applicable.

Recommended use : BIOCIDES

Restrictions on use : Refer to available product literature or ask your local Sales Representative for restrictions on use and dose limits.

Company : Nalco Company  
1601 W. Diehl Road  
Naperville, Illinois 60563-1198  
USA  
TEL: (630)305-1000

Emergency telephone number : (800) 424-9300 (24 Hours) CHEMTREC

Issuing date : 05/16/2017

### Section: 2. HAZARDS IDENTIFICATION

#### GHS Classification

Flammable liquids : Category 3

Acute toxicity (Oral) : Category 3

Acute toxicity (Inhalation) : Category 3

Skin corrosion : Category 1B

Serious eye damage : Category 1

Germ cell mutagenicity : Category 2

#### GHS Label element

Hazard pictograms :



Signal Word :  
Danger

Hazard Statements :  
Flammable liquid and vapour.  
Toxic if swallowed or if inhaled  
Causes severe skin burns and eye damage.  
Causes serious eye damage.  
Suspected of causing genetic defects.

Precautionary Statements : **Prevention:**  
Keep away from heat/sparks/open flames/hot surfaces. - No smoking.  
Ground/bond container and receiving equipment. Use explosion-proof electrical/

# SAFETY DATA SHEET

**H-130M**

ventilating/ lighting/ equipment. Avoid breathing dust/ fume/ gas/ mist/ vapours/ spray. Wear protective gloves/ protective clothing/ eye protection/ face protection.

**Response:**

IF SWALLOWED: Immediately call a POISON CENTER/doctor. Rinse mouth. IF SWALLOWED: Rinse mouth. Do NOT induce vomiting. Immediately call a POISON CENTER or doctor/ physician. 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. Immediately call a POISON CENTER/doctor. IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.

**Other hazards** : None known.

## Section: 3. COMPOSITION/INFORMATION ON INGREDIENTS

Pure substance/mixture : Mixture

Chemical Name	CAS-No.	Concentration: (%)
Didecyl-Dimethyl-Ammonium chloride	7173-51-5	50
Ethanol	64-17-5	10 - 30

## Section: 4. FIRST AID MEASURES

In case of eye contact : Rinse immediately with plenty of water, also under the eyelids, for at least 15 minutes. Remove contact lenses, if present and easy to do. Continue rinsing. Get medical attention immediately.

In case of skin contact : Wash off immediately with plenty of water for at least 15 minutes. Use a mild soap if available. Wash clothing before reuse. Thoroughly clean shoes before reuse. Get medical attention immediately.

If swallowed : Rinse mouth with water. Do NOT induce vomiting. Never give anything by mouth to an unconscious person. Get medical attention immediately.

If inhaled : Remove to fresh air. Treat symptomatically. Get medical attention immediately.

Protection of first-aiders : In event of emergency assess the danger before taking action. Do not put yourself at risk of injury. If in doubt, contact emergency responders. Use personal protective equipment as required.

Notes to physician : Treat symptomatically.

Most important symptoms and effects, both acute and delayed : See Section 11 for more detailed information on health effects and symptoms.

## Section: 5. FIREFIGHTING MEASURES

Suitable extinguishing media : Foam  
Carbon dioxide  
Dry powder  
Other extinguishing agent suitable for Class B fires

## SAFETY DATA SHEET

**H-130M**

For large fires, use water spray or fog, thoroughly drenching the burning material.

Unsuitable extinguishing media : None known.

Specific hazards during firefighting : Fire Hazard  
Keep away from heat and sources of ignition.  
Flash back possible over considerable distance.  
Beware of vapours accumulating to form explosive concentrations. Vapours can accumulate in low areas.

Hazardous combustion products : Decomposition products may include the following materials: Carbon oxides nitrogen oxides (NOx) Sulphur oxides Oxides of phosphorus

Special protective equipment for firefighters : Use personal protective equipment.

Specific extinguishing methods : Use water spray to cool unopened containers. Collect contaminated fire extinguishing water separately. This must not be discharged into drains. Fire residues and contaminated fire extinguishing water must be disposed of in accordance with local regulations. In the event of fire and/or explosion do not breathe fumes.

### Section: 6. ACCIDENTAL RELEASE MEASURES

Personal precautions, protective equipment and emergency procedures : Ensure adequate ventilation. Remove all sources of ignition. Keep people away from and upwind of spill/leak. Avoid inhalation, ingestion and contact with skin and eyes. When workers are facing concentrations above the exposure limit they must use appropriate certified respirators. Ensure clean-up is conducted by trained personnel only. Refer to protective measures listed in sections 7 and 8.

Environmental precautions : Do not allow contact with soil, surface or ground water.

Methods and materials for containment and cleaning up : Eliminate all ignition sources if safe to do so. Stop leak if safe to do so. Contain spillage, and then collect with non-combustible absorbent material, (e.g. sand, earth, diatomaceous earth, vermiculite) and place in container for disposal according to local / national regulations (see section 13). For large spills, dike spilled material or otherwise contain material to ensure runoff does not reach a waterway. Flush away traces with water.

### Section: 7. HANDLING AND STORAGE

Advice on safe handling : Take necessary action to avoid static electricity discharge (which might cause ignition of organic vapours). Do not ingest. Keep away from fire, sparks and heated surfaces. Do not breathe dust/fume/gas/mist/vapours/spray. Do not get in eyes, on skin, or on clothing. Wash hands thoroughly after handling. Use only with adequate ventilation.

Conditions for safe storage : Keep away from heat and sources of ignition. Keep in a cool, well-ventilated place. Keep away from oxidizing agents. Keep out of reach of children. Keep container tightly closed. Store in suitable labelled containers.

Suitable material : Keep in properly labelled containers.

## SAFETY DATA SHEET

**H-130M**

Unsuitable material : not determined

### Section: 8. EXPOSURE CONTROLS/PERSONAL PROTECTION

#### Components with workplace control parameters

Components	CAS-No.	Form of exposure	Permissible concentration	Basis
Ethanol	64-17-5	TWA	1,000 ppm 1,900 mg/m <sup>3</sup>	NIOSH REL
		TWA	1,000 ppm 1,900 mg/m <sup>3</sup>	OSHA Z1
		STEL	1,000 ppm	ACGIH

Engineering measures : Effective exhaust ventilation system. Maintain air concentrations below occupational exposure standards.

#### Personal protective equipment

Eye protection : Safety goggles  
Face-shield

Hand protection : Wear the following personal protective equipment:  
Standard glove type.  
Gloves should be discarded and replaced if there is any indication of degradation or chemical breakthrough.

Skin protection : Personal protective equipment comprising: suitable protective gloves, safety goggles and protective clothing

Respiratory protection : When workers are facing concentrations above the exposure limit they must use appropriate certified respirators.

Hygiene measures : Handle in accordance with good industrial hygiene and safety practice. Remove and wash contaminated clothing before re-use. Wash face, hands and any exposed skin thoroughly after handling. Provide suitable facilities for quick drenching or flushing of the eyes and body in case of contact or splash hazard.

### Section: 9. PHYSICAL AND CHEMICAL PROPERTIES

Appearance : Liquid

Colour : colourless

Odour : Alcoholic

Flash point : 43 °C, Method: Seta closed cup

pH : 7.0 - 8.0,(1 %)

Odour Threshold : no data available

Melting point/freezing point : FREEZING POINT: -11.11 °C

Initial boiling point and boiling range : no data available

## SAFETY DATA SHEET

### H-130M

Evaporation rate	: no data available
Flammability (solid, gas)	: no data available
Upper explosion limit	: no data available
Lower explosion limit	: no data available
Vapour pressure	: no data available
Relative vapour density	: no data available
Relative density	: 0.93, (25 °C),
Density	: 7.7 lb/gal
Water solubility	: completely soluble
Solubility in other solvents	: no data available
Partition coefficient: n-octanol/water	: no data available
Auto-ignition temperature	: no data available
Thermal decomposition	: no data available
Viscosity, dynamic	: < 100 mPa.s (25 °C)
Viscosity, kinematic	: no data available
Molecular weight	: no data available
VOC	: 10 %, 92.27 g/l

### Section: 10. STABILITY AND REACTIVITY

Chemical stability	: Stable under normal conditions.
Possibility of hazardous reactions	: No dangerous reaction known under conditions of normal use.
Conditions to avoid	: Heat, flames and sparks.
Incompatible materials	: Contact with strong oxidizers (e.g. chlorine, peroxides, chromates, nitric acid, perchlorate, concentrated oxygen, permanganate) may generate heat, fires, explosions and/or toxic vapors. Contact with reducing agents (e.g. hydrazine, sulfites, sulfide, aluminum or magnesium dust) may generate heat, fires, explosions and toxic vapors.
Hazardous decomposition products	: Decomposition products may include the following materials: Carbon oxides nitrogen oxides (NO <sub>x</sub> ) Sulphur oxides Oxides of phosphorus

### Section: 11. TOXICOLOGICAL INFORMATION

Information on likely routes of exposure : Inhalation, Eye contact, Skin contact

#### Potential Health Effects

## SAFETY DATA SHEET

**H-130M**

Eyes : Causes serious eye damage.  
Skin : Causes severe skin burns.  
Ingestion : Toxic if swallowed. Causes digestive tract burns.  
Inhalation : Toxic if inhaled. May cause nose, throat, and lung irritation.  
Chronic Exposure : Suspected of causing genetic defects.

### Experience with human exposure

Eye contact : Redness, Pain, Corrosion  
Skin contact : Redness, Pain, Corrosion  
Ingestion : Corrosion, Abdominal pain  
Inhalation : Respiratory irritation, Cough

### Toxicity

#### Product

Acute oral toxicity : rat: 450 mg/kg  
Test substance: 80% Active Ingredient  
Acute inhalation toxicity : LC50 rat: 5 mg/l  
Exposure time: 4 h  
Test substance: Product  
Acute dermal toxicity : LD50 rabbit: > 4,000 mg/kg  
Test substance: 80% Active Ingredient  
Skin corrosion/irritation : no data available  
Serious eye damage/eye irritation : no data available  
Respiratory or skin sensitization : no data available  
Carcinogenicity : no data available  
Reproductive effects : no data available  
Germ cell mutagenicity : Positive result(s) from in vivo mammalian somatic cell mutagenicity tests.  
Teratogenicity : no data available  
STOT - single exposure : no data available  
STOT - repeated exposure : no data available  
Aspiration toxicity : no data available

## Section: 12. ECOLOGICAL INFORMATION

### Ecotoxicity



## SAFETY DATA SHEET

**H-130M**

Environmental Effects : Very toxic to aquatic life.

### Product

Toxicity to fish : LC50 *Lepomis macrochirus* (Bluegill sunfish): 0.32 mg/l  
Exposure time: 96 hrs  
Test substance: Active Substance

LC50 *Oncorhynchus mykiss* (rainbow trout): 1.6 mg/l  
Exposure time: 96 hrs  
Test substance: Active Substance

LC50 *Oncorhynchus kisutch* (coho salmon): 1.0 mg/l  
Exposure time: 96 hrs  
Test substance: Active Substance

LC50 *Pimephales promelas* (fathead minnow): 0.19 mg/l  
Exposure time: 96 hrs  
Test substance: Active Substance

LC50 *Pimephales promelas* (fathead minnow): 1.2 mg/l  
Exposure time: 96 hrs  
Test substance: Active Substance tested with 20 mg/L Humic Acid

LC50 *Cyprinodon variegatus* (sheepshead minnow): 0.96 mg/l  
Exposure time: 96 h  
Test substance: Active Substance

Toxicity to daphnia and other aquatic invertebrates : EC50 *Daphnia magna* (Water flea): 0.06 mg/l  
Exposure time: 48 hrs  
Test substance: Active Substance

Toxicity to algae : LC50 Green Algae (*Pseudokirchneriella subcapitata*, previously *Selenastrum capricornutum*): 0.026 mg/l  
Exposure time: 96 hrs  
Test substance: Active Substance

Toxicity to fish (Chronic toxicity) : NOEC: 0.032 mg/l  
Exposure time: 34 Days  
Species: Zebra Danio  
Test substance: Active Substance

Toxicity to daphnia and other aquatic invertebrates (Chronic toxicity) : NOEC: 0.01 mg/l  
Species: *Daphnia magna*  
Test substance: Active Substance

EC25 / IC25: 0.125 mg/l  
Species: *Daphnia magna*  
Test substance: Active Substance

### Persistence and degradability

The organic portion of this preparation is expected to be readily biodegradable.

### Mobility

## SAFETY DATA SHEET

**H-130M**

no data available

### Bioaccumulative potential

no data available

### Other information

no data available

## Section: 13. DISPOSAL CONSIDERATIONS

If this product becomes a waste, it could meet the criteria of a hazardous waste as defined by the Resource Conservation and Recovery Act (RCRA) 40 CFR 261. Before disposal, it should be determined if the waste meets the criteria of a hazardous waste.

Hazardous Waste: : D001

Disposal methods : The product should not be allowed to enter drains, water courses or the soil. Where possible recycling is preferred to disposal or incineration. If recycling is not practicable, dispose of in compliance with local regulations. Dispose of wastes in an approved waste disposal facility.

Disposal considerations : Dispose of as unused product. Empty containers should be taken to an approved waste handling site for recycling or disposal. Do not re-use empty containers.

## Section: 14. TRANSPORT INFORMATION

The shipper/consignor/sender is responsible to ensure that the packaging, labeling, and markings are in compliance with the selected mode of transport.

### Land transport (DOT)

Proper shipping name : CORROSIVE LIQUID, FLAMMABLE, N.O.S.  
Technical name(s) : DIDECYLDIMETHYLAMMONIUM CHLORIDE, ETHANOL  
UN/ID No. : UN 2920  
Transport hazard class(es) : 8, 3  
Packing group : II

### Air transport (IATA)

Proper shipping name : CORROSIVE LIQUID, FLAMMABLE, N.O.S.  
Technical name(s) : DIDECYLDIMETHYLAMMONIUM CHLORIDE, ETHANOL  
UN/ID No. : UN 2920  
Transport hazard class(es) : 8, 3  
Packing group : II

### Sea transport (IMDG/IMO)

Proper shipping name : CORROSIVE LIQUID, FLAMMABLE, N.O.S.  
Technical name(s) : DIDECYLDIMETHYLAMMONIUM CHLORIDE, ETHANOL  
UN/ID No. : UN 2920  
Transport hazard class(es) : 8, 3

## SAFETY DATA SHEET

**H-130M**

Packing group : II

\*Marine pollutant : DIDECYLDIMETHYLAMMONIUM CHLORIDE

\*Note: This product is regulated as a Marine Pollutant when shipped by Rail, Highway (in bulk quantities), or Air (if no other hazard class applies), and when shipped by water in all quantities.

### Section: 15. REGULATORY INFORMATION

EPA Reg. No. : 6836-203-1706

#### EPCRA - Emergency Planning and Community Right-to-Know Act

##### CERCLA Reportable Quantity

This material does not contain any components with a CERCLA RQ.

##### SARA 304 Extremely Hazardous Substances Reportable Quantity

This material does not contain any components with a section 304 EHS RQ.

**SARA 311/312 Hazards** : Acute Health Hazard  
Chronic Health Hazard  
Fire Hazard

**SARA 302** : No chemicals in this material are subject to the reporting requirements of SARA Title III, Section 302.

**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.

**California Prop 65** : This product does not contain any chemicals known to State of California to cause cancer, birth defects, or any other reproductive harm.

#### INTERNATIONAL CHEMICAL CONTROL LAWS :

##### United States TSCA Inventory

This product is exempted under TSCA and regulated under FIFRA. The inerts are on the Inventory List.

##### Australia. Industrial Chemical (Notification and Assessment) Act

All substances in this product comply with the National Industrial Chemicals Notification & Assessment Scheme (NICNAS).

##### Canadian Domestic Substances List (DSL)

Substances regulated under the Pest Control Products Act are exempt from CEPA New Substance Notification requirements.

##### Japan. ENCS - Existing and New Chemical Substances Inventory

All substances in this product comply with the Law Regulating the Manufacture and Importation Of Chemical Substances and are listed on the Existing and New Chemical Substances list (ENCS).

##### Korea. Korean Existing Chemicals Inventory (KECI)

All substances in this product comply with the Chemical Control Act (CCA) and are listed on the Existing Chemicals List (ECL)

## SAFETY DATA SHEET

**H-130M**

### Philippines Inventory of Chemicals and Chemical Substances (PICCS)

All substances in this product comply with the Republic Act 6969 (RA 6969) and are listed on the Philippines Inventory of Chemicals & Chemical Substances (PICCS).

### China Inventory of Existing Chemical Substances

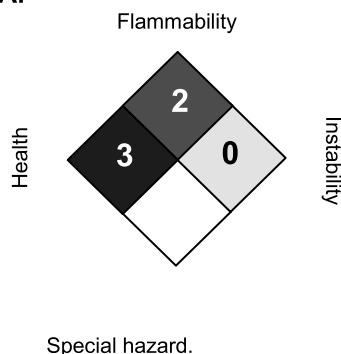
All substances in this product comply with the Provisions on the Environmental Administration of New Chemical Substances and are listed on or exempt from the Inventory of Existing Chemical Substances China (IECSC).

### Taiwan Chemical Substance Inventory

All substances in this product comply with the Taiwan Existing Chemical Substances Inventory (ECSI).

## Section: 16. OTHER INFORMATION

### NFPA:



### HMIS III:

HEALTH	3*
FLAMMABILITY	2
PHYSICAL HAZARD	0

0 = not significant, 1 = Slight,  
2 = Moderate, 3 = High  
4 = Extreme, \* = Chronic

Revision Date : 05/16/2017  
Version Number : 1.1  
Prepared By : Regulatory Affairs

REVISED INFORMATION: Significant changes to regulatory or health information for this revision is indicated by a bar in the left-hand margin of the SDS.

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. For additional copies of an SDS visit [www.nalco.com](http://www.nalco.com) and request access.

## SAFETY DATA SHEET

**NALCO® 77352NA**

### Section: 1. PRODUCT AND COMPANY IDENTIFICATION

Product name : NALCO® 77352NA

Other means of identification : Not applicable.

Recommended use : BIOCIDES

Restrictions on use : Refer to available product literature or ask your local Sales Representative for restrictions on use and dose limits.

Company : Nalco Company  
1601 W. Diehl Road  
Naperville, Illinois 60563-1198  
USA  
TEL: (630) 305-1000

Emergency telephone number : (800) 424-9300 (24 Hours) CHEMTREC

Issuing date : 10/15/2019

### Section: 2. HAZARDS IDENTIFICATION

#### GHS Classification

Acute toxicity (Inhalation) : Category 4  
Skin corrosion : Category 1A  
Serious eye damage : Category 1  
Skin sensitization : Category 1

#### GHS Label element

Hazard pictograms :



Signal Word : Danger

Hazard Statements : Causes severe skin burns and eye damage.  
May cause an allergic skin reaction.  
Harmful if inhaled.

Precautionary Statements : **Prevention:**  
Avoid breathing dust/ fume/ gas/ mist/ vapours/ spray. Wear protective gloves/ protective clothing/ eye protection/ face protection.  
**Response:**  
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. Immediately call a POISON CENTER/doctor. 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 or doctor/ physician.  
**Disposal:**

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Dispose of contents/ container to an approved waste disposal plant.

**Other hazards** : None known.

### Section: 3. COMPOSITION/INFORMATION ON INGREDIENTS

Chemical Name	CAS-No.	Concentration: (%)
Magnesium Nitrate	10377-60-3	1 - 5
5-Chloro-2-Methyl-4-Isothiazolin-3-one	26172-55-4	1 - 5
Magnesium Chloride	7786-30-3	1 - 5
2-Methyl-4-Isothiazolin-3-one	2682-20-4	0.1 - 1

### Section: 4. FIRST AID MEASURES

In case of eye contact	: Rinse immediately with plenty of water, also under the eyelids, for at least 15 minutes. Remove contact lenses, if present and easy to do. Continue rinsing. Get medical attention immediately.
In case of skin contact	: Wash off immediately with plenty of water for at least 15 minutes. Use a mild soap if available. Wash clothing before reuse. Thoroughly clean shoes before reuse. Get medical attention immediately.
If swallowed	: Rinse mouth with water. Do NOT induce vomiting. Never give anything by mouth to an unconscious person. Get medical attention immediately.
If inhaled	: Remove to fresh air. Treat symptomatically. Get medical attention.
Protection of first-aiders	: In event of emergency assess the danger before taking action. Do not put yourself at risk of injury. If in doubt, contact emergency responders. Use personal protective equipment as required.
Notes to physician	: Treat symptomatically.
Most important symptoms and effects, both acute and delayed	: See Section 11 for more detailed information on health effects and symptoms.

### Section: 5. FIREFIGHTING MEASURES

Suitable extinguishing media	: Use extinguishing measures that are appropriate to local circumstances and the surrounding environment.
Unsuitable extinguishing media	: None known.
Specific hazards during firefighting	: Not flammable or combustible.
Hazardous combustion products	: Decomposition products may include the following materials: Carbon oxides nitrogen oxides (NOx) Sulphur oxides Oxides of phosphorus
Special protective equipment for firefighters	: Use personal protective equipment.

## SAFETY DATA SHEET

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Specific extinguishing methods : Fire residues and contaminated fire extinguishing water must be disposed of in accordance with local regulations. In the event of fire and/or explosion do not breathe fumes.

### Section: 6. ACCIDENTAL RELEASE MEASURES

Personal precautions, protective equipment and emergency procedures : Ensure adequate ventilation. Keep people away from and upwind of spill/leak. Avoid inhalation, ingestion and contact with skin and eyes. When workers are facing concentrations above the exposure limit they must use appropriate certified respirators. Ensure clean-up is conducted by trained personnel only. Refer to protective measures listed in sections 7 and 8.

Environmental precautions : Do not allow contact with soil, surface or ground water.

Methods and materials for containment and cleaning up : Stop leak if safe to do so. Contain spillage, and then collect with non-combustible absorbent material, (e.g. sand, earth, diatomaceous earth, vermiculite) and place in container for disposal according to local / national regulations (see section 13). For large spills, dike spilled material or otherwise contain material to ensure runoff does not reach a waterway. Flush away traces with water.

### Section: 7. HANDLING AND STORAGE

Advice on safe handling : Do not ingest. Do not breathe dust/fume/gas/mist/vapours/spray. Do not get in eyes, on skin, or on clothing. Wash hands thoroughly after handling. Use only with adequate ventilation.

Conditions for safe storage : Keep out of reach of children. Keep container tightly closed. Store in suitable labelled containers.

Suitable material : Keep in properly labelled containers.

Unsuitable material : The following compatibility data is suggested based on similar product data and/or industry experience: Compatibility with Plastic Materials can vary; we therefore recommend that compatibility is tested prior to use.

### Section: 8. EXPOSURE CONTROLS/PERSONAL PROTECTION

#### Components with workplace control parameters

Contains no substances with occupational exposure limit values.

Engineering measures : Effective exhaust ventilation system. Maintain air concentrations below occupational exposure standards.

#### Personal protective equipment

Eye protection : Safety goggles  
Face-shield

Hand protection : Wear the following personal protective equipment:  
Standard glove type.  
Gloves should be discarded and replaced if there is any indication of degradation or chemical breakthrough.

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Skin protection	: Personal protective equipment comprising: suitable protective gloves, safety goggles and protective clothing
Respiratory protection	: When workers are facing concentrations above the exposure limit they must use appropriate certified respirators.
Hygiene measures	: Handle in accordance with good industrial hygiene and safety practice. Remove and wash contaminated clothing before re-use. Wash face, hands and any exposed skin thoroughly after handling. Provide suitable facilities for quick drenching or flushing of the eyes and body in case of contact or splash hazard.

### Section: 9. PHYSICAL AND CHEMICAL PROPERTIES

Appearance	: Liquid
Colour	: yellow
Odour	: Pungent
Flash point	: does not flash
pH	: 3 - 5,(100 %)
Odour Threshold	: no data available
Melting point/freezing point	: no data available
Initial boiling point and boiling range	: 100 °C
Evaporation rate	: no data available
Flammability (solid, gas)	: Not applicable.
Upper explosion limit	: no data available
Lower explosion limit	: no data available
Vapour pressure	: 0.1 mm Hg, (20 °C),
Relative vapour density	: no data available
Relative density	: 1.02, (20 °C),
Density	: 1.02 g/cm <sup>3</sup> , 8.5 lb/gal
Water solubility	: completely soluble
Solubility in other solvents	: no data available
Partition coefficient: n-octanol/water	: no data available
Auto-ignition temperature	: no data available
Thermal decomposition	: no data available
Viscosity, dynamic	: 3 mPa.s (25 °C)
Viscosity, kinematic	: no data available
Molecular weight	: no data available
VOC	: 0 %, 0 g/l, EPA Method 24



## SAFETY DATA SHEET

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### Section: 10. STABILITY AND REACTIVITY

Reactivity	: No dangerous reaction known under conditions of normal use.
Chemical stability	: Stable under normal conditions.
Possibility of hazardous reactions	: No dangerous reaction known under conditions of normal use.
Conditions to avoid	: Extremes of temperature Freezing temperatures.
Incompatible materials	: Amines Organic materials and reducing agents Mercaptans Oxidizing agents Aluminium Mild steel
Hazardous decomposition products	: Decomposition products may include the following materials: Carbon oxides nitrogen oxides (NOx) Sulphur oxides Oxides of phosphorus

### Section: 11. TOXICOLOGICAL INFORMATION

Information on likely routes of exposure : Inhalation, Eye contact, Skin contact

#### Potential Health Effects

Eyes	: Causes serious eye damage.
Skin	: Causes severe skin burns. May cause allergic skin reaction.
Ingestion	: Causes digestive tract burns.
Inhalation	: Harmful if inhaled. May cause nose, throat, and lung irritation.
Chronic Exposure	: Health injuries are not known or expected under normal use.

#### Experience with human exposure

Eye contact	: Redness, Pain, Corrosion
Skin contact	: Redness, Pain, Irritation, Corrosion, Allergic reactions
Ingestion	: Corrosion, Abdominal pain
Inhalation	: Respiratory irritation, Cough

#### Toxicity

#### Product

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Acute oral toxicity	: LD50 rat: 4,000 mg/kg Test substance: Product (estimated)
Acute inhalation toxicity	: Acute toxicity estimate: 19.13 mg/l Exposure time: 4 h Test atmosphere: dust/mist
Acute dermal toxicity	: LD50 rabbit: > 5,000 mg/kg Test substance: Product (estimated)
Skin corrosion/irritation	: no data available
Serious eye damage/eye irritation	: no data available
Respiratory or skin sensitization	: no data available
Carcinogenicity	: no data available
Reproductive effects	: no data available
Germ cell mutagenicity	: no data available
Teratogenicity	: no data available
STOT - single exposure	: no data available
STOT - repeated exposure	: no data available
Aspiration toxicity	: no data available

### Section: 12. ECOLOGICAL INFORMATION

#### Ecotoxicity

Environmental Effects : Harmful to aquatic life.

#### Product

Toxicity to algae : EC50 Marine Algae (*Skeletonema costatum*): 0.003 mg/l  
Test substance: Active Substance  
  
EC50 Green Algae (*Pseudokirchneriella subcapitata*, previously *Selenastrum capricornutum*): 0.018 mg/l  
Test substance: Active Substance

#### Components

Toxicity to fish : Magnesium Nitrate  
LC50 *Oncorhynchus mykiss* (rainbow trout): > 100 mg/l  
Exposure time: 96 h  
  
5-Chloro-2-Methyl-4-Isothiazolin-3-one  
LC50 Fish: 0.19 mg/l  
Exposure time: 96 h  
  
2-Methyl-4-Isothiazolin-3-one  
LC50 Fish: 0.19 mg/l  
Exposure time: 96 h

#### Components

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### NALCO® 77352NA

Toxicity to daphnia and other aquatic invertebrates : Magnesium Nitrate  
EC50 Daphnia magna (Water flea): 490 mg/l  
Exposure time: 48 h

#### Persistence and degradability

The organic portion of this preparation is expected to be readily biodegradable.

#### Mobility

The environmental fate was estimated using a level III fugacity model embedded in the EPI (estimation program interface) Suite TM, provided by the US EPA. The model assumes a steady state condition between the total input and output. The level III model does not require equilibrium between the defined media. The information provided is intended to give the user a general estimate of the environmental fate of this product under the defined conditions of the models.

If released into the environment this material is expected to distribute to the air, water and soil/sediment in the approximate respective percentages;

Air	: <5%
Water	: 30 - 50%
Soil	: 50 - 70%

The portion in water is expected to be soluble or dispersible.

#### Bioaccumulative potential

This preparation or material is not expected to bioaccumulate.

#### Other information

no data available

### Section: 13. DISPOSAL CONSIDERATIONS

Disposal methods : The product should not be allowed to enter drains, water courses or the soil. Where possible recycling is preferred to disposal or incineration. If recycling is not practicable, dispose of in compliance with local regulations. Dispose of wastes in an approved waste disposal facility.

Disposal considerations : Dispose of as unused product. Empty containers should be taken to an approved waste handling site for recycling or disposal. Do not re-use empty containers.

### Section: 14. TRANSPORT INFORMATION

The shipper/consignor/sender is responsible to ensure that the packaging, labeling, and markings are in compliance with the selected mode of transport.

#### Land transport (DOT)

Proper shipping name	: CORROSIVE LIQUID, ACIDIC, ORGANIC, N.O.S.
Technical name(s)	: 5-CHLORO-2-METHYL-4-ISOTHIAZOLIN-3-ONE, ISOTHIAZOLINONE MICROBIOCID
UN/ID No.	: UN 3265

## SAFETY DATA SHEET

**NALCO® 77352NA**

Transport hazard class(es) : 8  
Packing group : II

### Air transport (IATA)

Proper shipping name : CORROSIVE LIQUID, ACIDIC, ORGANIC, N.O.S.  
Technical name(s) : 5-CHLORO-2-METHYL-4-ISOTHIAZOLIN-3-ONE, ISOTHIAZOLINONE MICROBIOCIDE  
UN/ID No. : UN 3265  
Transport hazard class(es) : 8  
Packing group : II

### Sea transport (IMDG/IMO)

Proper shipping name : CORROSIVE LIQUID, ACIDIC, ORGANIC, N.O.S.  
Technical name(s) : 5-CHLORO-2-METHYL-4-ISOTHIAZOLIN-3-ONE, ISOTHIAZOLINONE MICROBIOCIDE  
UN/ID No. : UN 3265  
Transport hazard class(es) : 8  
Packing group : II

\*Marine pollutant : ISOTHIAZOLINONE MICROBIOCIDE

\* Note: This product is regulated as a Marine Pollutant when shipped by Rail or Highway (in bulk quantities), and when shipped by water in all quantities.

## Section: 15. REGULATORY INFORMATION

**TSCA list** : No substances are subject to a Significant New Use Rule.

The following substance(s) is/are subject to TSCA 12(b) export notification requirements: 5-Chloro-2-Methyl-4-Isothiazolin-3-one

**EPA Reg. No.** : 707-133-1706

### EPCRA - Emergency Planning and Community Right-to-Know Act

#### CERCLA Reportable Quantity

This product does not contain a RQ substance, or this product contains a substance with a RQ, however the calculated RQ exceeds the reasonably attainable upper limit.

#### SARA 304 Extremely Hazardous Substances Reportable Quantity

This material does not contain any components with a section 304 EHS RQ.

**SARA 311/312 Hazards** : Respiratory or skin sensitisation  
Acute toxicity (any route of exposure)  
Serious eye damage or eye irritation  
Skin corrosion or irritation

**SARA 302** : This material does not contain any components with a section 302 EHS TPQ.

**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.

## SAFETY DATA SHEET

**NALCO® 77352NA**

### **California Prop. 65**

This product does not contain any chemicals known to State of California to cause cancer, birth defects, or any other reproductive harm.

### **INTERNATIONAL CHEMICAL CONTROL LAWS :**

#### **United States TSCA Inventory**

This product is exempted under TSCA and regulated under FIFRA. The inerts are on the Inventory List.

#### **Australia. Industrial Chemical (Notification and Assessment) Act**

All substances in this product comply with the National Industrial Chemicals Notification & Assessment Scheme (NICNAS).

#### **Canadian Domestic Substances List (DSL)**

The substances in this preparation are listed on the Domestic Substances List (DSL), are exempt, or have been reported in accordance with the New Substances Notification Regulations.

#### **Japan. ENCS - Existing and New Chemical Substances Inventory**

All substances in this product comply with the Law Regulating the Manufacture and Importation Of Chemical Substances and are listed on the Existing and New Chemical Substances list (ENCS).

#### **Korea. Korean Existing Chemicals Inventory (KECI)**

All substances in this product comply with the Chemical Control Act (CCA) and are listed on the Existing Chemicals List (ECL)

#### **Philippines Inventory of Chemicals and Chemical Substances (PICCS)**

All substances in this product comply with the Republic Act 6969 (RA 6969) and are listed on the Philippines Inventory of Chemicals & Chemical Substances (PICCS).

#### **China Inventory of Existing Chemical Substances**

All substances in this product comply with the Provisions on the Environmental Administration of New Chemical Substances and are listed on or exempt from the Inventory of Existing Chemical Substances China (IECSC).

#### **New Zealand. Inventory of Chemicals (NZIoC), as published by ERMA New Zealand**

All substances in this product comply with the Hazardous Substances and New Organisms (HSNO) Act 1996, and are listed on or are exempt from the New Zealand Inventory of Chemicals.

#### **Taiwan Chemical Substance Inventory**

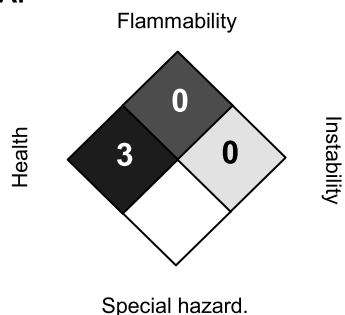
All substances in this product comply with the Taiwan Existing Chemical Substances Inventory (ECSI).

### **Section: 16. OTHER INFORMATION**

## SAFETY DATA SHEET

**NALCO® 77352NA**

### NFPA:



### HMIS III:

<b>HEALTH</b>	<b>3*</b>
<b>FLAMMABILITY</b>	<b>0</b>
<b>PHYSICAL HAZARD</b>	<b>0</b>

0 = not significant, 1 = Slight,  
2 = Moderate, 3 = High  
4 = Extreme, \* = Chronic

Revision Date : 10/15/2019  
Version Number : 1.4  
Prepared By : Regulatory Affairs

REVISED INFORMATION: Significant changes to regulatory or health information for this revision is indicated by a bar in the left-hand margin of the SDS.

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. For additional copies of an SDS visit [www.nalco.com](http://www.nalco.com) and request access.



GE Power & Water  
Water & Process Technologies

# SAFETY DATA SHEET

## OPTISPERSE\* PWR6600

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### 1. Identification

Product identifier	OPTISPERSE PWR6600
Other means of identification	None.
Recommended use	Internal boiler water treatment
Recommended restrictions	None known.

#### Company/undertaking identification

GE Betz, 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	Not classified.
Health hazards	Not classified.
OSHA defined hazards	Not classified.

#### Label elements

Hazard symbol	None.
Signal word	None.
Hazard statement	The mixture does not meet the criteria for classification.
Precautionary statement	
Prevention	Observe good industrial hygiene practices.
Response	Wash hands after handling.
Storage	Store away from incompatible materials.
Disposal	Dispose of waste and residues in accordance with local authority requirements.

Hazard(s) not otherwise classified (HNOC)	None known.
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Supplemental information	None.
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### 3. Composition/information on ingredients

#### Mixtures

This material is not considered to be hazardous according to regulatory guidelines (see Section 15 of the SDS).

Composition comments	This product does not contain hazardous ingredients in reportable concentrations. 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.
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### 4. First-aid measures

Inhalation	Move to fresh air. Call a physician if symptoms develop or persist.
Skin contact	Wash off with soap and water.

<b>Eye contact</b>	Immediately flush eye(s) with plenty of water. Get medical attention if irritation develops and persists.
<b>Ingestion</b>	Get medical attention if symptoms occur.
<b>Most important symptoms/effects, acute and delayed</b>	Direct contact with eyes may cause temporary irritation.
<b>Indication of immediate medical attention and special treatment needed</b>	Treat symptomatically.
<b>General information</b>	Ensure that medical personnel are aware of the material(s) involved, and take precautions to protect themselves.

## 5. Fire-fighting measures

<b>Suitable extinguishing media</b>	Water fog. Foam. Dry chemical powder. Carbon dioxide (CO <sub>2</sub> ).
<b>Unsuitable extinguishing media</b>	Do not use water jet as an extinguisher, as this will spread the fire.
<b>Specific hazards arising from the chemical</b>	During fire, gases hazardous to health may be formed.
<b>Special protective equipment and precautions for firefighters</b>	Self-contained breathing apparatus and full protective clothing must be worn in case of fire.
<b>Fire fighting equipment/instructions</b>	Move containers from fire area if you can do so without risk.
<b>Specific methods</b>	Use standard firefighting procedures and consider the hazards of other involved materials.
<b>General fire hazards</b>	No unusual fire or explosion hazards noted.

## 6. Accidental release measures

<b>Personal precautions, protective equipment and emergency procedures</b>	Keep unnecessary personnel away. For personal protection, see section 8 of the SDS.
<b>Methods and materials for containment and cleaning up</b>	<p>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. Absorb in vermiculite, dry sand or earth and place into containers. Following product recovery, flush area with water.</p> <p>Small Spills: Wipe up with absorbent material (e.g. cloth, fleece). Clean surface thoroughly to remove residual contamination.</p> <p>Never return spills to original containers for re-use. For waste disposal, see section 13 of the SDS.</p>
<b>Environmental precautions</b>	Avoid discharge into drains, water courses or onto the ground.

## 7. Handling and storage

<b>Precautions for safe handling</b>	Observe good industrial hygiene practices.
<b>Conditions for safe storage, including any incompatibilities</b>	Protect from freezing. If frozen, thaw completely and mix thoroughly prior to use. Store in original tightly closed container. Store away from incompatible materials (see Section 10 of the SDS).

## 8. Exposure controls/personal protection

<b>Occupational exposure limits</b>	No exposure limits noted for ingredient(s).
<b>Biological limit values</b>	No biological exposure limits noted for the ingredient(s).
<b>Appropriate engineering controls</b>	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.
<b>Individual protection measures, such as personal protective equipment</b>	
<b>Eye/face protection</b>	Splash proof chemical goggles.
<b>Skin protection</b>	
<b>Hand protection</b>	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.
<b>Other</b>	Wear suitable protective clothing.
<b>Respiratory protection</b>	In case of insufficient ventilation, wear suitable respiratory equipment. 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.



<b>Thermal hazards</b>	Wear appropriate thermal protective clothing, when necessary.
<b>General hygiene considerations</b>	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	Colorless to light yellow
Physical state	Liquid
Odor	Slight
Odor threshold	Not available.
pH (concentrated product)	8.5
pH in aqueous solution	8.5 (5% SOL.)
Melting point/freezing point	30 °F (-1 °C)
Initial boiling point and boiling range	220 °F (104 °C)
Flash point	> 212 °F (> 100 °C) P-M(CC)
Evaporation rate	< 1 (Ether = 1)
Flammability (solid, gas)	Not available.

### 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 mm Hg
Vapor pressure temp.	70 °F (21 °C)
Vapor density	< 1 (Air = 1)
Relative density	1.06
Relative density temperature	70 °F (21 °C)

### Solubility(ies)

Solubility (water)	100 %
Partition coefficient (n-octanol/water)	Not available.

Auto-ignition temperature	Not available.
Decomposition temperature	Not available.

Viscosity	133 cps
Viscosity temperature	70 °F (21 °C)

### Other information

Percent volatile	15 (Calculated)
Pour point	35 °F (2 °C)
Specific gravity	1.06
VOC (Weight %)	0.26 % Switzerland estimated

## 10. Stability and reactivity

<b>Reactivity</b>	The product is stable and non-reactive under normal conditions of use, storage and transport.
<b>Chemical stability</b>	Material is stable under normal conditions.
<b>Possibility of hazardous reactions</b>	Hazardous polymerization does not occur.
<b>Conditions to avoid</b>	Protect from freezing.
<b>Incompatible materials</b>	Strong oxidizing agents.
<b>Hazardous decomposition products</b>	Ammonia, oxides of carbon and nitrogen evolved in fire.

## 11. Toxicological information

### Information on likely routes of exposure

Inhalation	May cause irritation to respiratory organs.
Skin contact	Prolonged or repeated contact may cause irritation.
Eye contact	Direct contact with eyes may cause temporary irritation.
Ingestion	Expected to be a low ingestion hazard.

**Symptoms related to the physical, chemical and toxicological characteristics** Direct contact with eyes may cause temporary irritation.

### Information on toxicological effects

#### Acute toxicity

Product	Species	Test Results
OPTISPERSE PWR6600 (CAS Mixture)		
<b>Acute</b>		
<i>Dermal</i>		
LD50	Rabbit	> 5000 mg/kg, (Calculated according to GHS additivity formula)
<i>Inhalation</i>		
LC50	Rat	> 20 mg/l, 4 Hours, (Calculated according to GHS additivity formula)
<i>Oral</i>		
LD50	Rat	> 5000 mg/kg, (Calculated according to GHS additivity formula)

\* Estimates for product may be based on additional component data not shown.

**Skin corrosion/irritation** Prolonged skin contact may cause temporary irritation.

**Serious eye damage/eye irritation** Direct contact with eyes may cause temporary irritation.

#### Respiratory or skin sensitization

**Respiratory sensitization** Not available.

**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** This product is not considered to be a carcinogen by IARC, ACGIH, NTP, or OSHA.

#### OSHA Specifically Regulated Substances (29 CFR 1910.1001-1050)

Not listed.

**Reproductive toxicity** This product is not expected to cause reproductive or developmental effects.

**Specific target organ toxicity - single exposure** Not classified.

**Specific target organ toxicity - repeated exposure** Not classified.

**Aspiration hazard** Based on available data, the classification criteria are not met. May be harmful if swallowed and enters airways.

## 12. Ecological information

**Ecotoxicity** The product is not classified as environmentally hazardous. However, this does not exclude the possibility that large or frequent spills can have a harmful or damaging effect on the environment.

Product	Species	Test Results
OPTISPERSE PWR6600 (CAS Mixture)		
0% Mortality	Fathead Minnow	2000 mg/L, Static Bioassay with 48-Hour Renewal, 96 hour
LC50	Mysid Shrimp	2640 mg/L, Static Renewal Bioassay, 96 hour

Product		Species	Test Results
Aquatic Crustacea	NOEL	Mysid Shrimp	1000 mg/L, Static Renewal Bioassay, 96 hour
		Sheepshead Minnow	8000 mg/L, Static Renewal Bioassay, 96 hour
	LC50	Daphnia magna	1250 mg/L, Static Renewal Bioassay, 48 hour
		Daphnia magna	687 mg/L, Static Renewal Bioassay, 48 hour

\* Estimates for product may be based on additional component data not shown.

<b>Bioaccumulative potential</b>	No data available.
<b>Mobility in soil</b>	No data available.
<b>Other adverse effects</b>	No other adverse environmental effects (e.g. ozone depletion, photochemical ozone creation potential, endocrine disruption, global warming potential) are expected from this component.
<b>Environmental fate</b>	The product is not classified as environmentally hazardous. However, this does not exclude the possibility that large or frequent spills can have a harmful or damaging effect on the environment.
<b>Persistence and degradability</b>	No data available

### 13. Disposal considerations

<b>Disposal instructions</b>	Collect and reclaim or dispose in sealed containers at licensed waste disposal site.
<b>Local disposal regulations</b>	Dispose in accordance with all applicable regulations.
<b>Hazardous waste code</b>	The waste code should be assigned in discussion between the user, the producer and the waste disposal company.
<b>Waste from residues / unused products</b>	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).
<b>Contaminated packaging</b>	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

<b>DOT</b>	Not regulated as dangerous goods. Some containers may be DOT exempt, please check BOL for exact container classification.
<b>IATA</b>	Not regulated as dangerous goods.
<b>IMDG</b>	Not regulated as dangerous goods.

### 15. Regulatory information

<b>US federal regulations</b>	This product is not known to be a "Hazardous Chemical" as defined by the OSHA Hazard Communication Standard, 29 CFR 1910.1200. All components of this product are included on or are in compliance with the U.S. TSCA regulations.
<b>TSCA Section 12(b) Export Notification (40 CFR 707, Subpt. D)</b>	Not regulated.
<b>CERCLA Hazardous Substance List (40 CFR 302.4)</b>	Not listed.
<b>SARA 304 Emergency release notification</b>	Not regulated.
<b>OSHA Specifically Regulated Substances (29 CFR 1910.1001-1050)</b>	Not listed.
<b>Superfund Amendments and Reauthorization Act of 1986 (SARA)</b>	
<b>Hazard categories</b>	Immediate Hazard - No Delayed Hazard - No Fire Hazard - No Pressure Hazard - No Reactivity Hazard - No

**SARA 302 Extremely hazardous substance**

Not listed.

**SARA 311/312 Hazardous chemical** No**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)**

Not regulated.

**Safe Drinking Water Act (SDWA)** Not regulated.**Inventory status**

Country(s) or region	Inventory name	On inventory (yes/no)*
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 - Massachusetts RTK - Substance List**

Not regulated.

**US - Pennsylvania RTK - Hazardous Substances**

Not regulated.

**US - Rhode Island RTK**

Not regulated.

**US. California Controlled Substances. CA Department of Justice (California Health and Safety Code Section 11100)**

Not listed.

**US. New Jersey Worker and Community Right-to-Know Act**

Not listed.

**US. Pennsylvania Worker and Community Right-to-Know Law**

Not listed.

**US. California Proposition 65**

WARNING: This product contains a chemical known to the State of California to cause cancer.

**US - California Proposition 65 - CRT: Listed date/Carcinogenic substance**

Diethanolamine (CAS 111-42-2)

Listed: June 22, 2012

**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.

**16. Other information, including date of preparation or last revision****Issue date** Feb-04-2015**Revision date** Feb-04-2015**Version #** 1.0

**List of abbreviations**

CAS: Chemical Abstract Service Registration Number  
TWA: Time Weighted Average  
STEL: Short Term Exposure Limit  
TLV: Threshold Limit Value  
LD50: Lethal Dose, 50%  
LC50: Lethal Concentration, 50%  
NOEL: No Observed Effect Level  
COD: Chemical Oxygen Demand  
BOD: Biochemical Oxygen Demand  
TOC: Total Organic Carbon  
IATA: International Air Transport Association  
IMDG: International Maritime Dangerous Goods Code  
TSRN indicates a Trade Secret Registry Number is used in place of the CAS number.  
ACGIH: American Conference of Governmental Industrial Hygienists  
NFPA: National Fire Protection Association

**References:**

No data available

**Disclaimer**

The information in the sheet was written based on the best knowledge and experience currently available. 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**

Product and Company Identification: Product and Company Identification  
Composition / Information on Ingredients: Ingredients  
Physical & Chemical Properties: Multiple Properties  
Toxicological Information: Toxicological Data  
Transport Information: Material Transportation Information  
Regulatory Information: Risk Phrases - Labeling  
HazReg Data: Europe - EU  
GHS: Classification

**Prepared by**

This SDS has been prepared by GE Water & Process Technologies Regulatory Department (1-215-355-3300).

\* Trademark of General Electric Company. May be registered in one or more countries.

## SAFETY DATA SHEET

### 3D TRASAR™ 3DT198

#### Section: 1. PRODUCT AND COMPANY IDENTIFICATION

Product name : 3D TRASAR™ 3DT198

Other means of identification : Not applicable.

Restrictions on use : Refer to available product literature or ask your local Sales Representative for restrictions on use and dose limits.

Company : Nalco Company  
1601 W. Diehl Road  
Naperville, Illinois 60563-1198  
USA  
TEL: (630) 305-1000

Emergency telephone number : (800) 424-9300 (24 Hours) CHEMTREC

Issuing date : 11/20/2019

#### Section: 2. HAZARDS IDENTIFICATION

##### GHS Classification

Acute toxicity (Oral) : Category 4  
Skin corrosion : Category 1B  
Serious eye damage : Category 1

##### GHS Label element

Hazard pictograms :



Signal Word : Danger

Hazard Statements : Harmful if swallowed.  
Causes severe skin burns and eye damage.

Precautionary Statements : **Prevention:**  
Wash skin thoroughly after handling. Do not eat, drink or smoke when using this product. Wear protective gloves/ protective clothing/ eye protection/ face protection.  
**Response:**  
IF SWALLOWED: Call a POISON CENTER or doctor/ physician if you feel unwell. IF SWALLOWED: Rinse mouth. Do NOT induce vomiting. IF ON SKIN (or hair): Remove/ Take off immediately all contaminated clothing. Rinse skin with water/ shower. IF INHALED: Remove victim to fresh air and keep at rest in a position 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 or doctor/ physician. Wash contaminated clothing before reuse.  
**Storage:**  
Store locked up.

## SAFETY DATA SHEET

### 3D TRASAR™ 3DT198

**Disposal:**

Dispose of contents/ container to an approved waste disposal plant.

**Other hazards** : None known.

### Section: 3. COMPOSITION/INFORMATION ON INGREDIENTS

Pure substance/mixture : Mixture

Chemical Name	CAS-No.	Concentration: (%)
Sodium Tolytriazole	64665-57-2	30 - 60

### Section: 4. FIRST AID MEASURES

In case of eye contact : Rinse immediately with plenty of water, also under the eyelids, for at least 15 minutes. Remove contact lenses, if present and easy to do. Continue rinsing. Get medical attention immediately.

In case of skin contact : Wash off immediately with plenty of water for at least 15 minutes. Use a mild soap if available. Wash clothing before reuse. Thoroughly clean shoes before reuse. Get medical attention immediately.

If swallowed : Rinse mouth with water. Do NOT induce vomiting. Never give anything by mouth to an unconscious person. Get medical attention immediately.

If inhaled : Remove to fresh air. Treat symptomatically. Get medical attention if symptoms occur.

Protection of first-aiders : In event of emergency assess the danger before taking action. Do not put yourself at risk of injury. If in doubt, contact emergency responders. Use personal protective equipment as required.

Notes to physician : Treat symptomatically.

Most important symptoms and effects, both acute and delayed : See Section 11 for more detailed information on health effects and symptoms.

### Section: 5. FIREFIGHTING MEASURES

Suitable extinguishing media : Use extinguishing measures that are appropriate to local circumstances and the surrounding environment.

Unsuitable extinguishing media : None known.

Specific hazards during firefighting : Not flammable or combustible.

Hazardous combustion products : Decomposition products may include the following materials: Carbon oxides nitrogen oxides (NOx)

Special protective equipment for firefighters : Use personal protective equipment.

## SAFETY DATA SHEET

### 3D TRASAR™ 3DT198

Specific extinguishing methods : Fire residues and contaminated fire extinguishing water must be disposed of in accordance with local regulations. In the event of fire and/or explosion do not breathe fumes.

#### Section: 6. ACCIDENTAL RELEASE MEASURES

Personal precautions, protective equipment and emergency procedures : Ensure adequate ventilation. Keep people away from and upwind of spill/leak. Avoid inhalation, ingestion and contact with skin and eyes. When workers are facing concentrations above the exposure limit they must use appropriate certified respirators. Ensure clean-up is conducted by trained personnel only. Refer to protective measures listed in sections 7 and 8.

Environmental precautions : Do not allow contact with soil, surface or ground water.

Methods and materials for containment and cleaning up : Stop leak if safe to do so. Contain spillage, and then collect with non-combustible absorbent material, (e.g. sand, earth, diatomaceous earth, vermiculite) and place in container for disposal according to local / national regulations (see section 13). For large spills, dike spilled material or otherwise contain material to ensure runoff does not reach a waterway.

#### Section: 7. HANDLING AND STORAGE

Advice on safe handling : Do not ingest. Do not breathe dust/fume/gas/mist/vapours/spray. Do not get in eyes, on skin, or on clothing. Wash hands thoroughly after handling. Use only with adequate ventilation.

Conditions for safe storage : Do not store near acids. Keep out of reach of children. Keep container tightly closed. Store in suitable labelled containers.

Suitable material : The following compatibility data is suggested based on similar product data and/or industry experience: Stainless Steel 304, Compatibility with Plastic Materials can vary; we therefore recommend that compatibility is tested prior to use.

Unsuitable material : not determined

#### Section: 8. EXPOSURE CONTROLS/PERSONAL PROTECTION

##### Components with workplace control parameters

Contains no substances with occupational exposure limit values.

Engineering measures : Effective exhaust ventilation system. Maintain air concentrations below occupational exposure standards.

##### Personal protective equipment

Eye protection : Safety goggles  
Face-shield

Hand protection : Wear the following personal protective equipment:  
Standard glove type.  
Gloves should be discarded and replaced if there is any indication of degradation or chemical breakthrough.



## SAFETY DATA SHEET

### 3D TRASAR™ 3DT198

Skin protection	: Personal protective equipment comprising: suitable protective gloves, safety goggles and protective clothing
Respiratory protection	: When workers are facing concentrations above the exposure limit they must use appropriate certified respirators.
Hygiene measures	: Handle in accordance with good industrial hygiene and safety practice. Remove and wash contaminated clothing before re-use. Wash face, hands and any exposed skin thoroughly after handling. Provide suitable facilities for quick drenching or flushing of the eyes and body in case of contact or splash hazard.

#### Section: 9. PHYSICAL AND CHEMICAL PROPERTIES

Appearance	: Liquid
Colour	: Light
Odour	: Characteristic
Flash point	: does not flash
pH	: 11.5 - 12,(10 %)
Odour Threshold	: no data available
Melting point/freezing point	: Freezing Point: -7.8 - -5 °C
Initial boiling point and boiling range	: 106 °C
Evaporation rate	: no data available
Flammability (solid, gas)	: Not applicable.
Upper explosion limit	: no data available
Lower explosion limit	: no data available
Vapour pressure	: 18.8 mm Hg, (20 °C),
Relative vapour density	: no data available
Relative density	: 1.19 - 1.21,
Density	: 1.17 g/cm <sup>3</sup> , 9.8 lb/gal
Water solubility	: no data available
Solubility in other solvents	: no data available
Partition coefficient: n-octanol/water	: log Pow: -1.20
Auto-ignition temperature	: no data available
Thermal decomposition	: no data available
Viscosity, dynamic	: 55 mPa.s (16 °C)
Viscosity, kinematic	: no data available
Molecular weight	: no data available
VOC	: no data available

## SAFETY DATA SHEET

### 3D TRASAR™ 3DT198

#### Section: 10. STABILITY AND REACTIVITY

Reactivity	: No dangerous reaction known under conditions of normal use.
Chemical stability	: Stable under normal conditions.
Possibility of hazardous reactions	: No dangerous reaction known under conditions of normal use.
Conditions to avoid	: None known.
Incompatible materials	: Strong acids Oxidizing agents
Hazardous decomposition products	: Decomposition products may include the following materials: Carbon oxides nitrogen oxides (NOx)

#### Section: 11. TOXICOLOGICAL INFORMATION

Information on likely routes of exposure : Inhalation, Eye contact, Skin contact

##### Potential Health Effects

Eyes	: Causes serious eye damage.
Skin	: Causes severe skin burns.
Ingestion	: Harmful if swallowed. Causes digestive tract burns.
Inhalation	: May cause nose, throat, and lung irritation.
Chronic Exposure	: Health injuries are not known or expected under normal use.

##### Experience with human exposure

Eye contact	: Redness, Pain, Corrosion
Skin contact	: Redness, Pain, Corrosion
Ingestion	: Corrosion, Abdominal pain
Inhalation	: Respiratory irritation, Cough

##### Toxicity

##### Product

Acute oral toxicity	: LD50 rat: 640 mg/kg Test substance: Product
Acute inhalation toxicity	: no data available
Acute dermal toxicity	: LD50 rabbit: > 2,000 mg/kg Test substance: Product

## SAFETY DATA SHEET

### 3D TRASAR™ 3DT198

Skin corrosion/irritation : no data available  
Serious eye damage/eye irritation : no data available  
Respiratory or skin sensitization : no data available  
Carcinogenicity : no data available  
Reproductive effects : no data available  
Germ cell mutagenicity : no data available  
Teratogenicity : no data available  
STOT - single exposure : no data available  
STOT - repeated exposure : no data available  
Aspiration toxicity : no data available

### Section: 12. ECOLOGICAL INFORMATION

#### Ecotoxicity

Environmental Effects : Harmful to aquatic life.

#### Product

Toxicity to fish : LC50 Bluegill Sunfish: 191.2 mg/l  
Exposure time: 96 hrs  
Test substance: Product

LC50 Rainbow Trout: 23.7 mg/l  
Exposure time: 96 hrs  
Test substance: Product

LC50 Inland Silverside: 93.2 mg/l  
Exposure time: 96 hrs  
Test substance: Product

LC50 Zebra Danio: 122 mg/l  
Exposure time: 96 hrs  
Test substance: Product

LC50 Bluegill Sunfish: 173 mg/l  
Exposure time: 96 hrs  
Test substance: Product

NOEC Bluegill Sunfish: 56 mg/l  
Exposure time: 96 hrs  
Test substance: Product

NOEC Rainbow Trout: 10 mg/l  
Exposure time: 96 hrs  
Test substance: Product

NOEC Inland Silverside: 62.5 mg/l  
Exposure time: 96 hrs

## SAFETY DATA SHEET

### 3D TRASAR™ 3DT198

Test substance: Product

Toxicity to daphnia and other aquatic invertebrates : LC50 Daphnia magna: 245.7 mg/l  
Exposure time: 48 hrs

Test substance: Product

LC50 Mysid Shrimp (Mysidopsis bahia): 89.8 mg/l

Exposure time: 96 hrs

Test substance: Product

LC50 Acartia tonsa: 605 mg/l

Exposure time: 48 hrs

Test substance: Product

NOEC Mysid Shrimp (Mysidopsis bahia): 62.5 mg/l

Exposure time: 96 hrs

Test substance: Product

NOEC Acartia tonsa: 250 mg/l

Exposure time: 48 hrs

Test substance: Product

Toxicity to algae : LC50 Marine Algae (Skeletonema costatum): 114 mg/l

Exposure time: 72 hrs

Test substance: Product

Test Type: Growth

NOEC Marine Algae (Skeletonema costatum): 10 mg/l

Exposure time: 72 hrs

Test substance: Product

Test Type: Growth

NOEC Macrocystis pyrifera (brown algae): 50 mg/l

Exposure time: 48 hrs

Test substance: Product

Test Type: Reproduction

NOEC Macrocystis pyrifera (brown algae): 12.5 mg/l

Exposure time: 48 hrs

Test substance: Product

Test Type: Growth

EC25 / IC25 Macrocystis pyrifera (brown algae): 62.9 mg/l

Exposure time: 48 hrs

Test substance: Product

Test Type: Reproduction

EC25 / IC25 Macrocystis pyrifera (brown algae): 46.4 mg/l

Exposure time: 48 hrs

Test substance: Product

Test Type: Growth

EC50 Macrocystis pyrifera (brown algae): 82.7 mg/l

Exposure time: 48 hrs

Test substance: Product

## SAFETY DATA SHEET

### 3D TRASAR™ 3DT198

Test Type: Reproduction

EC50 *Macrocystis pyrifera* (brown algae): 86.7 mg/l

Exposure time: 48 hrs

Test substance: Product

Test Type: Growth

Toxicity to bacteria : LC50 *Pseudomonas putida*: 500 mg/l  
Test substance: Product

Toxicity to daphnia and other aquatic invertebrates (Chronic toxicity) : IC50: 2.1 mg/l  
Exposure time: 21 Days  
Species: *Daphnia magna*  
Test substance: Product

#### Persistence and degradability

The organic portion of this preparation is expected to be poorly biodegradable.

Total Organic Carbon (TOC) : 280,000 mg/l

Chemical Oxygen Demand (COD): 850,000 mg/l

Biochemical Oxygen Demand (BOD):

Incubation Period  
5 d

Value  
< 300 mg/l

Test Descriptor  
Product

#### Mobility

The environmental fate was estimated using a level III fugacity model embedded in the EPI (estimation program interface) Suite TM, provided by the US EPA. The model assumes a steady state condition between the total input and output. The level III model does not require equilibrium between the defined media. The information provided is intended to give the user a general estimate of the environmental fate of this product under the defined conditions of the models.

If released into the environment this material is expected to distribute to the air, water and soil/sediment in the approximate respective percentages;

Air : <5%  
Water : 10 - 30%  
Soil : 70 - 90%

The portion in water is expected to be soluble or dispersible.

#### Bioaccumulative potential

This preparation or material is not expected to bioaccumulate.

#### Other information

no data available

### Section: 13. DISPOSAL CONSIDERATIONS

If this product becomes a waste, it is not a hazardous waste as defined by the Resource Conservation and Recovery Act (RCRA) 40 CFR 261, since it does not have the characteristics of Subpart C, nor is it listed under Subpart D.

## SAFETY DATA SHEET

### 3D TRASAR™ 3DT198

- Disposal methods : The product should not be allowed to enter drains, water courses or the soil. Where possible recycling is preferred to disposal or incineration. If recycling is not practicable, dispose of in compliance with local regulations. Dispose of wastes in an approved waste disposal facility.
- Disposal considerations : Dispose of as unused product. Empty containers should be taken to an approved waste handling site for recycling or disposal. Do not re-use empty containers.

#### Section: 14. TRANSPORT INFORMATION

The shipper/consignor/sender is responsible to ensure that the packaging, labeling, and markings are in compliance with the selected mode of transport.

##### Land transport (DOT)

- Proper shipping name : CORROSIVE LIQUID, BASIC, ORGANIC, N.O.S  
Technical name(s) : Substituted Triazole  
UN/ID No. : UN 3267  
Transport hazard class(es) : 8  
Packing group : II

##### Air transport (IATA)

- Proper shipping name : CORROSIVE LIQUID, BASIC, ORGANIC, N.O.S  
Technical name(s) : Substituted Triazole  
UN/ID No. : UN 3267  
Transport hazard class(es) : 8  
Packing group : II

##### Sea transport (IMDG/IMO)

- Proper shipping name : CORROSIVE LIQUID, BASIC, ORGANIC, N.O.S  
Technical name(s) : Substituted Triazole  
UN/ID No. : UN 3267  
Transport hazard class(es) : 8  
Packing group : II

#### Section: 15. REGULATORY INFORMATION

- TSCA list : No substances are subject to a Significant New Use Rule.  
No substances are subject to TSCA 12(b) export notification requirements.

##### EPCRA - Emergency Planning and Community Right-to-Know Act

##### CERCLA Reportable Quantity

This product does not contain a RQ substance, or this product contains a substance with a RQ, however the calculated RQ exceeds the reasonably attainable upper limit.

##### SARA 304 Extremely Hazardous Substances Reportable Quantity

This material does not contain any components with a section 304 EHS RQ.

## SAFETY DATA SHEET

### 3D TRASAR™ 3DT198

- SARA 311/312 Hazards** : Acute toxicity (any route of exposure)  
Skin corrosion or irritation  
Serious eye damage or eye irritation
- SARA 302** : No chemicals in this material are subject to the reporting requirements of SARA Title III, Section 302.
- 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.

#### California Prop. 65

This product does not contain any chemicals known to State of California to cause cancer, birth defects, or any other reproductive harm.

#### INTERNATIONAL CHEMICAL CONTROL LAWS :

##### United States TSCA Inventory

On the inventory, or in compliance with the inventory

##### Australia. Industrial Chemical (Notification and Assessment) Act

All substances in this product comply with the National Industrial Chemicals Notification & Assessment Scheme (NICNAS).

##### Canadian Domestic Substances List (DSL)

The substance(s) in this preparation are included in or exempted from the Domestic Substance List (DSL).

##### Japan. ENCS - Existing and New Chemical Substances Inventory

All substances in this product comply with the Law Regulating the Manufacture and Importation Of Chemical Substances and are listed on the Existing and New Chemical Substances list (ENCS).

##### Korea. Korean Existing Chemicals Inventory (KECI)

All substances in this product comply with the Chemical Control Act (CCA) and are listed on the Existing Chemicals List (ECL)

##### Philippines Inventory of Chemicals and Chemical Substances (PICCS)

All substances in this product comply with the Republic Act 6969 (RA 6969) and are listed on the Philippines Inventory of Chemicals & Chemical Substances (PICCS).

##### China Inventory of Existing Chemical Substances

All substances in this product comply with the Provisions on the Environmental Administration of New Chemical Substances and are listed on or exempt from the Inventory of Existing Chemical Substances China (IECSC).

##### New Zealand. Inventory of Chemicals (NZIoC), as published by ERMA New Zealand

All substances in this product comply with the Hazardous Substances and New Organisms (HSNO) Act 1996, and are listed on or are exempt from the New Zealand Inventory of Chemicals.

##### Taiwan Chemical Substance Inventory

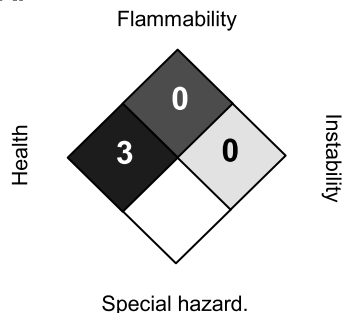
All substances in this product comply with the Taiwan Existing Chemical Substances Inventory (ECSI).

#### Section: 16. OTHER INFORMATION

## SAFETY DATA SHEET

**3D TRASAR™ 3DT198**

### NFPA:



### HMIS III:

<b>HEALTH</b>	<b>3</b>
<b>FLAMMABILITY</b>	<b>0</b>
<b>PHYSICAL HAZARD</b>	<b>0</b>

0 = not significant, 1 = Slight,  
2 = Moderate, 3 = High  
4 = Extreme, \* = Chronic

Revision Date : 11/20/2019  
Version Number : 1.4  
Prepared By : Regulatory Affairs

REVISED INFORMATION: Significant changes to regulatory or health information for this revision is indicated by a bar in the left-hand margin of the SDS.

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. For additional copies of an SDS visit [www.nalco.com](http://www.nalco.com) and request access.



## SAFETY DATA SHEET

### PRE-TECT™ 7080HP

#### Section: 1. PRODUCT AND COMPANY IDENTIFICATION

Product name : PRE-TECT™ 7080HP

Other means of identification : Not applicable.

Recommended use : WATER TREATMENT

Restrictions on use : Refer to available product literature or ask your local Sales Representative for restrictions on use and dose limits.

Company : Nalco Company  
1601 W. Diehl Road  
Naperville, Illinois 60563-1198  
USA  
TEL: (630) 305-1000

Emergency telephone number : (800) 424-9300 (24 Hours) CHEMTREC

Issuing date : 08/30/2021

#### Section: 2. HAZARDS IDENTIFICATION

##### GHS Classification

Acute toxicity (Oral) : Category 4

Acute toxicity (Inhalation) : Category 4

Acute toxicity (Dermal) : Category 4

Skin corrosion : Category 1B

Serious eye damage : Category 1

Specific target organ toxicity - single exposure : Category 3 (Respiratory system)

##### GHS Label element

Hazard pictograms :



Signal Word : Danger

Hazard Statements : Harmful if swallowed, in contact with skin or if inhaled.  
Causes severe skin burns and eye damage.  
May cause respiratory irritation.

Precautionary Statements : **Prevention:**  
Avoid breathing dust/ fume/ gas/ mist/ vapours/ spray. Wear protective gloves/ protective clothing/ eye protection/ face protection.  
**Response:**  
IF SWALLOWED: Call a POISON CENTER or doctor/ physician if you feel unwell. Rinse mouth. 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. Immediately call a

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POISON CENTER/doctor. 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 or doctor/ physician.

**Storage:**

Store in a well-ventilated place. Keep container tightly closed.

**Disposal:**

Dispose of contents/ container to an approved waste disposal plant.

**Other hazards** : None known.

### Section: 3. COMPOSITION/INFORMATION ON INGREDIENTS

Pure substance/mixture : Mixture

Chemical Name	CAS-No.	Concentration: (%)
Monoethanolamine	141-43-5	60 - 100

### Section: 4. FIRST AID MEASURES

In case of eye contact : Rinse immediately with plenty of water, also under the eyelids, for at least 15 minutes. Remove contact lenses, if present and easy to do. Continue rinsing. Get medical attention immediately.

In case of skin contact : Wash off immediately with plenty of water for at least 15 minutes. Use a mild soap if available. Wash clothing before reuse. Thoroughly clean shoes before reuse. Get medical attention immediately.

If swallowed : Rinse mouth with water. Do NOT induce vomiting. Never give anything by mouth to an unconscious person. Get medical attention immediately.

If inhaled : Remove to fresh air. Treat symptomatically. Get medical attention.

Protection of first-aiders : In event of emergency assess the danger before taking action. Do not put yourself at risk of injury. If in doubt, contact emergency responders. Use personal protective equipment as required.

Notes to physician : Treat symptomatically.

Most important symptoms and effects, both acute and delayed : See Section 11 for more detailed information on health effects and symptoms.

### Section: 5. FIREFIGHTING MEASURES

Suitable extinguishing media : Use extinguishing measures that are appropriate to local circumstances and the surrounding environment.

Unsuitable extinguishing media : None known.

Specific hazards during firefighting : Not flammable or combustible.

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- Hazardous combustion products : Decomposition products may include the following materials: Carbon oxides nitrogen oxides (NOx) Sulphur oxides Oxides of phosphorus
- Special protective equipment for firefighters : Use personal protective equipment.
- Specific extinguishing methods : Fire residues and contaminated fire extinguishing water must be disposed of in accordance with local regulations. In the event of fire and/or explosion do not breathe fumes.

#### Section: 6. ACCIDENTAL RELEASE MEASURES

- Personal precautions, protective equipment and emergency procedures : Ensure adequate ventilation. Keep people away from and upwind of spill/leak. Avoid inhalation, ingestion and contact with skin and eyes. When workers are facing concentrations above the exposure limit they must use appropriate certified respirators. Ensure clean-up is conducted by trained personnel only. Refer to protective measures listed in sections 7 and 8.
- Environmental precautions : Do not allow contact with soil, surface or ground water.
- Methods and materials for containment and cleaning up : Stop leak if safe to do so. Contain spillage, and then collect with non-combustible absorbent material, (e.g. sand, earth, diatomaceous earth, vermiculite) and place in container for disposal according to local / national regulations (see section 13). For large spills, dike spilled material or otherwise contain material to ensure runoff does not reach a waterway. Flush away traces with water.

#### Section: 7. HANDLING AND STORAGE

- Advice on safe handling : Do not ingest. Do not breathe dust/fume/gas/mist/vapours/spray. Do not get in eyes, on skin, or on clothing. Wash hands thoroughly after handling. Use only with adequate ventilation.
- Conditions for safe storage : Do not store near acids. Keep out of reach of children. Keep container tightly closed. Store in suitable labelled containers.
- Suitable material : Keep in properly labelled containers.
- Unsuitable material : not determined

#### Section: 8. EXPOSURE CONTROLS/PERSONAL PROTECTION

##### Components with workplace control parameters

Components	CAS-No.	Form of exposure	Permissible concentration	Basis
Monoethanolamine	141-43-5	TWA	3 ppm	ACGIH
		STEL	6 ppm	ACGIH
		TWA	3 ppm 8 mg/m <sup>3</sup>	NIOSH REL
		STEL	6 ppm 15 mg/m <sup>3</sup>	NIOSH REL
		TWA	3 ppm	OSHA Z1

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6 mg/m3

Engineering measures : Effective exhaust ventilation system. Maintain air concentrations below occupational exposure standards.

#### Personal protective equipment

Eye protection : Safety goggles  
Face-shield

Hand protection : Wear the following personal protective equipment:  
Standard glove type.  
Gloves should be discarded and replaced if there is any indication of degradation or chemical breakthrough.

Skin protection : Personal protective equipment comprising: suitable protective gloves, safety goggles and protective clothing

Respiratory protection : When workers are facing concentrations above the exposure limit they must use appropriate certified respirators.

Hygiene measures : Handle in accordance with good industrial hygiene and safety practice. Remove and wash contaminated clothing before re-use. Wash face, hands and any exposed skin thoroughly after handling. Provide suitable facilities for quick drenching or flushing of the eyes and body in case of contact or splash hazard.

The Personal Protective Equipment (PPE) recommendations provided above have been made in good faith based on typical expected conditions of use. PPE selection should always be completed in conjunction with a proper risk assessment and in accordance with a PPE management program.

#### Section: 9. PHYSICAL AND CHEMICAL PROPERTIES

Appearance : Liquid

Colour : colourless

Odour : ammoniacal

Flash point : > 93.3 °C, Method: ASTM D 56, Tag closed cup

pH : 12.5 - 13.5, (100 %), (25 °C)

Odour Threshold : no data available

Melting point/freezing point : Freezing Point: < -20 °C

Initial boiling point and boiling range : 170 °C

Evaporation rate : no data available

Flammability (solid, gas) : Not applicable.

Upper explosion limit : 23.5 V%

Lower explosion limit : 3 V%

Vapour pressure : 0.3 - 0.4 mm Hg, (20 °C),

Relative vapour density : no data available

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Relative density	: 1.0067 - 1.0467, (25 °C),
Density	: no data available
Water solubility	: completely soluble
Solubility in other solvents	: no data available
Partition coefficient: n-octanol/water	: no data available
Auto-ignition temperature	: 410 °C
Thermal decomposition	: no data available
Viscosity, dynamic	: no data available
Viscosity, kinematic	: no data available
Molecular weight	: no data available
VOC	: no data available

#### Section: 10. STABILITY AND REACTIVITY

Reactivity	: No dangerous reaction known under conditions of normal use.
Chemical stability	: Stable under normal conditions.
Possibility of hazardous reactions	: No dangerous reaction known under conditions of normal use.
Conditions to avoid	: None known.
Incompatible materials	: Strong acids
Hazardous decomposition products	: Decomposition products may include the following materials: Carbon oxides nitrogen oxides (NOx) Sulphur oxides Oxides of phosphorus

#### Section: 11. TOXICOLOGICAL INFORMATION

Information on likely routes of exposure : Inhalation, Eye contact, Skin contact

##### Potential Health Effects

Eyes	: Causes serious eye damage.
Skin	: Harmful in contact with skin. Causes severe skin burns.
Ingestion	: Harmful if swallowed. Causes digestive tract burns.
Inhalation	: May cause respiratory tract irritation. Harmful if inhaled. May cause nose, throat, and lung irritation.
Chronic Exposure	: Health injuries are not known or expected under normal use.

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#### Experience with human exposure

Eye contact	: Redness, Pain, Corrosion
Skin contact	: Redness, Pain, Corrosion
Ingestion	: Corrosion, Abdominal pain
Inhalation	: Respiratory irritation, Cough

#### Toxicity

##### Product

Acute oral toxicity	: LD50 rat: 1,089 mg/kg Test substance: Active Substance
Acute inhalation toxicity	: Acute toxicity estimate: 1.88 mg/l Exposure time: 4 h Test atmosphere: dust/mist
Acute dermal toxicity	: LD50 rabbit: 1,025 mg/kg Test substance: Active Substance
Skin corrosion/irritation	: no data available
Serious eye damage/eye irritation	: no data available
Respiratory or skin sensitization	: no data available
Carcinogenicity	: no data available
Reproductive effects	: No reproductive toxic effects expected.
Germ cell mutagenicity	: Contains no ingredient listed as a mutagen
Teratogenicity	: no data available
STOT - single exposure	: no data available
STOT - repeated exposure	: no data available
Aspiration toxicity	: no data available

### Section: 12. ECOLOGICAL INFORMATION

#### Toxicity

Environmental Effects	: Harmful to aquatic life with long lasting effects.
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#### Product

Toxicity to fish	: LC50 Pimephales promelas (fathead minnow): 125 mg/l Exposure time: 96 hrs  LC50 Lepomis macrochirus (Bluegill sunfish): 75 mg/l Exposure time: 96 hrs  LC50 Oncorhynchus mykiss (rainbow trout): 150 mg/l
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Exposure time: 96 hrs

Toxicity to daphnia and other aquatic invertebrates : LC50 Daphnia magna (Water flea): 140 mg/l  
Exposure time: 24 hrs

#### Components

Toxicity to daphnia and other aquatic invertebrates (Chronic toxicity) : Monoethanolamine  
NOEC: 0.85 mg/l  
Exposure time: 21 d  
Species: Daphnia magna (Water flea)

#### Persistence and degradability

no data available

#### Mobility

The environmental fate was estimated using level III fugacity mathematical models developed by the US EPA. The model assumes a steady state condition where the total input and output have equilibrated. The level III model does not require equilibrium between the defined media. The information provided is intended to give the user a general estimate of the environmental fate of this product under the defined conditions of the models.

Air : <5%  
Water : 30 - 50%  
Soil : 50 - 70%

The portion in water is expected to be soluble or dispersible.

#### Bioaccumulative potential

no data available

#### Other information

no data available

### Section: 13. DISPOSAL CONSIDERATIONS

If this product becomes a waste, it could meet the criteria of a hazardous waste as defined by the Resource Conservation and Recovery Act (RCRA) 40 CFR 261. Before disposal, it should be determined if the waste meets the criteria of a hazardous waste.

Hazardous Waste: : D002

Disposal methods : The product should not be allowed to enter drains, water courses or the soil. Where possible recycling is preferred to disposal or incineration. If recycling is not practicable, dispose of in compliance with local regulations. Dispose of wastes in an approved waste disposal facility.

Disposal considerations : Dispose of as unused product. Empty containers should be taken to an approved waste handling site for recycling or disposal. Do not re-use empty containers.

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### Section: 14. TRANSPORT INFORMATION

The shipper/consignor/sender is responsible to ensure that the packaging, labeling, and markings are in compliance with the selected mode of transport.

#### Land transport (DOT)

Proper shipping name : ETHANOLAMINE SOLUTION  
Technical name(s) :  
UN/ID No. : UN 2491  
Transport hazard class(es) : 8  
Packing group : III

#### Air transport (IATA)

Proper shipping name : ETHANOLAMINE SOLUTION  
Technical name(s) :  
UN/ID No. : UN 2491  
Transport hazard class(es) : 8  
Packing group : III

#### Sea transport (IMDG/IMO)

Proper shipping name : ETHANOLAMINE SOLUTION  
Technical name(s) :  
UN/ID No. : UN 2491  
Transport hazard class(es) : 8  
Packing group : III

### Section: 15. REGULATORY INFORMATION

**TSCA list** : No substances are subject to a Significant New Use Rule.

No substances are subject to TSCA 12(b) export notification requirements.

#### EPCRA - Emergency Planning and Community Right-to-Know Act

##### CERCLA Reportable Quantity

This product does not contain a RQ substance, or this product contains a substance with a RQ, however the calculated RQ exceeds the reasonably attainable upper limit.

##### SARA 304 Extremely Hazardous Substances Reportable Quantity

This material does not contain any components with a section 304 EHS RQ.

**SARA 311/312 Hazards** : Acute toxicity (any route of exposure)  
Skin corrosion or irritation  
Serious eye damage or eye irritation  
Specific target organ toxicity (single or repeated exposure)

**SARA 302** : No chemicals in this material are subject to the reporting requirements of SARA Title III, Section 302.



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**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.

#### **California Prop. 65**

This product does not contain any chemicals known to State of California to cause cancer, birth defects, or any other reproductive harm.

#### **INTERNATIONAL CHEMICAL CONTROL LAWS :**

##### **United States TSCA Inventory**

On or in compliance with the active portion of the TSCA inventory

##### **Canadian Domestic Substances List (DSL)**

The substance(s) in this preparation are included in or exempted from the Domestic Substance List (DSL).

##### **Australia. Australian Industrial Chemicals Introduction Scheme (AICIS)**

All substances in this product comply with the Australian Industrial Chemicals Introduction Scheme (AICIS)

##### **China Inventory of Existing Chemical Substances**

All substances in this product comply with the Provisions on the Environmental Administration of New Chemical Substances and are listed on or exempt from the Inventory of Existing Chemical Substances China (IECSC).

##### **Japan. ENCS - Existing and New Chemical Substances Inventory**

All substances in this product comply with the Law Regulating the Manufacture and Importation Of Chemical Substances and are listed on the Existing and New Chemical Substances list (ENCS).

##### **Korea. Korean Existing Chemicals Inventory (KECI)**

All substances in this product comply with the Chemical Control Act (CCA) and are listed on the Existing Chemicals List (ECL)

##### **Philippines Inventory of Chemicals and Chemical Substances (PICCS)**

All substances in this product comply with the Republic Act 6969 (RA 6969) and are listed on the Philippines Inventory of Chemicals & Chemical Substances (PICCS).

##### **Taiwan Chemical Substance Inventory**

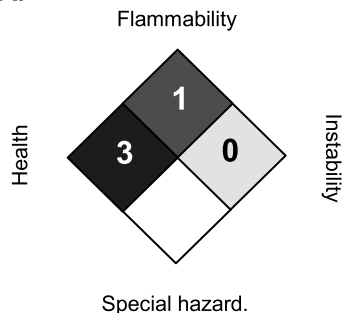
On the inventory, or in compliance with the inventory.

#### **Section: 16. OTHER INFORMATION**

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### NFPA:



### HMIS III:

HEALTH	3
FLAMMABILITY	1
PHYSICAL HAZARD	0

0 = not significant, 1 = Slight,  
2 = Moderate, 3 = High  
4 = Extreme, \* = Chronic

Revision Date : 08/30/2021  
Version Number : 1.2  
Prepared By : Regulatory Affairs

REVISED INFORMATION: Significant changes to regulatory or health information for this revision is indicated by a bar in the left-hand margin of the SDS.

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. For additional copies of an SDS visit [www.nalco.com](http://www.nalco.com) and request access.

## 1. Identification

Other means of identification None known.  
 Product identifier **FERROUS SULFATE SOLUTION 5-10%**  
 Recommended use ALL PROPER AND LEGAL PURPOSES  
 Recommended restrictions None known.

### Manufacturer/Importer/Supplier/Distributor information

#### Manufacturer

Company name Brenntag Northeast, LLC  
 Address 81 West Huller Lane  
 Reading, PA 19605  
 Telephone 610-926-4151  
 E-mail Not available.  
 Emergency phone number 800-424-9300 Chemtrec

## 2. Hazard(s) identification

Physical hazards Not classified.  
 Health hazards Not classified.  
 Environmental hazards Not classified.  
 OSHA defined hazards Not classified.

### Label elements

Hazard symbol None.  
 Signal word None.  
 Hazard statement The mixture does not meet the criteria for classification.  
 Precautionary statement  
 Prevention Observe good industrial hygiene practices.  
 Response Wash hands after handling.  
 Storage Store away from incompatible materials.  
 Disposal Dispose of waste and residues in accordance with local authority requirements.  
 Hazard(s) not otherwise classified (HNOC) None known.

Supplemental information 7.5% of the mixture consists of component(s) of unknown acute dermal toxicity. 97.5% of the mixture consists of component(s) of unknown acute inhalation toxicity.

## 3. Composition/information on ingredients

### Mixtures

Chemical name	Common name and synonyms	CAS number	%
FERROUS SULFATE HEPTAHYDRATE		7782-63-0	5 - 10

## 4. First-aid measures

Inhalation Move to fresh air. Call a physician if symptoms develop or persist.  
 Skin contact Wash off with soap and water. Get medical attention if irritation develops and persists.  
 Eye contact Rinse with water. Get medical attention if irritation develops and persists.  
 Ingestion Rinse mouth. Get medical attention if symptoms occur.  
 Most important symptoms/effects, acute and delayed Direct contact with eyes may cause temporary irritation.

<b>Indication of immediate medical attention and special treatment needed</b>	Treat symptomatically.
<b>General information</b>	Ensure that medical personnel are aware of the material(s) involved, and take precautions to protect themselves.
<b>5. Fire-fighting measures</b>	
<b>Suitable extinguishing media</b>	Water fog. Foam. Dry chemical powder. Carbon dioxide (CO <sub>2</sub> ).
<b>Unsuitable extinguishing media</b>	Do not use water jet as an extinguisher, as this will spread the fire.
<b>Specific hazards arising from the chemical</b>	During fire, gases hazardous to health may be formed.
<b>Special protective equipment and precautions for firefighters</b>	Self-contained breathing apparatus and full protective clothing must be worn in case of fire.
<b>Fire fighting equipment/instructions</b>	Move containers from fire area if you can do so without risk.
<b>Specific methods</b>	Use standard firefighting procedures and consider the hazards of other involved materials.
<b>General fire hazards</b>	No unusual fire or explosion hazards noted.
<b>6. Accidental release measures</b>	
<b>Personal precautions, protective equipment and emergency procedures</b>	Keep unnecessary personnel away. For personal protection, see section 8 of the SDS.
<b>Methods and materials for containment and cleaning up</b>	Large Spills: Stop the flow of material, if this is without risk. Dike the spilled material, where this is possible. Absorb in vermiculite, dry sand or earth and place into containers. Following product recovery, flush area with water.
	Small Spills: 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.
<b>Environmental precautions</b>	Avoid discharge into drains, water courses or onto the ground.
<b>7. Handling and storage</b>	
<b>Precautions for safe handling</b>	Observe good industrial hygiene practices.
<b>Conditions for safe storage, including any incompatibilities</b>	Store in tightly closed container. Store away from incompatible materials (see Section 10 of the SDS).
<b>8. Exposure controls/personal protection</b>	
<b>Occupational exposure limits</b>	No exposure limits noted for ingredient(s).
<b>Biological limit values</b>	No biological exposure limits noted for the ingredient(s).
<b>Appropriate engineering controls</b>	Good general ventilation 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.
<b>Individual protection measures, such as personal protective equipment</b>	
The following are recommendations for Personnel Protective Equipment (PPE). The employer/user of this product must perform a Hazard Assessment of the workplace according to OSHA regulations 29 CFR 1910.132 to determine the appropriate PPE for use while performing any task involving potential exposure to this product.	
<b>Eye/face protection</b>	Wear safety glasses with side shields (or goggles).
<b>Skin protection</b>	
<b>Hand protection</b>	Wear appropriate chemical resistant gloves.
<b>Other</b>	Wear suitable protective clothing.
<b>Respiratory protection</b>	In case of insufficient ventilation, wear suitable respiratory equipment.
<b>Thermal hazards</b>	Wear appropriate thermal protective clothing, when necessary.
<b>General hygiene considerations</b>	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

Physical state	Liquid.
Form	Liquid.
Color	LIGHT GREEN

Odor ODORLESS

Odor threshold Not available.

pH Not available.

Melting point/freezing point Not available.

Initial boiling point and boiling range 212 °F (100 °C) estimated

Flash point Not available.

Evaporation rate Not available.

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 Not available.

Vapor density Not available.

Relative density Not available.

### Solubility(ies)

Solubility (water) Not available.

Partition coefficient (n-octanol/water) Not available.

Auto-ignition temperature Not available.

Decomposition temperature Not available.

Viscosity Not available.

### Other information

Density 9.17 lbs/gal  
1.10 g/ml

Explosive properties Not explosive.

Oxidizing properties Not oxidizing.

Percent volatile 92.31 % estimated

Specific gravity 1.1

## 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 Contact with incompatible materials.

Incompatible materials Strong oxidizing agents.

Hazardous decomposition products No hazardous decomposition products are known.

## 11. Toxicological information

### Information on likely routes of exposure

Inhalation No adverse effects due to inhalation are expected.

<b>Skin contact</b>	No adverse effects due to skin contact are expected.
<b>Eye contact</b>	Direct contact with eyes may cause temporary irritation.
<b>Ingestion</b>	Expected to be a low ingestion hazard.
<b>Symptoms related to the physical, chemical and toxicological characteristics</b>	Direct contact with eyes may cause temporary irritation.
<b>Information on toxicological effects</b>	
<b>Acute toxicity</b>	Not known.
<b>Skin corrosion/irritation</b>	Due to partial or complete lack of data the classification is not possible.
<b>Serious eye damage/eye irritation</b>	Due to partial or complete lack of data the classification is not possible.
<b>Respiratory or skin sensitization</b>	
<b>Respiratory sensitization</b>	Due to partial or complete lack of data the classification is not possible.
<b>Skin sensitization</b>	Due to partial or complete lack of data the classification is not possible.
<b>Germ cell mutagenicity</b>	Due to partial or complete lack of data the classification is not possible.
<b>Carcinogenicity</b>	Due to partial or complete lack of data the classification is not possible.

#### **IARC Monographs. Overall Evaluation of Carcinogenicity**

Not listed.

#### **OSHA Specifically Regulated Substances (29 CFR 1910.1001-1053)**

Not listed.

#### **US. National Toxicology Program (NTP) Report on Carcinogens**

Not listed.

<b>Reproductive toxicity</b>	Due to partial or complete lack of data the classification is not possible.
<b>Specific target organ toxicity - single exposure</b>	Due to partial or complete lack of data the classification is not possible.
<b>Specific target organ toxicity - repeated exposure</b>	Due to partial or complete lack of data the classification is not possible.
<b>Aspiration hazard</b>	Due to partial or complete lack of data the classification is not possible.

## **12. Ecological information**

<b>Ecotoxicity</b>	The product is not classified as environmentally hazardous. However, this does not exclude the possibility that large or frequent spills can have a harmful or damaging effect on the environment.
<b>Persistence and degradability</b>	No data is available on the degradability of any ingredients in the mixture.
<b>Bioaccumulative potential</b>	No data available.
<b>Mobility in soil</b>	No data available.
<b>Other adverse effects</b>	No other adverse environmental effects (e.g. ozone depletion, photochemical ozone creation potential, endocrine disruption, global warming potential) are expected from this component.

## **13. Disposal considerations**

<b>Disposal instructions</b>	Collect and reclaim or dispose in sealed containers at licensed waste disposal site. Incinerate the material under controlled conditions in an approved incinerator.
<b>Local disposal regulations</b>	Dispose in accordance with all applicable regulations.
<b>Hazardous waste code</b>	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.
<b>Waste from residues / unused products</b>	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).
<b>Contaminated packaging</b>	Since emptied containers may retain product residue, follow label warnings even after container is emptied. Empty containers should be taken to an approved waste handling site for recycling or disposal.

## **14. Transport information**

### **DOT**

<b>UN number</b>	UN3264
<b>UN proper shipping name</b>	CORROSIVE LIQUIDS, ACIDIC, INORGANIC, N.O.S. (FERRIC SULFATE SOLUTION)

**Transport hazard class(es)****Class** 8**Subsidiary risk** -**Packing group** III**Special precautions for user** Read safety instructions, SDS and emergency procedures before handling.

Transportation information on packaging may be different from that listed.

**IATA****UN number** UN3264**UN proper shipping name** CORROSIVE LIQUIDS, ACIDIC, INORGANIC, N.O.S. (FERRIC SULFATE SOLUTION)**Transport hazard class(es)****Class** 8**Subsidiary risk** -**Packing group** III**Environmental hazards** No.**Special precautions for user** Read safety instructions, SDS and emergency procedures before handling.**IMDG**

Not regulated as dangerous goods.

**DOT****IATA****15. Regulatory information****US federal regulations**

This product is not known to be a "Hazardous Chemical" as defined by the OSHA Hazard Communication Standard, 29 CFR 1910.1200.

**Toxic Substances Control Act (TSCA)****TSCA Section 12(b) Export Notification (40 CFR 707, Subpt. D)**

Not regulated.

**CERCLA Hazardous Substance List (40 CFR 302.4)**FERROUS SULFATE HEPTAHYDRATE Listed.  
(CAS 7782-63-0)**SARA 304 Emergency release notification**

Not regulated.

**OSHA Specifically Regulated Substances (29 CFR 1910.1001-1053)**

Not listed.

**Superfund Amendments and Reauthorization Act of 1986 (SARA)****SARA 302 Extremely hazardous substance**

Not listed.

**SARA 311/312 Hazardous chemical** No

**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)**

Not regulated.

**Safe Drinking Water Act (SDWA)** Not regulated.**US state regulations****California Proposition 65**

California Safe Drinking Water and Toxic Enforcement Act of 1986 (Proposition 65): This material is not known to contain any chemicals currently listed as carcinogens or reproductive toxins. For more information go to [www.P65Warnings.ca.gov](http://www.P65Warnings.ca.gov).

**International Inventories**

Country(s) or region	Inventory name	On inventory (yes/no)*
Australia	Australian Inventory of Chemical Substances (AICS)	Yes
Canada	Domestic Substances List (DSL)	No
Canada	Non-Domestic Substances List (NDSL)	No
China	Inventory of Existing Chemical Substances in China (IECSC)	Yes
Europe	European Inventory of Existing Commercial Chemical Substances (EINECS)	Yes
Europe	European List of Notified Chemical Substances (ELINCS)	No
Japan	Inventory of Existing and New Chemical Substances (ENCS)	No
Korea	Existing Chemicals List (ECL)	No
New Zealand	New Zealand Inventory	Yes
Philippines	Philippine Inventory of Chemicals and Chemical Substances (PICCS)	Yes
Taiwan	Taiwan Chemical Substance Inventory (TCSI)	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).

**16. Other information, including date of preparation or last revision****Issue date** 08-19-2022**Version #** 01

**HMIS® ratings**  
 Health: 0  
 Flammability: 0  
 Physical hazard: 0

**NFPA ratings**  
 Health: 3  
 Flammability: 0  
 Instability: 0

**Disclaimer**  
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## SAFETY DATA SHEET

**3D TRASAR™ 3DT397**

### Section: 1. PRODUCT AND COMPANY IDENTIFICATION

Product name : 3D TRASAR™ 3DT397

Other means of identification : Not applicable.

Recommended use : COOLING WATER TREATMENT

Restrictions on use : Refer to available product literature or ask your local Sales Representative for restrictions on use and dose limits.

Company : Nalco Middle East FZE  
JAFZA One, Tower A, 11th Floor, Office 1101 & 1107.  
Jebel Ali Free Zone, Dubai  
UAE  
TEL: 00971 4 8014100

Nalco Saudi Company Limited  
First Industrial City, Dammam – 11th Street, P.O. Box 7372  
Dammam 31462  
Saudi Arabia  
TEL: 00966 13 824 9100

Nalco Egypt Ltd  
5th Settlement, South 90th St.  
New Cairo, Cairo, Egypt 11835TEL: 0020 2 25 37 1195

Emergency telephone : +32-(0)3-575-5555  
number

Issuing date : 05/19/2020

### Section: 2. HAZARDS IDENTIFICATION

#### GHS Classification

Skin corrosion : Category 1  
Serious eye damage : Category 1  
Reproductive toxicity : Category 2  
Specific target organ toxicity : Category 3 (Respiratory system)  
- single exposure

#### GHS Label element

Hazard pictograms : 

Signal Word : Danger

Hazard Statements : Causes severe skin burns and eye damage.  
May cause respiratory irritation.  
Suspected of damaging fertility or the unborn child.

Precautionary Statements : **Prevention:**  
Avoid breathing dust/ fume/ gas/ mist/ vapours/ spray. Wear protective gloves/

## SAFETY DATA SHEET

### 3D TRASAR™ 3DT397

protective clothing/ eye protection/ face protection.

**Response:**

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. Immediately call a POISON CENTER/doctor. 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 or doctor/ physician.

**Storage:**

Store in a well-ventilated place. Keep container tightly closed.

**Disposal:**

Dispose of contents/ container to an approved waste disposal plant.

**Other hazards** : Do not mix with bleach or other chlorinated products – will cause chlorine gas.

#### Section: 3. COMPOSITION/INFORMATION ON INGREDIENTS

Pure substance/mixture : Mixture

Chemical Name	CAS-No.	Concentration: (%)
Modified benzimidazole salt	Proprietary	10 - 30
Organic Sulfonic Acid	Proprietary	10 - 30
Acetic Acid	64-19-7	1 - 5

#### Section: 4. FIRST AID MEASURES

In case of eye contact : Rinse immediately with plenty of water, also under the eyelids, for at least 15 minutes. Remove contact lenses, if present and easy to do. Continue rinsing. Get medical attention immediately.

In case of skin contact : Wash off immediately with plenty of water for at least 15 minutes. Use a mild soap if available. Wash clothing before reuse. Thoroughly clean shoes before reuse. Get medical attention immediately.

If swallowed : Rinse mouth with water. Do NOT induce vomiting. Never give anything by mouth to an unconscious person. Get medical attention immediately.

If inhaled : Remove to fresh air. Treat symptomatically. Get medical attention if symptoms occur.

Protection of first-aiders : In event of emergency assess the danger before taking action. Do not put yourself at risk of injury. If in doubt, contact emergency responders. Use personal protective equipment as required.

Notes to physician : Treat symptomatically.

Most important symptoms and effects, both acute and delayed : See Section 11 for more detailed information on health effects and symptoms.

#### Section: 5. FIREFIGHTING MEASURES

Suitable extinguishing media : Use extinguishing measures that are appropriate to local circumstances and the surrounding environment.

Specific hazards during firefighting : Not flammable or combustible.

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### 3D TRASAR™ 3DT397

- Hazardous combustion products : Decomposition products may include the following materials: Carbon oxides nitrogen oxides (NOx) Sulphur oxides
- Special protective equipment for firefighters : Use personal protective equipment.
- Specific extinguishing methods : Fire residues and contaminated fire extinguishing water must be disposed of in accordance with local regulations. In the event of fire and/or explosion do not breathe fumes.

#### Section: 6. ACCIDENTAL RELEASE MEASURES

- Personal precautions, protective equipment and emergency procedures : Ensure adequate ventilation. Keep people away from and upwind of spill/leak. Avoid inhalation, ingestion and contact with skin and eyes. When workers are facing concentrations above the exposure limit they must use appropriate certified respirators. Ensure clean-up is conducted by trained personnel only. Refer to protective measures listed in sections 7 and 8.
- Environmental precautions : Do not allow contact with soil, surface or ground water.
- Methods and materials for containment and cleaning up : Stop leak if safe to do so. Contain spillage, and then collect with non-combustible absorbent material, (e.g. sand, earth, diatomaceous earth, vermiculite) and place in container for disposal according to local / national regulations (see section 13). For large spills, dike spilled material or otherwise contain material to ensure runoff does not reach a waterway. Flush away traces with water.

#### Section: 7. HANDLING AND STORAGE

- Advice on safe handling : Do not ingest. Do not breathe dust/fume/gas/mist/vapours/spray. Do not get in eyes, on skin, or on clothing. Wash hands thoroughly after handling. Use only with adequate ventilation. Do not mix with bleach or other chlorinated products – will cause chlorine gas.
- Conditions for safe storage : Keep away from strong bases. Keep out of reach of children. Keep container tightly closed. Store in suitable labelled containers.
- Suitable material : Keep in properly labelled containers.

#### Section: 8. EXPOSURE CONTROLS/PERSONAL PROTECTION

##### Components with workplace control parameters

Components	CAS-No.	Form of exposure	Permissible concentration	Basis
Acetic Acid	64-19-7	TWA	10 ppm	ACGIH
		STEL	15 ppm	ACGIH
		STEL	15 ppm 37 mg/m3	NIOSH REL
		TWA	10 ppm 25 mg/m3	NIOSH REL
		TWA	10 ppm 25 mg/m3	OSHA Z1

- Engineering measures : Effective exhaust ventilation system. Maintain air concentrations below occupational exposure standards.

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### 3D TRASAR™ 3DT397

#### Personal protective equipment

Eye protection	: Safety goggles Face-shield
Hand protection	: Wear the following personal protective equipment: Standard glove type. Gloves should be discarded and replaced if there is any indication of degradation or chemical breakthrough.
Skin protection	: Personal protective equipment comprising: suitable protective gloves, safety goggles and protective clothing
Respiratory protection	: When workers are facing concentrations above the exposure limit they must use appropriate certified respirators.
Hygiene measures	: Handle in accordance with good industrial hygiene and safety practice. Remove and wash contaminated clothing before re-use. Wash face, hands and any exposed skin thoroughly after handling. Provide suitable facilities for quick drenching or flushing of the eyes and body in case of contact or splash hazard.

#### Section: 9. PHYSICAL AND CHEMICAL PROPERTIES

Appearance	: Aqueous solution
Colour	: Dark brown
Odour	: vinegar-like
Flash point	: > 101 °C, Does not sustain combustion.
pH	: < 1.5, (25 °C)
Odour Threshold	: no data available
Melting point/freezing point	: -5 °C
Initial boiling point and boiling range	: 98.5 °C
Evaporation rate	: no data available
Flammability (solid, gas)	: Not applicable.
Upper explosion limit	: no data available
Lower explosion limit	: no data available
Vapour pressure	: no data available
Relative vapour density	: no data available
Relative density	: 1.08 - 1.13, (25 °C),
Density	: no data available
Water solubility	: Complete
Solubility in other solvents	: no data available
Partition coefficient: n-octanol/water	: no data available
Auto-ignition temperature	: no data available
Thermal decomposition	: no data available
Viscosity, dynamic	: no data available
Viscosity, kinematic	: 2.66 mm <sup>2</sup> /s (25 °C)

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### 3D TRASAR™ 3DT397

Molecular weight : no data available  
VOC : no data available

#### Section: 10. STABILITY AND REACTIVITY

Reactivity : No dangerous reaction known under conditions of normal use.  
Chemical stability : Stable under normal conditions.  
Possibility of hazardous reactions : Do not mix with bleach or other chlorinated products – will cause chlorine gas.  
Incompatible materials : Strong bases  
Hazardous decomposition products : Decomposition products may include the following materials:  
Carbon oxides  
nitrogen oxides (NOx)  
Sulphur oxides

#### Section: 11. TOXICOLOGICAL INFORMATION

Information on likely routes of exposure : Inhalation, Eye contact, Skin contact

##### Potential Health Effects

Eyes : Causes serious eye damage.  
Skin : Causes severe skin burns.  
Ingestion : Causes digestive tract burns.  
Inhalation : May cause respiratory tract irritation. May cause nose, throat, and lung irritation.  
Chronic Exposure : Suspected of damaging fertility or the unborn child.

##### Experience with human exposure

Eye contact : Redness, Pain, Corrosion  
Skin contact : Redness, Pain, Corrosion  
Ingestion : Corrosion, Abdominal pain  
Inhalation : Respiratory irritation, Cough

##### Toxicity

##### Product

Acute oral toxicity : Acute toxicity estimate: > 5,000 mg/kg  
Acute inhalation toxicity : no data available  
Acute dermal toxicity : Acute toxicity estimate: > 5,000 mg/kg  
Skin corrosion/irritation : no data available  
Serious eye damage/eye irritation : no data available

## SAFETY DATA SHEET

### 3D TRASAR™ 3DT397

Respiratory or skin sensitization : no data available

Carcinogenicity : no data available

Reproductive effects : no data available

Germ cell mutagenicity : no data available

Teratogenicity : no data available

STOT - single exposure : Causes damage to organs if inhaled.

STOT - repeated exposure : no data available

Aspiration toxicity : no data available

### Section: 12. ECOLOGICAL INFORMATION

#### Ecotoxicity

Environmental Effects : This product has no known ecotoxicological effects.

#### Product

Toxicity to fish : LC50 Fathead Minnow: 502 mg/l  
Exposure time: 96 hrs  
Test substance: Product

NOEC Fathead Minnow: 360 mg/l  
Exposure time: 96 hrs  
Test substance: Product

LC50 Rainbow Trout: 480 mg/l  
Exposure time: 96 hrs  
Test substance: Product

NOEC Rainbow Trout: 360 mg/l  
Exposure time: 96 hrs  
Test substance: Product

Toxicity to daphnia and other aquatic invertebrates : EC50 Ceriodaphnia dubia: 301 mg/l  
Exposure time: 48 hrs  
Test substance: Product

LC50 Ceriodaphnia dubia: 369 mg/l  
Exposure time: 48 hrs  
Test substance: Product

NOEC Ceriodaphnia dubia: 216 mg/l  
Exposure time: 48 hrs  
Test substance: Product

Toxicity to algae : NOEC Macrocyctis pyrifera (brown algae): 25 mg/l  
Exposure time: 48 hrs  
Test substance: Product  
Test Type: Reproduction

EC25 / IC25 Macrocyctis pyrifera (brown algae): 74.5 mg/l  
Exposure time: 48 hrs  
Test substance: Product  
Test Type: Reproduction

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**3D TRASAR™ 3DT397**

EC25 / IC25 *Macrocystis pyrifera* (brown algae): 67.6 mg/l

Exposure time: 48 hrs

Test substance: Product

Test Type: Growth

EC50 *Macrocystis pyrifera* (brown algae): 104 mg/l

Exposure time: 48 hrs

Test substance: Product

Test Type: Reproduction

EC50 *Macrocystis pyrifera* (brown algae): 119 mg/l

Exposure time: 48 hrs

Test substance: Product

Test Type: Growth

NOEC *Macrocystis pyrifera* (brown algae): 25 mg/l

Exposure time: 48 hrs

Test substance: Product

Test Type: Growth

Toxicity to daphnia and other aquatic invertebrates (Chronic toxicity) : EC25 / IC25: 66 mg/l  
Exposure time: 7 d  
Species: *Ceriodaphnia dubia*  
Test substance: Product  
Test Type: Reproduction

LOEC: 90 mg/l

Exposure time: 7 d

Species: *Ceriodaphnia dubia*

Test substance: Product

Test Type: Reproduction

NOEC: 45 mg/l

Exposure time: 7 d

Species: *Ceriodaphnia dubia*

Test substance: Product

Test Type: Reproduction

### Components

Toxicity to fish (Chronic toxicity) : Modified benzimidazole salt  
NOEC: 60 mg/l  
Exposure time: 96 h  
Species: *Oncorhynchus mykiss* (rainbow trout)

### Persistence and degradability

no data available

### Mobility

no data available

### Bioaccumulative potential

no data available

### Other information

no data available

## SAFETY DATA SHEET

**3D TRASAR™ 3DT397**

### Section: 13. DISPOSAL CONSIDERATIONS

- Disposal methods : Where possible recycling is preferred to disposal or incineration. If recycling is not practicable, dispose of in compliance with local regulations. Dispose of wastes in an approved waste disposal facility.
- Disposal considerations : Dispose of as unused product. Empty containers should be taken to an approved waste handling site for recycling or disposal. Do not re-use empty containers.

### Section: 14. TRANSPORT INFORMATION

The shipper/consignor/sender is responsible to ensure that the packaging, labeling, and markings are in compliance with the selected mode of transport.

#### Land transport (ADR)

UN number: UN 1760  
UN proper shipping name: CORROSIVE LIQUID, N.O.S. (Organic Sulfonic Acid, Acetic Acid)  
Transport hazard class(es): 8  
Packing group: III  
Environmental hazards: No

#### Air transport (IATA)

UN number: UN 1760  
UN proper shipping name: CORROSIVE LIQUID, N.O.S. (Organic Sulfonic Acid, Acetic Acid)  
Transport hazard class(es): 8  
Packing group: III  
Environmental hazards: No

#### Sea transport (IMDG/IMO)

UN number: UN 1760  
UN proper shipping name: CORROSIVE LIQUID, N.O.S. (Organic Sulfonic Acid, Acetic Acid)  
Transport hazard class(es): 8  
Packing group: III  
Environmental hazards: No

### Section: 15. REGULATORY INFORMATION

#### NATIONAL REGULATIONS

National regulations in the country where this substance is used, should be followed.

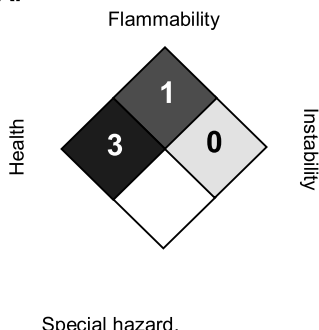
### Section: 16. OTHER INFORMATION



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**3D TRASAR™ 3DT397**

### NFPA:



### HMIS III:

HEALTH	3*
FLAMMABILITY	1
PHYSICAL HAZARD	0

0 = not significant, 1 = Slight,  
2 = Moderate, 3 = High  
4 = Extreme, \* = Chronic

Due to our commitment to Product Stewardship, we have evaluated the human and environmental hazards and exposures of this product. Based on our recommended use of this product, we have characterized the product's general risk. This information should provide assistance for your own risk management practices. We have evaluated our product's risk as follows:

\* The human risk is: Low

\* The environmental risk is: Low

Any use inconsistent with our recommendations may affect the risk characterization. Our sales representative will assist you to determine if your product application is consistent with our recommendations. Together we can implement an appropriate risk management process.

Revision Date : 05/19/2020  
Version Number : 1.3  
Prepared By : Regulatory Affairs

REVISED INFORMATION: Significant changes to regulatory or health information for this revision is indicated by a bar in the left-hand margin of the SDS.

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.

## SAFETY DATA SHEET

**H-550**

### Section: 1. PRODUCT AND COMPANY IDENTIFICATION

Product name : H-550

Other means of identification : Not applicable.

Recommended use : MICROBIOCIDE

Restrictions on use : Refer to available product literature or ask your local Sales Representative for restrictions on use and dose limits.

Company : Nalco Company  
1601 W. Diehl Road  
Naperville, Illinois 60563-1198  
USA  
TEL: (630) 305-1000

Emergency telephone number : (800) 424-9300 (24 Hours) CHEMTREC

Issuing date : 06/10/2021

### Section: 2. HAZARDS IDENTIFICATION

#### GHS Classification

Acute toxicity (Oral) : Category 3

Acute toxicity (Inhalation) : Category 4

Acute toxicity (Dermal) : Category 4

Skin corrosion : Category 1B

Serious eye damage : Category 1

Respiratory sensitization : Category 1

Skin sensitization : Category 1

Specific target organ toxicity - single exposure : Category 3 (Respiratory system)

#### GHS Label element

Hazard pictograms :



Signal Word : Danger

Hazard Statements : Toxic if swallowed.  
Harmful in contact with skin or if inhaled.  
Causes severe skin burns and eye damage.  
May cause an allergic skin reaction.  
Causes serious eye damage.  
May cause allergy or asthma symptoms or breathing difficulties if inhaled.  
May cause respiratory irritation.

Precautionary Statements : **Prevention:**  
Avoid breathing dust/ fume/ gas/ mist/ vapours/ spray. Use only outdoors or in a

# SAFETY DATA SHEET

H-550

well-ventilated area. Wear protective gloves/ protective clothing/ eye protection/ face protection. In case of inadequate ventilation wear respiratory protection.

## Response:

IF SWALLOWED: Immediately call a POISON CENTER/doctor. Rinse mouth. IF SWALLOWED: Rinse mouth. Do NOT induce vomiting. Immediately call a POISON CENTER or doctor/ physician. 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. Immediately call a POISON CENTER/doctor. IF INHALED: If breathing is difficult, remove victim to fresh air and keep at rest in a position comfortable for breathing. IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.

Other hazards : None known.

## Section: 3. COMPOSITION/INFORMATION ON INGREDIENTS

Chemical Name	CAS-No.	Concentration: (%)
Glutaraldehyde	111-30-8	50
Methanol	67-56-1	0.1 - 1

## Section: 4. FIRST AID MEASURES

In case of eye contact	: Rinse immediately with plenty of water, also under the eyelids, for at least 15 minutes. Remove contact lenses, if present and easy to do. Continue rinsing. Get medical attention immediately.
In case of skin contact	: Wash off immediately with plenty of water for at least 15 minutes. Use a mild soap if available. Wash clothing before reuse. Thoroughly clean shoes before reuse. Get medical attention immediately.
If swallowed	: Rinse mouth with water. Do NOT induce vomiting. Never give anything by mouth to an unconscious person. Get medical attention immediately.
If inhaled	: Remove to fresh air. Treat symptomatically. Get medical attention.
Protection of first-aiders	: In event of emergency assess the danger before taking action. Do not put yourself at risk of injury. If in doubt, contact emergency responders. Use personal protective equipment as required.
Notes to physician	: Treat symptomatically.
Most important symptoms and effects, both acute and delayed	: See Section 11 for more detailed information on health effects and symptoms.

## Section: 5. FIREFIGHTING MEASURES

Suitable extinguishing media	: Use extinguishing measures that are appropriate to local circumstances and the surrounding environment.
Unsuitable extinguishing media	: None known.

## SAFETY DATA SHEET

**H-550**

- Specific hazards during firefighting : Not flammable or combustible.
- Hazardous combustion products : Decomposition products may include the following materials: Carbon oxides nitrogen oxides (NOx) Sulphur oxides Oxides of phosphorus
- Special protective equipment for firefighters : Use personal protective equipment.
- Specific extinguishing methods : Fire residues and contaminated fire extinguishing water must be disposed of in accordance with local regulations. In the event of fire and/or explosion do not breathe fumes.

### Section: 6. ACCIDENTAL RELEASE MEASURES

- Personal precautions, protective equipment and emergency procedures : Restrict access to area as appropriate until clean-up operations are complete. Ensure clean-up is conducted by trained personnel only. Ventilate spill area if possible. Do not touch spilled material. Stop or reduce any leaks if it is safe to do so. Use personal protective equipment. Notify appropriate government, occupational health and safety and environmental authorities.
- Environmental precautions : This pesticide is toxic to fish. Do not discharge effluent containing this product into lakes, streams, ponds, estuaries, oceans or other waters, unless in accordance with the requirements of a National Pollutant Discharge Elimination System (NPDES) permit and the permitting authority has been notified in writing prior to discharge. Do not discharge effluent containing this product to sewer systems without previously notifying the local sewage treatment plant authority. For guidance contact your State Water Board or Regional Office of the EPA.

### Section: 7. HANDLING AND STORAGE

- Advice on safe handling : Do not ingest. Do not breathe dust/fume/gas/mist/vapours/spray. Do not get in eyes, on skin, or on clothing. Wash hands thoroughly after handling. Use only with adequate ventilation.
- Conditions for safe storage : Keep out of reach of children. Keep container tightly closed. Store in suitable labelled containers.
- Suitable material : The following compatibility data is suggested based on similar product data and/or industry experience: Compatibility with Plastic Materials can vary; we therefore recommend that compatibility is tested prior to use.
- Unsuitable material : not determined

### Section: 8. EXPOSURE CONTROLS/PERSONAL PROTECTION

#### Components with workplace control parameters

Components	CAS-No.	Form of exposure	Permissible concentration	Basis
Glutaraldehyde	111-30-8	Ceiling	0.2 ppm 0.8 mg/m <sup>3</sup>	NIOSH REL

## SAFETY DATA SHEET

**H-550**

		Ceiling	0.05 ppm	ACGIH
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Engineering measures : Effective exhaust ventilation system. Maintain air concentrations below occupational exposure standards.

### Personal protective equipment

Eye protection : Safety goggles  
Face-shield

Hand protection : Wear the following personal protective equipment:  
Standard glove type.  
Gloves should be discarded and replaced if there is any indication of degradation or chemical breakthrough.

Skin protection : Personal protective equipment comprising: suitable protective gloves, safety goggles and protective clothing

Respiratory protection : When workers are facing concentrations above the exposure limit they must use appropriate certified respirators.

Hygiene measures : Handle in accordance with good industrial hygiene and safety practice. Remove and wash contaminated clothing before re-use. Wash face, hands and any exposed skin thoroughly after handling. Provide suitable facilities for quick drenching or flushing of the eyes and body in case of contact or splash hazard.

The Personal Protective Equipment (PPE) recommendations provided above have been made in good faith based on typical expected conditions of use. PPE selection should always be completed in conjunction with a proper risk assessment and in accordance with a PPE management program.

### Section: 9. PHYSICAL AND CHEMICAL PROPERTIES

Appearance : Liquid

Colour : colourless

Odour : Aldehyde

Flash point : , Method: ASTM D 56, does not flash

pH : 3.1 - 4.5,(100 %), (25 °C)

Odour Threshold : no data available

Melting point/freezing point : Freezing Point: -21 °C, ASTM D-1177

Initial boiling point and boiling range : 100.5 °C, (760 mm Hg), Method: ASTM D 86

Evaporation rate : no data available

Flammability (solid, gas) : Not applicable.

Upper explosion limit : no data available

Lower explosion limit : no data available

Vapour pressure : 16 mm Hg, (20 °C), ASTM D 323,

Relative vapour density : 1.1

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**H-550**

Relative density	: 1.11 - 1.13, (25 °C), ASTM D-1298
Density	: 9.4 lb/gal
Water solubility	: completely soluble
Solubility in other solvents	: no data available
Partition coefficient: n-octanol/water	: no data available
Auto-ignition temperature	: no data available
Thermal decomposition	: no data available
Viscosity, dynamic	: 21 mPa.s (20 °C)
Viscosity, kinematic	: no data available
Molecular weight	: no data available
VOC	: 54 %, 605.12 g/l, EPA Method 24

### Section: 10. STABILITY AND REACTIVITY

Reactivity	: No dangerous reaction known under conditions of normal use.
Chemical stability	: Stable under normal conditions.
Possibility of hazardous reactions	: No dangerous reaction known under conditions of normal use.
Conditions to avoid	: Extremes of temperature
Incompatible materials	: Contact with strong oxidizers (e.g. chlorine, peroxides, chromates, nitric acid, perchlorate, concentrated oxygen, permanganate) may generate heat, fires, explosions and/or toxic vapors. Amines Strong Bases Strong acids
Hazardous decomposition products	: Decomposition products may include the following materials: Carbon oxides nitrogen oxides (NOx) Sulphur oxides Oxides of phosphorus

### Section: 11. TOXICOLOGICAL INFORMATION

Information on likely routes of exposure : Inhalation, Eye contact, Skin contact

#### Potential Health Effects

Eyes	: Causes serious eye damage.
Skin	: Harmful in contact with skin. Causes severe skin burns. May cause allergic skin reaction.

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**H-550**

- Ingestion : Toxic if swallowed. Causes digestive tract burns.
- Inhalation : May cause allergic respiratory reaction. May cause respiratory tract irritation. Harmful if inhaled. May cause nose, throat, and lung irritation.
- Chronic Exposure : Health injuries are not known or expected under normal use.

### Experience with human exposure

- Eye contact : Redness, Pain, Corrosion
- Skin contact : Redness, Pain, Irritation, Corrosion, Allergic reactions
- Ingestion : Corrosion, Abdominal pain
- Inhalation : Respiratory irritation, Cough, May cause allergy or asthma symptoms or breathing difficulties if inhaled.

### Toxicity

#### Product

- Acute oral toxicity : LD50 rat: 200 mg/kg  
Test substance: Product
- Acute inhalation toxicity : LC50 rat: > 27 ppm  
Exposure time: 4 hrs  
Test substance: Product
- LC50 rat: 15 mg/l  
Exposure time: 4 hrs  
Test atmosphere: vapour  
Test substance: Product
- Acute dermal toxicity : LD50 rabbit: 1,749 mg/kg  
Test substance: Product
- Skin corrosion/irritation : no data available
- Serious eye damage/eye irritation : no data available
- Respiratory or skin sensitization : no data available
- Carcinogenicity : no data available
- Reproductive effects : no data available
- Germ cell mutagenicity : no data available
- Teratogenicity : no data available
- STOT - single exposure : no data available
- STOT - repeated exposure : no data available
- Aspiration toxicity : no data available

## Section: 12. ECOLOGICAL INFORMATION

### Toxicity

## SAFETY DATA SHEET

H-550

Environmental Effects : Harmful to aquatic life.

### Product

Toxicity to fish : LC50 *Lepomis macrochirus* (Bluegill sunfish): 22.4 mg/l  
Exposure time: 96 hrs  
Test substance: Product  
Test Type: Static

LC50 *Pimephales promelas* (fathead minnow): 10.8 mg/l  
Exposure time: 96 hrs  
Test substance: Product

LC50 *Cyprinodon variegatus* (sheepshead minnow): 32 mg/l  
Exposure time: 96 hrs  
Test substance: Active Substance

LC50 *Oncorhynchus mykiss* (rainbow trout): 12 mg/l  
Exposure time: 96 hrs  
Test substance: Active Substance

NOEC *Lepomis macrochirus* (Bluegill sunfish): 10 mg/l  
Exposure time: 96 hrs  
Test substance: Product  
Test Type: Static

NOEC *Cyprinodon variegatus* (sheepshead minnow): 24 mg/l  
Exposure time: 96 hrs  
Test substance: Active Substance

NOEC *Oncorhynchus mykiss* (rainbow trout): 9 mg/l  
Exposure time: 96 hrs  
Test substance: Active Substance

Toxicity to daphnia and other aquatic invertebrates : LC50 *Daphnia magna* (Water flea): 0.69 mg/l  
Exposure time: 48 hrs  
Test substance: Product  
Test Type: Static

LC50 Shore Crab: 465 mg/l  
Exposure time: 96 hrs  
Test substance: Active Substance  
Test Type: Static

LC50 Grass Shrimp: 41 mg/l  
Exposure time: 96 hrs  
Test substance: Active Substance  
Test Type: Static

LC50 Mysid Shrimp (*Mysidopsis bahia*): 7.1 mg/l  
Exposure time: 96 hrs  
Test substance: Active Substance  
Test Type: Flow-through

LC50 *Acartia tonsa*: 0.11 mg/l



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Exposure time: 48 hrs  
Test substance: Active Substance  
Test Type: Static

EC50 American Oyster: 0.78 mg/l  
Exposure time: 96 hrs  
Test substance: Active Substance  
Test Type: Flow-through

NOEC Mysid Shrimp (*Mysidopsis bahia*): 0.78 mg/l  
Exposure time: 96 hrs  
Test substance: Active Substance  
Test Type: Flow-through

NOEC American Oyster: 0.16 mg/l  
Exposure time: 96 hrs  
Test substance: Active Substance  
Test Type: Flow-through

NOEC *Acartia tonsa*: 0.029 mg/l  
Exposure time: 48 hrs  
Test substance: Active Substance  
Test Type: Static

Toxicity to algae : LC50 Marine Algae (*Skeletonema costatum*): 0.61 mg/l  
Exposure time: 72 hrs  
Test substance: Active Substance

LC50 Algae (*Scenedesmus subspicatus*): 0.97 mg/l  
Exposure time: 96 hrs  
Test substance: Active Substance

LC50 Green Algae (*Pseudokirchneriella subcapitata*,  
previously *Selenastrum capricornutum*): 2.64 mg/l  
Exposure time: 72 hrs  
Test substance: Product

NOEC Marine Algae (*Skeletonema costatum*): 0.33 mg/l  
Exposure time: 72 hrs  
Test substance: Active Substance

NOEC Algae (*Scenedesmus subspicatus*): 0.33 mg/l  
Exposure time: 96 hrs  
Test substance: Active Substance

Toxicity to bacteria : LC50 Sewage Microorganisms: > 50 mg/l  
Exposure time: 96 hrs  
Test substance: Active Substance

: LC50 Bacteria: 17 - 25 mg/l  
Exposure time: 16 hrs  
Test substance: Active Substance

Toxicity to fish (Chronic toxicity) : LOEC: 2.9 mg/l  
Exposure time: 28 Days

## SAFETY DATA SHEET

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Species: Fathead Minnow  
Test substance: Active Substance

NOEC: 1.4 mg/l  
Exposure time: 28 Days  
Species: Fathead Minnow  
Test substance: Active Substance

Toxicity to daphnia and other aquatic invertebrates (Chronic toxicity) : NOEC: 4.25 mg/l  
Exposure time: 21 Days  
Species: Daphnia magna  
Test substance: Active Substance  
Test Type: 3 Brood

Toxicity to terrestrial organisms : LC50 Bobwhite Quail: Exposure time: 8 Days  
Test substance: Active Substance

LC50 Mallard Duck: Exposure time: 8 Days  
Test substance: Active Substance

LC50 Mallard Duck: 933 mg/kg  
Test substance: 50% Active Ingredient

### Persistence and degradability

The organic portion of this preparation is expected to be readily biodegradable.

Chemical Oxygen Demand (COD): 900,000 mg/l

Biochemical Oxygen Demand (BOD):

Incubation Period

Value

Test Descriptor

0 mg/l

### Mobility

The environmental fate was estimated using a level III fugacity model embedded in the EPI (estimation program interface) Suite TM, provided by the US EPA. The model assumes a steady state condition between the total input and output. The level III model does not require equilibrium between the defined media. The information provided is intended to give the user a general estimate of the environmental fate of this product under the defined conditions of the models.

If released into the environment this material is expected to distribute to the air, water and soil/sediment in the approximate respective percentages;

Air : <5%  
Water : 30 - 50%  
Soil : 50 - 70%

The portion in water is expected to be soluble or dispersible.

### Bioaccumulative potential

This preparation or material is not expected to bioaccumulate.

### Other information

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no data available

## Section: 13. DISPOSAL CONSIDERATIONS

If this product becomes a waste, it could meet the criteria of a hazardous waste as defined by the Resource Conservation and Recovery Act (RCRA) 40 CFR 261. Before disposal, it should be determined if the waste meets the criteria of a hazardous waste.

Disposal methods : The product should not be allowed to enter drains, water courses or the soil. Where possible recycling is preferred to disposal or incineration. If recycling is not practicable, dispose of in compliance with local regulations. Dispose of wastes in an approved waste disposal facility.

Disposal considerations : Dispose of as unused product. Empty containers should be taken to an approved waste handling site for recycling or disposal. Do not re-use empty containers.

## Section: 14. TRANSPORT INFORMATION

The shipper/consignor/sender is responsible to ensure that the packaging, labeling, and markings are in compliance with the selected mode of transport.

### Land transport (DOT)

Proper shipping name : CORROSIVE LIQUID, TOXIC, N.O.S  
Technical name(s) : GLUTARALDEHYDE  
UN/ID No. : UN 2922  
Transport hazard class(es) : 8, 6.1  
Packing group : II

### Air transport (IATA)

Proper shipping name : CORROSIVE LIQUID, TOXIC, N.O.S  
Technical name(s) : GLUTARALDEHYDE  
UN/ID No. : UN 2922  
Transport hazard class(es) : 8, 6.1  
Packing group : II

### Sea transport (IMDG/IMO)

Proper shipping name : CORROSIVE LIQUID, TOXIC, N.O.S  
Technical name(s) : GLUTARALDEHYDE  
UN/ID No. : UN 2922  
Transport hazard class(es) : 8, 6.1  
Packing group : II

\*Marine pollutant : GLUTARALDEHYDE

\* Note: This product is regulated as a Marine Pollutant when shipped by Rail or Highway (in bulk quantities), and when shipped by water in all quantities.

## Section: 15. REGULATORY INFORMATION

TSCA list : No substances are subject to a Significant New Use Rule.  
No substances are subject to TSCA 12(b) export notification

# SAFETY DATA SHEET

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requirements.

EPA Reg. No. : 464-704-1706

## EPCRA - Emergency Planning and Community Right-to-Know Act

### CERCLA Reportable Quantity

This product does not contain a RQ substance, or this product contains a substance with a RQ, however the calculated RQ exceeds the reasonably attainable upper limit.

### SARA 304 Extremely Hazardous Substances Reportable Quantity

This material does not contain any components with a section 304 EHS RQ.

**SARA 311/312 Hazards** : Acute toxicity (any route of exposure)  
Skin corrosion or irritation  
Serious eye damage or eye irritation  
Respiratory or skin sensitisation  
Specific target organ toxicity (single or repeated exposure)

**SARA 302** : This material does not contain any components with a section 302 EHS TPQ.

**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.

### California Prop. 65

 **WARNING:** Reproductive Harm - [www.P65Warnings.ca.gov](http://www.P65Warnings.ca.gov)

Methanol

67-56-1

## INTERNATIONAL CHEMICAL CONTROL LAWS :

### United States TSCA Inventory

This product is exempted under TSCA and regulated under FIFRA. The inerts are on the Inventory List.

### Australia. Australian Industrial Chemicals Introduction Scheme (AICIS)

All substances in this product comply with the Australian Industrial Chemicals Introduction Scheme (AICIS)

### Canadian Domestic Substances List (DSL)

Substances regulated under the Pest Control Products Act are exempt from CEPA New Substance Notification requirements.

### Japan. ENCS - Existing and New Chemical Substances Inventory

All substances in this product comply with the Law Regulating the Manufacture and Importation Of Chemical Substances and are listed on the Existing and New Chemical Substances list (ENCS).

### Korea. Korean Existing Chemicals Inventory (KECI)

All substances in this product comply with the Chemical Control Act (CCA) and are listed on the Existing Chemicals List (ECL)

### Philippines Inventory of Chemicals and Chemical Substances (PICCS)

All substances in this product comply with the Republic Act 6969 (RA 6969) and are listed on the Philippines Inventory of Chemicals & Chemical Substances (PICCS).

## SAFETY DATA SHEET

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### China Inventory of Existing Chemical Substances

All substances in this product comply with the Provisions on the Environmental Administration of New Chemical Substances and are listed on or exempt from the Inventory of Existing Chemical Substances China (IECSC).

### New Zealand. Inventory of Chemicals (NZIoC), as published by ERMA New Zealand

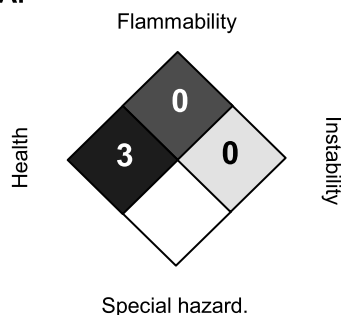
All substances in this product comply with the Hazardous Substances and New Organisms (HSNO) Act 1996, and are listed on or are exempt from the New Zealand Inventory of Chemicals.

### Taiwan Chemical Substance Inventory

All substances in this product comply with the Taiwan Existing Chemical Substances Inventory (ECSI).

## Section: 16. OTHER INFORMATION

### NFPA:



### HMIS III:

HEALTH	3*
FLAMMABILITY	0
PHYSICAL HAZARD	0

0 = not significant, 1 = Slight,  
2 = Moderate, 3 = High  
4 = Extreme, \* = Chronic

Revision Date : 06/10/2021  
Version Number : 1.5  
Prepared By : Regulatory Affairs

REVISED INFORMATION: Significant changes to regulatory or health information for this revision is indicated by a bar in the left-hand margin of the SDS.

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. For additional copies of an SDS visit [www.nalco.com](http://www.nalco.com) and request access.

## SAFETY DATA SHEET

### 3D TRASAR 3DT465

#### Section: 1. PRODUCT AND COMPANY IDENTIFICATION

Product name : 3D TRASAR 3DT465

Other means of identification : Not applicable.

Recommended use : CORROSION/SCALE INHIBITOR

Restrictions on use : Refer to available product literature or ask your local Sales Representative for restrictions on use and dose limits.

Company : Nalco Company  
1601 W. Diehl Road  
Naperville, Illinois 60563-1198  
USA  
TEL: (630) 305-1000

Emergency telephone number : (800) 424-9300 (24 Hours) CHEMTREC

Issuing date : 03/16/2022

#### Section: 2. HAZARDS IDENTIFICATION

##### GHS Classification

Corrosive to metals : Category 1

##### GHS Label element

Hazard pictograms :



Signal Word : Warning

Hazard Statements : May be corrosive to metals.

Precautionary Statements : **Prevention:**  
Keep only in original container.  
**Response:**  
Absorb spillage to prevent material damage.  
**Storage:**  
Store in corrosive resistant stainless steel container with a resistant inner liner.  
Protect product from freezing.

Other hazards : None known.

#### Section: 3. COMPOSITION/INFORMATION ON INGREDIENTS

Chemical name	CAS-No.	Concentration (%)
2-Phosphono-1,2,4-Butanetricarboxylic Acid	37971-36-1	5 - 10
Sodium HEDP	29329-71-3	1 - 5

## SAFETY DATA SHEET

### 3D TRASAR 3DT465

#### Section: 4. FIRST AID MEASURES

- In case of eye contact : Rinse with plenty of water. Get medical attention if symptoms occur.
- In case of skin contact : Wash off with soap and plenty of water. Get medical attention if symptoms occur.
- If swallowed : Rinse mouth. Get medical attention if symptoms occur.
- If inhaled : Get medical attention if symptoms occur.
- Protection of first-aiders : In event of emergency assess the danger before taking action. Do not put yourself at risk of injury. If in doubt, contact emergency responders. Use personal protective equipment as required.
- Notes to physician : Treat symptomatically.
- Most important symptoms and effects, both acute and delayed : See Section 11 for more detailed information on health effects and symptoms.

#### Section: 5. FIREFIGHTING MEASURES

- Suitable extinguishing media : Use extinguishing measures that are appropriate to local circumstances and the surrounding environment.
- Unsuitable extinguishing media : None known.
- Specific hazards during firefighting : Not flammable or combustible.
- Hazardous combustion products : Decomposition products may include the following materials: Carbon oxides nitrogen oxides (NOx) Sulphur oxides Oxides of phosphorus
- Special protective equipment for firefighters : Use personal protective equipment.
- Specific extinguishing methods : Fire residues and contaminated fire extinguishing water must be disposed of in accordance with local regulations. In the event of fire and/or explosion do not breathe fumes.

#### Section: 6. ACCIDENTAL RELEASE MEASURES

- Personal precautions, protective equipment and emergency procedures : Ensure clean-up is conducted by trained personnel only. Refer to protective measures listed in sections 7 and 8.
- Environmental precautions : Do not allow contact with soil, surface or ground water.
- Methods and materials for containment and cleaning up : Stop leak if safe to do so. Contain spillage, and then collect with non-combustible absorbent material, (e.g. sand, earth, diatomaceous earth, vermiculite) and place in container for disposal according to local / national

## SAFETY DATA SHEET

### 3D TRASAR 3DT465

regulations (see section 13). For large spills, dike spilled material or otherwise contain material to ensure runoff does not reach a waterway. Flush away traces with water.

#### Section: 7. HANDLING AND STORAGE

- Advice on safe handling : Wash hands thoroughly after handling. Use only with adequate ventilation. Protect product from freezing.
- Wash hands thoroughly after handling. Use only with adequate ventilation.
- Conditions for safe storage : Keep out of reach of children. Keep container tightly closed. Store in suitable labelled containers.
- Suitable material : Keep in properly labelled containers.
- Unsuitable material : not determined

#### Section: 8. EXPOSURE CONTROLS/PERSONAL PROTECTION

##### Components with workplace control parameters

Components	CAS-No.	Form of exposure	Permissible concentration	Basis
2-Phosphono-1,2,4-Butanetricarboxylic Acid	37971-36-1	TWA (Aerosol.)	10 mg/m <sup>3</sup>	US WEEL

- Engineering measures : Effective exhaust ventilation system. Maintain air concentrations below occupational exposure standards.

##### Personal protective equipment

- Eye protection : Safety glasses
- Hand protection : Wear protective gloves.  
Gloves should be discarded and replaced if there is any indication of degradation or chemical breakthrough.
- Skin protection : Wear suitable protective clothing.
- Respiratory protection : No personal respiratory protective equipment normally required.
- Hygiene measures : Handle in accordance with good industrial hygiene and safety practice. Remove and wash contaminated clothing before re-use. Wash face, hands and any exposed skin thoroughly after handling.

The Personal Protective Equipment (PPE) recommendations provided above have been made in good faith based on typical expected conditions of use. PPE selection should always be completed in conjunction with a proper risk assessment and in accordance with a PPE management program.

#### Section: 9. PHYSICAL AND CHEMICAL PROPERTIES

- Appearance : liquid



## SAFETY DATA SHEET

### 3D TRASAR 3DT465

Colour	: yellow
Odour	: None
Flash point	: Not applicable.
pH	: 2.2,(100 %)
Odour Threshold	: no data available
Melting point/freezing point	: Melting point/freezing point: -2.3 °C
Initial boiling point and boiling range	: 96.7 °C
Evaporation rate	: no data available
Flammability (solid, gas)	: Not applicable.
Upper explosion limit	: no data available
Lower explosion limit	: no data available
Vapour pressure	: no data available
Relative vapour density	: no data available
Relative density	: 1.106, (25.0 °C),
Density	: 9.22 lb/gal
Water solubility	: Complete
Solubility in other solvents	: no data available
Partition coefficient: n-octanol/water	: no data available
Auto-ignition temperature	: no data available
Thermal decomposition	: no data available
Viscosity, dynamic	: no data available
Viscosity, kinematic	: 3.96 mm <sup>2</sup> /s (24 °C)
Molecular weight	: no data available
VOC	: no data available

### Section: 10. STABILITY AND REACTIVITY

Reactivity	: No dangerous reaction known under conditions of normal use.
Chemical stability	: Stable under normal conditions.
Possibility of hazardous reactions	: No dangerous reaction known under conditions of normal use.
Conditions to avoid	: None known.
Incompatible materials	: None known.
Hazardous decomposition products	: In case of fire, hazardous decomposition products may be produced such as: Carbon oxides nitrogen oxides (NO <sub>x</sub> )

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## 3D TRASAR 3DT465

Sulphur oxides  
Oxides of phosphorus

### Section: 11. TOXICOLOGICAL INFORMATION

Information on likely routes of exposure : Inhalation, Eye contact, Skin contact

#### Potential Health Effects

Eyes : Health injuries are not known or expected under normal use.  
Skin : Health injuries are not known or expected under normal use.  
Ingestion : Health injuries are not known or expected under normal use.  
Inhalation : Health injuries are not known or expected under normal use.  
Chronic Exposure : Health injuries are not known or expected under normal use.

#### Experience with human exposure

Eye contact : No symptoms known or expected.  
Skin contact : No symptoms known or expected.  
Ingestion : No symptoms known or expected.  
Inhalation : No symptoms known or expected.

#### Toxicity

##### Product

Acute oral toxicity : Acute toxicity estimate: > 5,000 mg/kg  
Acute inhalation toxicity : no data available  
Acute dermal toxicity : no data available  
Skin corrosion/irritation : no data available  
Serious eye damage/eye irritation : Species: rabbit  
Result: No eye irritation  
Method: OECD Test Guideline 405  
GLP: yes  
Test substance: Product  
  
Respiratory or skin sensitisation : no data available  
Carcinogenicity : no data available  
Reproductive effects : no data available  
Germ cell mutagenicity : no data available  
Teratogenicity : no data available  
STOT - single exposure : no data available

## SAFETY DATA SHEET

### 3D TRASAR 3DT465

STOT - repeated exposure : no data available

Aspiration toxicity : no data available

#### Components

Acute dermal toxicity : Sodium HEDP  
LD50 rabbit: > 7,940 mg/kg

### Section: 12. ECOLOGICAL INFORMATION

#### Ecotoxicity

Environmental Effects : This product has no known ecotoxicological effects.

#### Product

Toxicity to fish : LC50 Fathead Minnow: 5,018 mg/l  
Exposure time: 96 hrs  
Test substance: Product

NOEC Fathead Minnow: 3,600 mg/l  
Exposure time: 96 hrs  
Test substance: Product

LC50 Rainbow Trout: 2,324 mg/l  
Exposure time: 96 hrs  
Test substance: Product

NOEC Rainbow Trout: 1,800 mg/l  
Exposure time: 96 hrs  
Test substance: Product

Toxicity to daphnia and other aquatic invertebrates : EC50 Ceriodaphnia dubia: 1,544 mg/l  
Exposure time: 48 hrs  
Test substance: Product

NOEC Ceriodaphnia dubia: 1,080 mg/l  
Exposure time: 48 hrs  
Test substance: Product

Toxicity to fish (Chronic toxicity) : NOEC: 750 mg/l  
Exposure time: 7 d  
Species: Pimephales promelas (fathead minnow)  
Test substance: Product

EC25 / IC25: 1,862 mg/l  
Exposure time: 7 d  
Species: Pimephales promelas (fathead minnow)  
Test substance: Product

LOEC: 1,500 mg/l  
Exposure time: 7 d  
Species: Pimephales promelas (fathead minnow)  
Test substance: Product

## SAFETY DATA SHEET

### 3D TRASAR 3DT465

#### Components

Toxicity to algae : 2-Phosphono-1,2,4-Butanetricarboxylic Acid  
EC50 *Desmodesmus subspicatus* (green algae): 140 mg/l  
Exposure time: 72 h

Sodium HEDP  
NOEC : 13 mg/l  
Exposure time: 14 d

#### Components

Toxicity to daphnia and other : 2-Phosphono-1,2,4-Butanetricarboxylic Acid  
aquatic invertebrates  
(Chronic toxicity) NOEC: 104 mg/l  
Exposure time: 21 d  
Species: *Daphnia magna* (Water flea)

Sodium HEDP  
NOEC: 6.75 mg/l  
Exposure time: 28 d

#### Persistence and degradability

Total Organic Carbon (TOC) : 8,500 mg/l

Chemical Oxygen Demand (COD): 160,000 mg/l

Biochemical Oxygen Demand (BOD):

Incubation Period	Value	Test Descriptor
5 d	< 1,000 mg/l	

#### Mobility

no data available

#### Bioaccumulative potential

no data available

#### Other information

no data available

### Section: 13. DISPOSAL CONSIDERATIONS

Disposal methods : Where possible recycling is preferred to disposal or incineration. If recycling is not practicable, dispose of contents/container in accordance with local regulations  
Dispose of wastes in an approved waste disposal facility.

Disposal considerations : Dispose of as unused product. Empty containers should be taken to an approved waste handling site for recycling or disposal. Do not re-use empty containers.

### Section: 14. TRANSPORT INFORMATION

## SAFETY DATA SHEET

### 3D TRASAR 3DT465

The shipper/consignor/sender is responsible to ensure that the packaging, labeling, and markings are in compliance with the selected mode of transport.

#### Land transport (DOT)

Proper shipping name : CORROSIVE LIQUID, ACIDIC, ORGANIC, N.O.S.  
Technical name(s) : 2-Phosphono-1,2,4-Butanetricarboxylic Acid,  
UN/ID No. : UN 3265  
Transport hazard class(es) : 8  
Packing group : III

#### Air transport (IATA)

Proper shipping name : CORROSIVE LIQUID, ACIDIC, ORGANIC, N.O.S.  
Technical name(s) : 2-Phosphono-1,2,4-Butanetricarboxylic Acid,  
UN/ID No. : UN 3265  
Transport hazard class(es) : 8  
Packing group : III

#### Sea transport (IMDG/IMO)

Proper shipping name : CORROSIVE LIQUID, ACIDIC, ORGANIC, N.O.S.  
Technical name(s) : 2-Phosphono-1,2,4-Butanetricarboxylic Acid,  
UN/ID No. : UN 3265  
Transport hazard class(es) : 8  
Packing group : III

### Section: 15. REGULATORY INFORMATION

**TSCA list** : No substances are subject to a Significant New Use Rule.

No substances are subject to TSCA 12(b) export notification requirements.

#### EPCRA - Emergency Planning and Community Right-to-Know Act

##### CERCLA Reportable Quantity

This product does not contain a RQ substance, or this product contains a substance with a RQ, however the calculated RQ exceeds the reasonably attainable upper limit.

##### SARA 304 Extremely Hazardous Substances Reportable Quantity

This material does not contain any components with a section 304 EHS RQ.

**SARA 311/312 Hazards** : Corrosive to metals

**SARA 302** : This material does not contain any components with a section 302 EHS TPQ.

**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.

#### California Prop. 65

## SAFETY DATA SHEET

### 3D TRASAR 3DT465

This product does not contain any chemicals known to State of California to cause cancer, birth defects, or any other reproductive harm.

#### INTERNATIONAL CHEMICAL CONTROL LAWS :

##### Canadian Domestic Substances List (DSL)

The substance(s) in this preparation are included in or exempted from the Domestic Substance List (DSL).

##### United States TSCA Inventory

On or in compliance with the active portion of the TSCA inventory

##### China Inventory of Existing Chemical Substances

All substances in this product comply with the Provisions on the Environmental Administration of New Chemical Substances and are listed on or exempt from the Inventory of Existing Chemical Substances China (IECSC).

##### Korea. Korean Existing Chemicals Inventory (KECI)

All substances in this product comply with the Chemical Control Act (CCA) and are listed on the Existing Chemicals List (ECL)

##### Taiwan Chemical Substance Inventory

All substances in this product comply with the Taiwan Existing Chemical Substances Inventory (ECSI).

##### Japan. ENCS - Existing and New Chemical Substances Inventory

All substances in this product comply with the Law Regulating the Manufacture and Importation Of Chemical Substances and are listed on the Existing and New Chemical Substances list (ENCS).

##### Australia. Australian Industrial Chemicals Introduction Scheme (AICIS)

All substances in this product comply with the Australian Industrial Chemicals Introduction Scheme (AICIS)

##### New Zealand. Inventory of Chemicals (NZIoC), as published by ERMA New Zealand

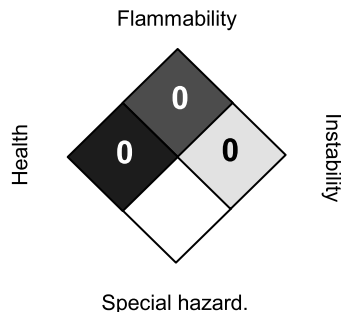
All substances in this product comply with the Hazardous Substances and New Organisms (HSNO) Act 1996, and are listed on or are exempt from the New Zealand Inventory of Chemicals.

##### Philippines Inventory of Chemicals and Chemical Substances (PICCS)

On the inventory, or in compliance with the inventory.

#### Section: 16. OTHER INFORMATION

##### NFPA:



##### HMIS III:

HEALTH	0
FLAMMABILITY	0
PHYSICAL HAZARD	0

0 = not significant, 1 = Slight,  
2 = Moderate, 3 = High  
4 = Extreme, \* = Chronic

Revision Date : 03/16/2022

## SAFETY DATA SHEET

### 3D TRASAR 3DT465

Version Number : 1.12  
Prepared By : Regulatory Affairs

REVISED INFORMATION: Significant changes to regulatory or health information for this revision is indicated by a bar in the left-hand margin of the SDS.

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. For additional copies of an SDS visit [www.nalco.com](http://www.nalco.com) and request access.

#### Section: 1. PRODUCT AND COMPANY IDENTIFICATION

Product name : 3D TRASAR® 3DT265

Other means of identification : Not applicable.

Recommended use : CORROSION/SCALE INHIBITOR

Restrictions on use : Refer to available product literature or ask your local Sales Representative for restrictions on use and dose limits.

Company : Nalco Company  
1601 W. Diehl Road  
Naperville, Illinois 60563-1198  
USA  
TEL: (630)305-1000

Emergency telephone number : (800) 424-9300 (24 Hours) CHEMTREC

Issuing date : 02/15/2016

#### Section: 2. HAZARDS IDENTIFICATION

##### GHS Classification

Not a hazardous substance or mixture.

##### GHS Label element

Precautionary Statements : **Prevention:**  
Wash hands thoroughly after handling.  
**Response:**  
Specific measures: consult SDS Section 4.  
**Storage:**  
Store in accordance with local regulations.

Other hazards : None known.

#### Section: 3. COMPOSITION/INFORMATION ON INGREDIENTS

Pure substance/mixture	: Mixture		
Chemical Name	CAS-No.	Concentration: (%)	
2-Phosphono-1,2,4-Butanetricarboxylic Acid	37971-36-1	1 - 5	

#### Section: 4. FIRST AID MEASURES

In case of eye contact : Rinse with plenty of water. Get medical attention if symptoms occur.

In case of skin contact : Wash off with soap and plenty of water. Get medical attention if symptoms occur.

If swallowed : Rinse mouth. Get medical attention if symptoms occur.



## SAFETY DATA SHEET

### 3D TRASAR® 3DT265

If inhaled	: Get medical attention if symptoms occur.
Protection of first-aiders	: In event of emergency assess the danger before taking action. Do not put yourself at risk of injury. If in doubt, contact emergency responders. Use personal protective equipment as required.
Notes to physician	: Treat symptomatically.
Most important symptoms and effects, both acute and delayed	: See Section 11 for more detailed information on health effects and symptoms.

#### Section: 5. FIREFIGHTING MEASURES

Suitable extinguishing media	: Use extinguishing measures that are appropriate to local circumstances and the surrounding environment.
Unsuitable extinguishing media	: None known.
Specific hazards during firefighting	: Not flammable or combustible.
Hazardous combustion products	: Decomposition products may include the following materials: Carbon oxides nitrogen oxides (NOx) Sulphur oxides Oxides of phosphorus
Special protective equipment for firefighters	: Use personal protective equipment.
Specific extinguishing methods	: Fire residues and contaminated fire extinguishing water must be disposed of in accordance with local regulations.

#### Section: 6. ACCIDENTAL RELEASE MEASURES

Personal precautions, protective equipment and emergency procedures	: Refer to protective measures listed in sections 7 and 8.
Environmental precautions	: No special environmental precautions required.
Methods and materials for containment and cleaning up	: Stop leak if safe to do so. Contain spillage, and then collect with non-combustible absorbent material, (e.g. sand, earth, diatomaceous earth, vermiculite) and place in container for disposal according to local / national regulations (see section 13). For large spills, dike spilled material or otherwise contain material to ensure runoff does not reach a waterway. Flush away traces with water.

#### Section: 7. HANDLING AND STORAGE

Advice on safe handling	: For personal protection see section 8. Wash hands after handling.
Conditions for safe storage	: Keep out of reach of children. Keep container tightly closed. Store in suitable labeled containers.

## SAFETY DATA SHEET

### 3D TRASAR® 3DT265

- Suitable material : The following compatibility data is suggested based on similar product data and/or industry experience: Buna-N, Polyurethane, Polypropylene, Polyethylene, PVC, EPDM, HDPE (high density polyethylene), Epoxy phenolic resin, Fluoroelastomer, Chlorosulfonated polyethylene rubber, Compatibility with Plastic Materials can vary; we therefore recommend that compatibility is tested prior to use.
- Unsuitable material : The following compatibility data is suggested based on similar product data and/or industry experience: Brass, Neoprene, Stainless Steel 304

### Section: 8. EXPOSURE CONTROLS/PERSONAL PROTECTION

#### Components with workplace control parameters

Components	CAS-No.	Form of exposure	Permissible concentration	Basis
2-Phosphono-1,2,4-Butanetricarboxylic Acid	37971-36-1	TWA (Aerosol.)	10 mg/m <sup>3</sup>	AIHA WEEL

- Engineering measures : Good general ventilation should be sufficient to control worker exposure to airborne contaminants.

#### Personal protective equipment

- Eye protection : Safety glasses
- Hand protection : Wear protective gloves.  
Gloves should be discarded and replaced if there is any indication of degradation or chemical breakthrough.
- Skin protection : Wear suitable protective clothing.
- Respiratory protection : When workers are facing concentrations above the exposure limit they must use appropriate certified respirators.
- Hygiene measures : Wash hands before breaks and immediately after handling the product.

### Section: 9. PHYSICAL AND CHEMICAL PROPERTIES

- Appearance : Liquid
- Colour : light brown
- Odour : odourless
- Flash point : > 100 °C  
Method: ASTM D 93, Pensky-Martens closed cup
- pH : no data available
- Odour Threshold : no data available
- Melting point/freezing point : FREEZING POINT: -2.2 °C
- Initial boiling point and boiling range : no data available

## SAFETY DATA SHEET

### 3D TRASAR® 3DT265

Evaporation rate	: no data available
Flammability (solid, gas)	: no data available
Upper explosion limit	: no data available
Lower explosion limit	: no data available
Vapour pressure	: similar to water
Relative vapour density	: Same as water
Relative density	: 1.13
Density	: 9.39 lb/gal
Water solubility	: completely soluble
Solubility in other solvents	: no data available
Partition coefficient: n-octanol/water	: no data available
Auto-ignition temperature	: no data available
Thermal decomposition temperature	: no data available
Viscosity, dynamic	: 6 mPa.s (21.6 °C)
Viscosity, kinematic	: no data available
Molecular weight	: no data available
VOC	: 0 % EPA Method 24

### Section: 10. STABILITY AND REACTIVITY

Chemical stability	: Stable under normal conditions.
Possibility of hazardous reactions	: No dangerous reaction known under conditions of normal use.
Conditions to avoid	: Extremes of temperature  None known.
Incompatible materials	: Contact with strong alkalies (e.g. ammonia and its solutions, carbonates, sodium hydroxide (caustic), potassium hydroxide, calcium hydroxide (lime), cyanide, sulfide, hypochlorites, chlorites) may generate heat, splattering or boiling and toxic vapors. Contact with strong oxidizers (e.g. chlorine, peroxides, chromates, nitric acid, perchlorate, concentrated oxygen, permanganate) may generate heat, fires, explosions and/or toxic vapors.
Hazardous decomposition products	: Decomposition products may include the following materials: Carbon oxides nitrogen oxides (NOx) Sulphur oxides Oxides of phosphorus

## SAFETY DATA SHEET

**3D TRASAR® 3DT265**

### Section: 11. TOXICOLOGICAL INFORMATION

Information on likely routes of exposure : Inhalation, Eye contact, Skin contact

#### Potential Health Effects

Eyes : Health injuries are not known or expected under normal use.

Skin : Health injuries are not known or expected under normal use.

Ingestion : Health injuries are not known or expected under normal use.

Inhalation : Health injuries are not known or expected under normal use.

Chronic Exposure : Health injuries are not known or expected under normal use.

#### Experience with human exposure

Eye contact : No symptoms known or expected.

Skin contact : No symptoms known or expected.

Ingestion : No symptoms known or expected.

Inhalation : No symptoms known or expected.

#### Toxicity

##### Product

Acute oral toxicity : Acute toxicity estimate : > 5,000 mg/kg

Acute inhalation toxicity : Acute toxicity estimate : > 40 mg/l  
Exposure time: 4 h

Acute dermal toxicity : Acute toxicity estimate : > 5,000 mg/kg

Skin corrosion/irritation : no data available

Serious eye damage/eye irritation : no data available

Respiratory or skin sensitization : no data available

Carcinogenicity : no data available

Reproductive effects : no data available

Germ cell mutagenicity : no data available

Teratogenicity : no data available

## SAFETY DATA SHEET

### 3D TRASAR® 3DT265

STOT - single exposure : no data available

STOT - repeated exposure : no data available

Aspiration toxicity : no data available

#### Section: 12. ECOLOGICAL INFORMATION

##### Ecotoxicity

Environmental Effects : This product has no known ecotoxicological effects.

##### Product

Toxicity to fish : LC50 Oncorhynchus mykiss (rainbow trout): 1,868 mg/l  
Exposure time: 96 hrs  
Test substance: Product

LC50 Pimephales promelas (fathead minnow): 3,140 mg/l  
Exposure time: 96 hrs  
Test substance: Product

NOEC Oncorhynchus mykiss (rainbow trout): 1,250 mg/l  
Exposure time: 96 hrs  
Test substance: Product

NOEC Pimephales promelas (fathead minnow): 1,250 mg/l  
Exposure time: 96 hrs  
Test substance: Product

Toxicity to daphnia and other aquatic invertebrates : LC50 Daphnia magna (Water flea): 1,964 mg/l  
Exposure time: 48 hrs  
Test substance: Product

NOEC Daphnia magna (Water flea): 1,250 mg/l  
Exposure time: 48 hrs  
Test substance: Product

##### Persistence and degradability

The organic portion of this preparation is expected to be inherently biodegradable.

Total Organic Carbon (TOC) : 63,000 mg/l

Chemical Oxygen Demand (COD): 190,000 mg/l

Biochemical Oxygen Demand (BOD):

Incubation Period	Value	Test Descriptor
5 d	< 200 mg/l	Product

##### Mobility

The environmental fate was estimated using a level III fugacity model embedded in the EPI (estimation program interface) Suite TM, provided by the US EPA. The model assumes a steady state condition between the total input

## SAFETY DATA SHEET

### 3D TRASAR® 3DT265

and output. The level III model does not require equilibrium between the defined media. The information provided is intended to give the user a general estimate of the environmental fate of this product under the defined conditions of the models.

If released into the environment this material is expected to distribute to the air, water and soil/sediment in the approximate respective percentages;

Air	: <5%
Water	: 30 - 50%
Soil	: 50 - 70%

The portion in water is expected to be soluble or dispersible.

#### Bioaccumulative potential

This preparation or material is not expected to bioaccumulate.

#### Other information

no data available

### Section: 13. DISPOSAL CONSIDERATIONS

If this product becomes a waste, it is not a hazardous waste as defined by the Resource Conservation and Recovery Act (RCRA) 40 CFR 261, since it does not have the characteristics of Subpart C, nor is it listed under Subpart D.

Disposal methods : Where possible recycling is preferred to disposal or incineration. If recycling is not practicable, dispose of in compliance with local regulations. Dispose of wastes in an approved waste disposal facility.

Disposal considerations : Dispose of as unused product. Empty containers should be taken to an approved waste handling site for recycling or disposal. Do not re-use empty containers.

### Section: 14. TRANSPORT INFORMATION

The shipper/consignor/sender is responsible to ensure that the packaging, labeling, and markings are in compliance with the selected mode of transport.

#### Land transport (DOT)

Proper shipping name : PRODUCT IS NOT REGULATED DURING TRANSPORTATION

#### Air transport (IATA)

Proper shipping name : PRODUCT IS NOT REGULATED DURING TRANSPORTATION

#### Sea transport (IMDG/IMO)

Proper shipping name : PRODUCT IS NOT REGULATED DURING TRANSPORTATION

## SAFETY DATA SHEET

**3D TRASAR® 3DT265**

### Section: 15. REGULATORY INFORMATION

#### EPCRA - Emergency Planning and Community Right-to-Know Act

##### CERCLA Reportable Quantity

This material does not contain any components with a CERCLA RQ.

##### SARA 304 Extremely Hazardous Substances Reportable Quantity

This material does not contain any components with a section 304 EHS RQ.

**SARA 311/312 Hazards** : No SARA Hazards

**SARA 302** : No chemicals in this material are subject to the reporting requirements of SARA Title III, Section 302.  
No chemicals in this material are subject to the reporting requirements of SARA Title III, Section 302.

**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.

#### California Prop 65

WARNING: This product contains a chemical known to the State of California to cause birth defects or other reproductive harm.

Methanol

67-56-1

#### INTERNATIONAL CHEMICAL CONTROL LAWS :

##### TOXIC SUBSTANCES CONTROL ACT (TSCA)

The substances in this preparation are included on or exempted from the TSCA 8(b) Inventory (40 CFR 710)

##### CANADIAN ENVIRONMENTAL PROTECTION ACT (CEPA)

The substance(s) in this preparation are included in or exempted from the Domestic Substance List (DSL).

##### AUSTRALIA

All substances in this product comply with the National Industrial Chemicals Notification & Assessment Scheme (NICNAS).

##### CHINA

All substances in this product comply with the Provisions on the Environmental Administration of New Chemical Substances and are listed on or exempt from the Inventory of Existing Chemical Substances China (IECSC).

##### JAPAN

All substances in this product comply with the Law Regulating the Manufacture and Importation Of Chemical Substances and are listed on the Existing and New Chemical Substances list (ENCS).

##### KOREA

All substances in this product comply with the Toxic Chemical Control Law (TCCL) and are listed on the Existing Chemicals List (ECL)

##### NEW ZEALAND

All substances in this product comply with the Hazardous Substances and New Organisms (HSNO) Act 1996, and are listed on or are exempt from the New Zealand Inventory of Chemicals.

## SAFETY DATA SHEET

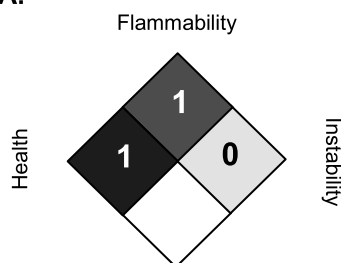
### 3D TRASAR® 3DT265

#### PHILIPPINES

All substances in this product comply with the Republic Act 6969 (RA 6969) and are listed on the Philippines Inventory of Chemicals & Chemical Substances (PICCS).

#### Section: 16. OTHER INFORMATION

##### NFPA:



##### HMIS III:

HEALTH	1
FLAMMABILITY	1
PHYSICAL HAZARD	0

0 = not significant, 1 = Slight,  
2 = Moderate, 3 = High  
4 = Extreme, \* = Chronic

Revision Date : 02/15/2016  
Version Number : 1.2  
Prepared By : Regulatory Affairs

REVISED INFORMATION: Significant changes to regulatory or health information for this revision is indicated by a bar in the left-hand margin of the SDS.

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. For additional copies of an SDS visit [www.nalco.com](http://www.nalco.com) and request access.



## SAFETY DATA SHEET

### CAT-FLOC 8103 PLUS

#### Section: 1. PRODUCT AND COMPANY IDENTIFICATION

Product name : CAT-FLOC 8103 PLUS

Other means of identification : Not applicable.

Recommended use : WATER TREATMENT

Restrictions on use : Refer to available product literature or ask your local Sales Representative for restrictions on use and dose limits.

Company : Nalco Company  
1601 W. Diehl Road  
Naperville, Illinois 60563-1198  
USA  
TEL: (630) 305-1000

Emergency telephone number : (800) 424-9300 (24 Hours) CHEMTREC

Issuing date : 09/08/2022

#### Section: 2. HAZARDS IDENTIFICATION

##### GHS Classification

Not a hazardous substance or mixture.

##### GHS Label element

Precautionary Statements : **Prevention:**  
Wash hands thoroughly after handling.  
**Response:**  
Get medical advice/ attention if you feel unwell.  
**Storage:**  
Store in accordance with local regulations. Protect product from freezing.

Other hazards : None known.

#### Section: 3. COMPOSITION/INFORMATION ON INGREDIENTS

No hazardous ingredients

#### Section: 4. FIRST AID MEASURES

In case of eye contact : Rinse with plenty of water. Get medical attention if symptoms occur.

In case of skin contact : Wash off with soap and plenty of water. Get medical attention if symptoms occur.

If swallowed : Rinse mouth. Get medical attention if symptoms occur.

If inhaled : Get medical attention if symptoms occur.

Protection of first-aiders : In event of emergency assess the danger before taking action. Do not put

## SAFETY DATA SHEET

### CAT-FLOC 8103 PLUS

yourself at risk of injury. If in doubt, contact emergency responders. Use personal protective equipment as required.

Notes to physician : Treat symptomatically.

Most important symptoms and effects, both acute and delayed : See Section 11 for more detailed information on health effects and symptoms.

#### Section: 5. FIREFIGHTING MEASURES

Suitable extinguishing media : Use extinguishing measures that are appropriate to local circumstances and the surrounding environment.

Unsuitable extinguishing media : None known.

Specific hazards during firefighting : Not flammable or combustible.

Hazardous combustion products : Decomposition products may include the following materials: Carbon oxides nitrogen oxides (NO<sub>x</sub>)

Special protective equipment for firefighters : Use personal protective equipment.

Specific extinguishing methods : Collect contaminated fire extinguishing water separately. This must not be discharged into drains. Fire residues and contaminated fire extinguishing water must be disposed of in accordance with local regulations. In the event of fire and/or explosion do not breathe fumes.

#### Section: 6. ACCIDENTAL RELEASE MEASURES

Personal precautions, protective equipment and emergency procedures : Ensure clean-up is conducted by trained personnel only. Refer to protective measures listed in sections 7 and 8.

Environmental precautions : Do not allow contact with soil, surface or ground water.

Methods and materials for containment and cleaning up : Stop leak if safe to do so. Contain spillage, and then collect with non-combustible absorbent material, (e.g. sand, earth, diatomaceous earth, vermiculite) and place in container for disposal according to local / national regulations (see section 13). For large spills, dike spilled material or otherwise contain material to ensure runoff does not reach a waterway. Flush away traces with water.

#### Section: 7. HANDLING AND STORAGE

Advice on safe handling : Wash hands thoroughly after handling.

Conditions for safe storage : Keep out of reach of children. Keep container tightly closed. Store in suitable labelled containers. Protect product from freezing.

## SAFETY DATA SHEET

### CAT-FLOC 8103 PLUS

Suitable material : The following compatibility data is suggested based on similar product data and/or industry experience: HDPE (high density polyethylene), Neoprene, Brass, Buna-N, Polyurethane, PVC, Polypropylene, Polyethylene, Stainless Steel 304, EPDM, Epoxy phenolic resin, 100% phenolic resin liner, Chlorosulfonated polyethylene rubber, Fluoroelastomer  
The following compatibility data is suggested based on similar product data and/or industry experience:

Unsuitable material : not determined

#### Section: 8. EXPOSURE CONTROLS/PERSONAL PROTECTION

##### Components with workplace control parameters

Contains no substances with occupational exposure limit values.

Engineering measures : Good general ventilation should be sufficient to control worker exposure to airborne contaminants.

##### Personal protective equipment

Eye protection : Safety glasses

Hand protection : Wear protective gloves.  
Gloves should be discarded and replaced if there is any indication of degradation or chemical breakthrough.

Skin protection : Wear suitable protective clothing.

Respiratory protection : No personal respiratory protective equipment normally required.

Hygiene measures : Handle in accordance with good industrial hygiene and safety practice. Remove and wash contaminated clothing before re-use. Wash face, hands and any exposed skin thoroughly after handling.

The Personal Protective Equipment (PPE) recommendations provided above have been made in good faith based on typical expected conditions of use. PPE selection should always be completed in conjunction with a proper risk assessment and in accordance with a PPE management program.

#### Section: 9. PHYSICAL AND CHEMICAL PROPERTIES

Appearance : Viscous liquid

Colour : yellow

Odour : slight

Flash point : > 93.3 °C

pH : 5.0 - 8.0, (100 %), (25 °C)

Odour Threshold : no data available

Melting point/freezing point : Freezing Point: -9.9 °C, ASTM D-1177

Initial boiling point and boiling range : > 100 °C

Evaporation rate : no data available

## SAFETY DATA SHEET

### CAT-FLOC 8103 PLUS

Flammability (solid, gas)	: Not applicable.
Upper explosion limit	: no data available
Lower explosion limit	: no data available
Vapour pressure	: similar to water
Relative vapour density	: Same as water
Relative density	: 1.018 - 1.058, (25 °C),
Density	: 1.019 - 1.056 g/cm <sup>3</sup> , 8.50 - 8.81 lb/gal
Water solubility	: completely soluble
Solubility in other solvents	: no data available
Partition coefficient: n-octanol/water	: no data available
Auto-ignition temperature	: no data available
Thermal decomposition	: no data available
Viscosity, dynamic	: < 1,050 mPa.s (25 °C)
Viscosity, kinematic	: no data available
Molecular weight	: no data available
VOC	: 0 %, 0 g/l, EPA Method 24

#### Section: 10. STABILITY AND REACTIVITY

Reactivity	: No dangerous reaction known under conditions of normal use.
Chemical stability	: Stable under normal conditions.
Possibility of hazardous reactions	: No dangerous reaction known under conditions of normal use.
Conditions to avoid	: Avoid extremes of temperature.
Incompatible materials	: Contact with strong oxidizers (e.g. chlorine, peroxides, chromates, nitric acid, perchlorate, concentrated oxygen, permanganate) may generate heat, fires, explosions and/or toxic vapors.
Hazardous decomposition products	: In case of fire, hazardous decomposition products may be produced such as: Carbon oxides nitrogen oxides (NO <sub>x</sub> )

#### Section: 11. TOXICOLOGICAL INFORMATION

Information on likely routes of exposure : Inhalation, Eye contact, Skin contact, Ingestion

##### Potential Health Effects

Eyes : Health injuries are not known or expected under normal use.

## SAFETY DATA SHEET

### CAT-FLOC 8103 PLUS

Skin : Health injuries are not known or expected under normal use.

Ingestion : Health injuries are not known or expected under normal use.

Inhalation : Health injuries are not known or expected under normal use.

Chronic Exposure : Health injuries are not known or expected under normal use.

#### Experience with human exposure

Eye contact : No symptoms known or expected.

Skin contact : No symptoms known or expected.

Ingestion : No symptoms known or expected.

Inhalation : No symptoms known or expected.

#### Toxicity

##### Product

Acute oral toxicity : Acute toxicity estimate: > 5,000 mg/kg

Acute inhalation toxicity : no data available

Acute dermal toxicity : no data available

Skin corrosion/irritation : no data available

Serious eye damage/eye irritation : no data available

Respiratory or skin sensitization : no data available

Carcinogenicity : no data available

Reproductive effects : no data available

Germ cell mutagenicity : no data available

Teratogenicity : no data available

STOT - single exposure : no data available

STOT - repeated exposure : no data available

Aspiration toxicity : no data available

### Section: 12. ECOLOGICAL INFORMATION

#### Toxicity

Environmental Effects : Toxic to aquatic life.

#### Product

Toxicity to fish : LC50 Inland Silverside: > 5,000 mg/l  
Exposure time: 96 hrs  
Test substance: Product tested in synthetic sea water

## SAFETY DATA SHEET

### CAT-FLOC 8103 PLUS

LC50 Zebra Danio: 10 - 100 mg/l  
Exposure time: 96 hrs  
Test substance: Representative polymer tested in water with DOC

LC50 Pimephales promelas (fathead minnow): 3.29 mg/l  
Exposure time: 96 hrs  
Test substance: Product tested in clean water

NOEC Inland Silverside: 5,000 mg/l  
Exposure time: 96 hrs  
Test substance: Product tested in synthetic sea water

NOEC Pimephales promelas (fathead minnow): 1.25 mg/l  
Exposure time: 96 hrs  
Test substance: Product tested in clean water

Toxicity to daphnia and other aquatic invertebrates : LC50 Daphnia magna (Water flea): 2.06 mg/l  
Exposure time: 48 hrs  
Test substance: Similar product tested in clean water

NOEC Ceriodaphnia dubia: 1.25 mg/l  
Exposure time: 48 hrs  
Test substance: Product tested in clean water

LC50 Daphnia magna (Water flea): 10 - 100 mg/l  
Exposure time: 48 hrs  
Test substance: Representative polymer tested in water with DOC

LC50 Ceriodaphnia dubia: 2.5 mg/l  
Exposure time: 48 hrs  
Test substance: Product tested in clean water

Toxicity to fish (Chronic toxicity) : EC25 / IC25: 1.4 mg/l  
Exposure time: 7 d  
Species: Fathead Minnow  
Test substance: Product

LOEC: 2.5 mg/l  
Exposure time: 7 d  
Species: Fathead Minnow  
Test substance: Product

NOEC: 1.3 mg/l  
Exposure time: 7 d  
Species: Fathead Minnow  
Test substance: Product

Toxicity to daphnia and other aquatic invertebrates (Chronic toxicity) : EC25 / IC25: 1.6 mg/l  
Exposure time: 7 d  
Species: Ceriodaphnia dubia  
Test substance: Product

LOEC: 2.5 mg/l

## SAFETY DATA SHEET

### CAT-FLOC 8103 PLUS

Exposure time: 7 d  
Species: Ceriodaphnia dubia  
Test substance: Product

NOEC: 1.3 mg/l  
Exposure time: 7 d  
Species: Ceriodaphnia dubia  
Test substance: Product

#### Persistence and degradability

The organic portion of this preparation is expected to be poorly biodegradable.

#### Mobility

The environmental fate was estimated using a level III fugacity model embedded in the EPI (estimation program interface) Suite TM, provided by the US EPA. The model assumes a steady state condition between the total input and output. The level III model does not require equilibrium between the defined media. The information provided is intended to give the user a general estimate of the environmental fate of this product under the defined conditions of the models.

If released into the environment this material is expected to distribute to the air, water and soil/sediment in the approximate respective percentages;

Air	:	<5%
Water	:	30 - 50%
Soil	:	50 - 70%

The portion in water is expected to be soluble or dispersible.

#### Bioaccumulative potential

This preparation or material is not expected to bioaccumulate.

#### Other information

The hazard characterization is based on the tests or potential hazard in the clean water.

### Section: 13. DISPOSAL CONSIDERATIONS

If this product becomes a waste, it is not a hazardous waste as defined by the Resource Conservation and Recovery Act (RCRA) 40 CFR 261, since it does not have the characteristics of Subpart C, nor is it listed under Subpart D.

Disposal methods : Do not contaminate storm water drains, natural waterways or soil with chemical or used container. Where possible recycling is preferred to disposal or incineration. If recycling is not practicable, dispose of contents/container in accordance with local regulations Dispose of wastes in an approved waste disposal facility.

Disposal considerations : Dispose of as unused product. Empty containers should be taken to an approved waste handling site for recycling or disposal. Do not re-use empty containers.

### Section: 14. TRANSPORT INFORMATION

## SAFETY DATA SHEET

### CAT-FLOC 8103 PLUS

The shipper/consignor/sender is responsible to ensure that the packaging, labeling, and markings are in compliance with the selected mode of transport.

#### Land transport (DOT)

Proper shipping name : PRODUCT IS NOT REGULATED DURING TRANSPORTATION

#### Air transport (IATA)

Proper shipping name : PRODUCT IS NOT REGULATED DURING TRANSPORTATION

#### Sea transport (IMDG/IMO)

Proper shipping name : PRODUCT IS NOT REGULATED DURING TRANSPORTATION

### Section: 15. REGULATORY INFORMATION

**TSCA list** : No substances are subject to a Significant New Use Rule.

No substances are subject to TSCA 12(b) export notification requirements.

#### EPCRA - Emergency Planning and Community Right-to-Know Act

##### CERCLA Reportable Quantity

This product does not contain a RQ substance, or this product contains a substance with a RQ, however the calculated RQ exceeds the reasonably attainable upper limit.

##### SARA 304 Extremely Hazardous Substances Reportable Quantity

This material does not contain any components with a section 304 EHS RQ.

**SARA 311/312 Hazards** : No SARA Hazards

**SARA 302** : This material does not contain any components with a section 302 EHS TPQ.

**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.

#### California Prop. 65

This product does not contain any chemicals known to State of California to cause cancer, birth defects, or any other reproductive harm.

#### INTERNATIONAL CHEMICAL CONTROL LAWS :

##### United States TSCA Inventory

On or in compliance with the active portion of the TSCA inventory

##### Australia. Australian Industrial Chemicals Introduction Scheme (AICIS)

All substances in this product comply with the Australian Industrial Chemicals Introduction Scheme (AICIS)

##### Canadian Domestic Substances List (DSL)

The substance(s) in this preparation are included in or exempted from the Domestic Substance List (DSL).



## SAFETY DATA SHEET

### CAT-FLOC 8103 PLUS

#### Japan. ENCS - Existing and New Chemical Substances Inventory

All substances in this product comply with the Law Regulating the Manufacture and Importation Of Chemical Substances and are listed on the Existing and New Chemical Substances list (ENCS).

#### Korea. Korean Existing Chemicals Inventory (KECI)

All substances in this product comply with the Chemical Control Act (CCA) and are listed on the Existing Chemicals List (ECL)

#### Philippines Inventory of Chemicals and Chemical Substances (PICCS)

All substances in this product comply with the Republic Act 6969 (RA 6969) and are listed on the Philippines Inventory of Chemicals & Chemical Substances (PICCS).

#### China Inventory of Existing Chemical Substances

All substances in this product comply with the Provisions on the Environmental Administration of New Chemical Substances and are listed on or exempt from the Inventory of Existing Chemical Substances China (IECSC).

#### New Zealand. Inventory of Chemicals (NZIoC), as published by ERMA New Zealand

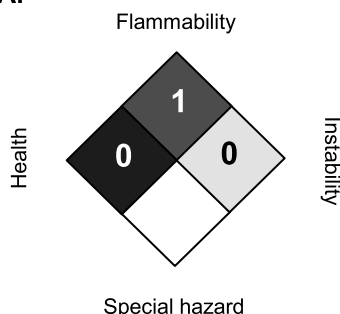
All substances in this product comply with the Hazardous Substances and New Organisms (HSNO) Act 1996, and are listed on or are exempt from the New Zealand Inventory of Chemicals.

#### Taiwan Chemical Substance Inventory

All substances in this product comply with the Taiwan Existing Chemical Substances Inventory (ECSI).

### Section: 16. OTHER INFORMATION

#### NFPA:



#### HMIS III:

HEALTH	0
FLAMMABILITY	1
PHYSICAL HAZARD	0

0 = not significant, 1 = Slight,  
2 = Moderate, 3 = High  
4 = Extreme, \* = Chronic

Revision Date : 09/08/2022  
Version Number : 1.4  
Prepared By : Regulatory Affairs

REVISED INFORMATION: Significant changes to regulatory or health information for this revision is indicated by a bar in the left-hand margin of the SDS.

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. For additional copies of an SDS visit [www.ecolab.com/sds](http://www.ecolab.com/sds) and request access.

## SAFETY DATA SHEET

**NALCO® GR-105**

### Section: 1. PRODUCT AND COMPANY IDENTIFICATION

Product name : NALCO® GR-105

Other means of identification : Not applicable.

Restrictions on use : Refer to available product literature or ask your local Sales Representative for restrictions on use and dose limits.

Company : Nalco Company  
1601 W. Diehl Road  
Naperville, Illinois 60563-1198  
USA  
TEL: (630)305-1000

Emergency telephone number : (800) 424-9300 (24 Hours) CHEMTREC

Issuing date : 08/07/2018

### Section: 2. HAZARDS IDENTIFICATION

#### GHS Classification

Eye irritation : Category 2B

#### GHS Label element

Signal Word : Warning

Hazard Statements : Causes eye irritation.

Precautionary Statements : **Prevention:**  
Wash skin thoroughly after handling.  
**Response:**  
IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.

**Other hazards** : Mix thoroughly before use. If swallowed a jelly mass may form which in digestion may cause blockage. Water in contact with the product will cause slippery floor conditions.

### Section: 3. COMPOSITION/INFORMATION ON INGREDIENTS

Pure substance/mixture : Mixture

Chemical Name	CAS-No.	Concentration: (%)
Hydrotreated Light Distillate (petroleum)	64742-47-8	10 - 30
Oxyalkylated alcohol	Proprietary	1 - 5

### Section: 4. FIRST AID MEASURES

In case of eye contact : Rinse with plenty of water. Get medical attention if symptoms occur.

In case of skin contact : Wash off with soap and plenty of water. Get medical attention if symptoms

## SAFETY DATA SHEET

### NALCO® GR-105

occur.

- If swallowed : Rinse mouth. Get medical attention if symptoms occur.
- If inhaled : Get medical attention if symptoms occur.
- Protection of first-aiders : In event of emergency assess the danger before taking action. Do not put yourself at risk of injury. If in doubt, contact emergency responders. Use personal protective equipment as required.
- Notes to physician : Treat symptomatically. If swallowed a jelly mass may form which in digestion may cause blockage.
- Most important symptoms and effects, both acute and delayed : See Section 11 for more detailed information on health effects and symptoms.

#### Section: 5. FIREFIGHTING MEASURES

- Suitable extinguishing media : Use extinguishing measures that are appropriate to local circumstances and the surrounding environment.
- Unsuitable extinguishing media : Do not use water unless flooding amounts are available.
- Specific hazards during firefighting : Phase separation of the product may occur after prolonged storage. The top phase will be combustible hydrocarbon solvent.
- Hazardous combustion products : Carbon oxides nitrogen oxides (NOx)
- Special protective equipment for firefighters : Use personal protective equipment.
- Specific extinguishing methods : Fire residues and contaminated fire extinguishing water must be disposed of in accordance with local regulations. In the event of fire and/or explosion do not breathe fumes.

#### Section: 6. ACCIDENTAL RELEASE MEASURES

- Personal precautions, protective equipment and emergency procedures : Ensure clean-up is conducted by trained personnel only. Spills of this product are very slippery. Refer to protective measures listed in sections 7 and 8.
- Environmental precautions : Do not allow contact with soil, surface or ground water.
- Methods and materials for containment and cleaning up : Stop leak if safe to do so. Contain spillage, and then collect with non-combustible absorbent material, (e.g. sand, earth, diatomaceous earth, vermiculite) and place in container for disposal according to local / national regulations (see section 13). For large spills, dike spilled material or otherwise contain material to ensure runoff does not reach a waterway. Flush away traces with water.

#### Section: 7. HANDLING AND STORAGE

## SAFETY DATA SHEET

### NALCO® GR-105

- Advice on safe handling : Wash hands thoroughly after handling. Use only with adequate ventilation. Stir well prior to use.
- Conditions for safe storage : Keep out of reach of children. Keep container tightly closed. Store in suitable labelled containers. Store separately from oxidizers.
- Suitable material : Keep in properly labelled containers.
- Unsuitable material : not determined

#### Section: 8. EXPOSURE CONTROLS/PERSONAL PROTECTION

##### Components with workplace control parameters

Components	CAS-No.	Form of exposure	Permissible concentration	Basis
Hydrotreated Light Distillate (petroleum)	64742-47-8	TWA	500 ppm 2,000 mg/m <sup>3</sup>	OSHA Z1
		TWA	200 mg/m <sup>3</sup> (as total hydrocarbon vapor)	ACGIH
		TWA (Mist)	5 mg/m <sup>3</sup>	OSHA Z1
		TWA (Mist)	5 mg/m <sup>3</sup>	NIOSH REL
		STEL (Mist)	10 mg/m <sup>3</sup>	NIOSH REL

- Engineering measures : Good general ventilation should be sufficient to control worker exposure to airborne contaminants.

##### Personal protective equipment

- Eye protection : Safety glasses
- Hand protection : Wear protective gloves.  
Nitrile rubber  
Neoprene gloves  
Viton® gloves  
Gloves should be discarded and replaced if there is any indication of degradation or chemical breakthrough.
- Skin protection : Wear suitable protective clothing.
- Respiratory protection : When workers are facing concentrations above the exposure limit they must use appropriate certified respirators.  
An organic vapor cartridge may be used.
- Hygiene measures : Handle in accordance with good industrial hygiene and safety practice. Remove and wash contaminated clothing before re-use. Wash face, hands and any exposed skin thoroughly after handling.

#### Section: 9. PHYSICAL AND CHEMICAL PROPERTIES

- Appearance : Emulsion

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### NALCO® GR-105

Colour	: off-white
Odour	: odourless
Flash point	: > 93.3 °C
pH	: 8,(100 %)
Odour Threshold	: no data available
Melting point/freezing point	: Freezing Point: < -20 °C
Initial boiling point and boiling range	: 98 °C, (760 mm Hg), Method: ASTM D 86
Evaporation rate	: no data available
Flammability (solid, gas)	: no data available
Upper explosion limit	: no data available
Lower explosion limit	: no data available
Vapour pressure	: no data available
Relative vapour density	: no data available
Relative density	: 1.03 - 1.07, (25 °C),
Density	: 1.03 - 1.08 g/cm <sup>3</sup> , 8.6 - 9.0 lb/gal
Water solubility	: emulsifiable
Solubility in other solvents	: no data available
Partition coefficient: n-octanol/water	: no data available
Auto-ignition temperature	: no data available
Thermal decomposition	: no data available
Viscosity, dynamic	: 400 - 1,200 mPa.s (25 °C), Method: ASTM D 2983
Viscosity, kinematic	: 388 mm <sup>2</sup> /s (40 °C)
Molecular weight	: no data available
VOC	: 24.77 %, EPA Method 24 3.02 %, Modified EPA Method 24 at 60°F

### Section: 10. STABILITY AND REACTIVITY

Chemical stability	: Stable under normal conditions.
Possibility of hazardous reactions	: No dangerous reaction known under conditions of normal use.
Conditions to avoid	: Extremes of temperature Freezing temperatures.
Incompatible materials	: Addition of water results in gelling. Contact with strong oxidizers (e.g. chlorine, peroxides, chromates, nitric acid, perchlorate, concentrated oxygen, permanganate) may generate heat, fires,

## SAFETY DATA SHEET

**NALCO® GR-105**

explosions and/or toxic vapors.

Hazardous decomposition products : In case of fire, hazardous decomposition products may be produced such as:  
Carbon oxides  
nitrogen oxides (NOx)

### Section: 11. TOXICOLOGICAL INFORMATION

Information on likely routes of exposure : Inhalation, Eye contact, Skin contact

#### Potential Health Effects

Eyes : Causes eye irritation.

Skin : Health injuries are not known or expected under normal use.

Ingestion : If swallowed a jelly mass may form which in digestion may cause blockage.

Inhalation : Health injuries are not known or expected under normal use.

Chronic Exposure : Health injuries are not known or expected under normal use.

#### Experience with human exposure

Eye contact : Redness, Irritation

Skin contact : No symptoms known or expected.

Ingestion : No symptoms known or expected.

Inhalation : No symptoms known or expected.

#### Toxicity

##### Product

Acute oral toxicity : Acute toxicity estimate: > 5,000 mg/kg

Acute inhalation toxicity : no data available

Acute dermal toxicity : no data available

Skin corrosion/irritation : no data available

Serious eye damage/eye irritation : Result: Mild eye irritation

Respiratory or skin sensitization : no data available

Carcinogenicity : no data available

Reproductive effects : No reproductive toxic effects expected.

Germ cell mutagenicity : Contains no ingredient listed as a mutagen

Teratogenicity : no data available

STOT - single exposure : no data available

## SAFETY DATA SHEET

**NALCO® GR-105**

STOT - repeated exposure : no data available  
Aspiration toxicity : No aspiration toxicity classification

### Components

Acute inhalation toxicity : Oxyalkylated alcohol  
LC50 rat: > 50 mg/l  
Exposure time: 4 h  
Test atmosphere: dust/mist

## Section: 12. ECOLOGICAL INFORMATION

### Ecotoxicity

Environmental Effects : Harmful to aquatic life.

### Components

Toxicity to fish : Hydrotreated Light Distillate (petroleum)  
LC50: > 1,000 mg/l  
Exposure time: 96 h

### Components

Toxicity to daphnia and other aquatic invertebrates : Hydrotreated Light Distillate (petroleum)  
EC50 : > 1,000 mg/l  
Exposure time: 48 h  
  
Oxyalkylated alcohol  
EC50 : > 0.1 mg/l  
Exposure time: 48 h

### Components

Toxicity to algae : Hydrotreated Light Distillate (petroleum)  
EC50 : > 1,000 mg/l  
Exposure time: 72 h

### Components

Toxicity to bacteria : Hydrotreated Light Distillate (petroleum)  
> 1,000 mg/l  
Exposure time: 48 h

### Persistence and degradability

no data available

### Mobility

no data available

### Bioaccumulative potential

no data available

### Other information

## SAFETY DATA SHEET

**NALCO® GR-105**

no data available

### Section: 13. DISPOSAL CONSIDERATIONS

- Disposal methods : The product should not be allowed to enter drains, water courses or the soil. Where possible recycling is preferred to disposal or incineration. If recycling is not practicable, dispose of in compliance with local regulations. Dispose of wastes in an approved waste disposal facility.
- Disposal considerations : Dispose of as unused product. Empty containers should be taken to an approved waste handling site for recycling or disposal. Do not re-use empty containers.

### Section: 14. TRANSPORT INFORMATION

The shipper/consignor/sender is responsible to ensure that the packaging, labeling, and markings are in compliance with the selected mode of transport.

#### Land transport (DOT)

Proper shipping name : PRODUCT IS NOT REGULATED DURING TRANSPORTATION

#### Air transport (IATA)

Proper shipping name : PRODUCT IS NOT REGULATED DURING TRANSPORTATION

#### Sea transport (IMDG/IMO)

Proper shipping name : PRODUCT IS NOT REGULATED DURING TRANSPORTATION

### Section: 15. REGULATORY INFORMATION

**TSCA list** : No substances are subject to a Significant New Use Rule.

No substances are subject to TSCA 12(b) export notification requirements.

#### EPCRA - Emergency Planning and Community Right-to-Know Act

##### CERCLA Reportable Quantity

This product does not contain a RQ substance, or this product contains a substance with a RQ, however the calculated RQ exceeds the reasonably attainable upper limit.

##### SARA 304 Extremely Hazardous Substances Reportable Quantity

This material does not contain any components with a section 304 EHS RQ.

**SARA 311/312 Hazards** : Acute Health Hazard

**SARA 302** : No chemicals in this material are subject to the reporting requirements of SARA Title III, Section 302.



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**NALCO® GR-105**

**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.

### **California Prop 65**

This product does not contain any chemicals known to State of California to cause cancer, birth defects, or any other reproductive harm.

## **INTERNATIONAL CHEMICAL CONTROL LAWS :**

### **United States TSCA Inventory**

The substances in this preparation are included on or exempted from the TSCA 8(b) Inventory (40 CFR 710)

### **Australia. Industrial Chemical (Notification and Assessment) Act**

All substances in this product comply with the National Industrial Chemicals Notification & Assessment Scheme (NICNAS).

### **Canadian Domestic Substances List (DSL)**

The substance(s) in this preparation are included in or exempted from the Domestic Substance List (DSL).

### **Japan. ENCS - Existing and New Chemical Substances Inventory**

All substances in this product comply with the Law Regulating the Manufacture and Importation Of Chemical Substances and are listed on the Existing and New Chemical Substances list (ENCS).

### **Korea. Korean Existing Chemicals Inventory (KECI)**

All substances in this product comply with the Chemical Control Act (CCA) and are listed on the Existing Chemicals List (ECL)

### **Philippines Inventory of Chemicals and Chemical Substances (PICCS)**

All substances in this product comply with the Republic Act 6969 (RA 6969) and are listed on the Philippines Inventory of Chemicals & Chemical Substances (PICCS).

### **China Inventory of Existing Chemical Substances**

All substances in this product comply with the Provisions on the Environmental Administration of New Chemical Substances and are listed on or exempt from the Inventory of Existing Chemical Substances China (IECSC).

### **New Zealand. Inventory of Chemicals (NZIoC), as published by ERMA New Zealand**

All substances in this product comply with the Hazardous Substances and New Organisms (HSNO) Act 1996, and are listed on or are exempt from the New Zealand Inventory of Chemicals.

### **Taiwan Chemical Substance Inventory**

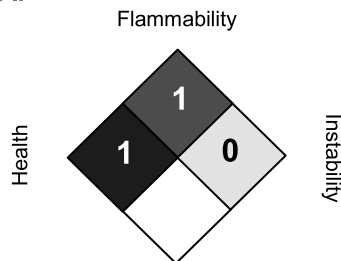
All substances in this product comply with the Taiwan Existing Chemical Substances Inventory (ECSI).

## **Section: 16. OTHER INFORMATION**

## SAFETY DATA SHEET

**NALCO® GR-105**

### NFPA:



### HMIS III:

<b>HEALTH</b>	<b>1</b>
<b>FLAMMABILITY</b>	<b>1</b>
<b>PHYSICAL HAZARD</b>	<b>0</b>

0 = not significant, 1 = Slight,  
2 = Moderate, 3 = High  
4 = Extreme, \* = Chronic

Revision Date : 08/07/2018  
Version Number : 1.2  
Prepared By : Regulatory Affairs

REVISED INFORMATION: Significant changes to regulatory or health information for this revision is indicated by a bar in the left-hand margin of the SDS.

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. For additional copies of an SDS visit [www.nalco.com](http://www.nalco.com) and request access.

## SAFETY DATA SHEET

**ULTRION™ 8187**

### Section: 1. PRODUCT AND COMPANY IDENTIFICATION

Product name : ULTRION™ 8187

Other means of identification : Not applicable

Recommended use : WATER CLARIFICATION AID

Restrictions on use : Refer to available product literature or ask your local Sales Representative for restrictions on use and dose limits.

Company : Nalco Company  
1601 W. Diehl Road  
Naperville, Illinois 60563-1198  
USA  
TEL: (630)305-1000

Emergency telephone number : (800) 424-9300 (24 Hours) CHEMTREC

Issuing date : 02/13/2018

### Section: 2. HAZARDS IDENTIFICATION

#### GHS Classification

Not a hazardous substance or mixture.

#### GHS Label element

Precautionary Statements : **Prevention:**  
Wash hands thoroughly after handling.  
**Response:**  
Specific measures: consult SDS Section 4.  
**Storage:**  
Store in accordance with local regulations.

**Other hazards** : None known.

### Section: 3. COMPOSITION/INFORMATION ON INGREDIENTS

Pure substance/mixture	: Mixture	
Chemical Name	CAS-No.	Concentration: (%)
Aluminum Chloride Hydroxide	12042-91-0	30 - 60

### Section: 4. FIRST AID MEASURES

In case of eye contact : Rinse with plenty of water. Get medical attention if symptoms occur.

In case of skin contact : Wash off with soap and plenty of water. Get medical attention if symptoms occur.

If swallowed : Rinse mouth. Get medical attention if symptoms occur.

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### ULTRION™ 8187

- If inhaled : Get medical attention if symptoms occur.
- Protection of first-aiders : In event of emergency assess the danger before taking action. Do not put yourself at risk of injury. If in doubt, contact emergency responders. Use personal protective equipment as required.
- Notes to physician : Treat symptomatically.
- Most important symptoms and effects, both acute and delayed : See Section 11 for more detailed information on health effects and symptoms.

#### Section: 5. FIREFIGHTING MEASURES

- Suitable extinguishing media : Use extinguishing measures that are appropriate to local circumstances and the surrounding environment.
- Unsuitable extinguishing media : None known.
- Specific hazards during firefighting : Not flammable or combustible.
- Hazardous combustion products : Hydrogen chloride metal oxides
- Special protective equipment for firefighters : Use personal protective equipment.
- Specific extinguishing methods : Fire residues and contaminated fire extinguishing water must be disposed of in accordance with local regulations.

#### Section: 6. ACCIDENTAL RELEASE MEASURES

- Personal precautions, protective equipment and emergency procedures : Refer to protective measures listed in sections 7 and 8.
- Environmental precautions : No special environmental precautions required.
- Methods and materials for containment and cleaning up : Stop leak if safe to do so. Contain spillage, and then collect with non-combustible absorbent material, (e.g. sand, earth, diatomaceous earth, vermiculite) and place in container for disposal according to local / national regulations (see section 13). For large spills, dike spilled material or otherwise contain material to ensure runoff does not reach a waterway. Flush away traces with water.

#### Section: 7. HANDLING AND STORAGE

- Advice on safe handling : For personal protection see section 8. Wash hands after handling.
- Conditions for safe storage : Keep out of reach of children. Keep container tightly closed. Store in suitable labelled containers.

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### ULTRION™ 8187

Suitable material : The following compatibility data is suggested based on similar product data and/or industry experience: PVC, Buna-N, Polyurethane, Polypropylene, Polyethylene, Viton, HDPE (high density polyethylene), 100% phenolic resin liner

Unsuitable material : The following compatibility data is suggested based on similar product data and/or industry experience: Brass, Hypalon, Stainless Steel 304, EPDM, Mild steel, Stainless Steel 316L, Neoprene, Epoxy phenolic resin

#### Section: 8. EXPOSURE CONTROLS/PERSONAL PROTECTION

##### Components with workplace control parameters

Components	CAS-No.	Form of exposure	Permissible concentration	Basis
Aluminum Chloride Hydroxide	12042-91-0	TWA	2 mg/m <sup>3</sup> (Aluminium)	NIOSH REL

Engineering measures : Good general ventilation should be sufficient to control worker exposure to airborne contaminants.

##### Personal protective equipment

Eye protection : Safety glasses

Hand protection : Wear protective gloves.  
butyl-rubber  
Neoprene gloves  
Gloves should be discarded and replaced if there is any indication of degradation or chemical breakthrough.

Skin protection : Wear suitable protective clothing.

Respiratory protection : When workers are facing concentrations above the exposure limit they must use appropriate certified respirators.

Hygiene measures : Wash hands before breaks and immediately after handling the product.

#### Section: 9. PHYSICAL AND CHEMICAL PROPERTIES

Appearance : Liquid

Colour : Colorless

Odour : None

Flash point : does not flash

pH : 4.00 - 4.40,(30 %), (25 °C)

Odour Threshold : no data available

Melting point/freezing point : FREEZING POINT: -5 °C, ASTM D-1177

Initial boiling point and boiling range : 104 °C

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Evaporation rate	: no data available
Flammability (solid, gas)	: no data available
Upper explosion limit	: no data available
Lower explosion limit	: no data available
Vapour pressure	: similar to water
Relative vapour density	: no data available
Relative density	: 1.34, (25 °C), ASTM D-1298
Density	: 11.1 lb/gal
Water solubility	: completely soluble
Solubility in other solvents	: no data available
Partition coefficient: n-octanol/water	: no data available
Auto-ignition temperature	: no data available
Thermal decomposition	: no data available
Viscosity, dynamic	: no data available
Viscosity, kinematic	: no data available
Molecular weight	: no data available
VOC	: no data available

#### Section: 10. STABILITY AND REACTIVITY

Chemical stability	: Stable under normal conditions.
Possibility of hazardous reactions	: No dangerous reaction known under conditions of normal use.
Conditions to avoid	: Extremes of temperature
Incompatible materials	: Strong Bases
Hazardous decomposition products	: In case of fire, hazardous decomposition products may be produced such as: Hydrogen chloride

#### Section: 11. TOXICOLOGICAL INFORMATION

Information on likely routes of exposure : Inhalation, Eye contact, Skin contact

##### Potential Health Effects

Eyes	: Health injuries are not known or expected under normal use.
Skin	: Health injuries are not known or expected under normal use.
Ingestion	: Health injuries are not known or expected under normal use.

## SAFETY DATA SHEET

### ULTRION™ 8187

Inhalation : Health injuries are not known or expected under normal use.

Chronic Exposure : Health injuries are not known or expected under normal use.

#### Experience with human exposure

Eye contact : No symptoms known or expected.

Skin contact : No symptoms known or expected.

Ingestion : No symptoms known or expected.

Inhalation : No symptoms known or expected.

#### Toxicity

##### Product

Acute oral toxicity : Acute toxicity estimate: 4,588 mg/kg

Acute inhalation toxicity : no data available

Acute dermal toxicity : no data available

Skin corrosion/irritation : no data available

Serious eye damage/eye irritation : no data available

Respiratory or skin sensitization : no data available

Carcinogenicity : no data available

Reproductive effects : no data available

Germ cell mutagenicity : no data available

Teratogenicity : no data available

STOT - single exposure : no data available

STOT - repeated exposure : no data available

Aspiration toxicity : no data available

##### **Components**

Acute dermal toxicity : Aluminum Chloride Hydroxide  
LD50 rat: > 2,000 mg/kg

### Section: 12. ECOLOGICAL INFORMATION

#### Ecotoxicity

Environmental Effects : This product has no known ecotoxicological effects.

##### **Product**

Toxicity to fish : LC50 Inland Silverside: > 5,000 mg/l  
Exposure time: 96 hrs  
Test substance: Product

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**ULTRION™ 8187**

LC50 Rainbow Trout: 590 mg/l  
Exposure time: 96 hrs  
Test substance: Product

LC50 Fathead Minnow: 1,094 mg/l  
Exposure time: 96 hrs  
Test substance: Product

NOEC Inland Silverside: 5,000 mg/l  
Exposure time: 96 hrs  
Test substance: Product

NOEC Rainbow Trout: 250 mg/l  
Exposure time: 96 hrs  
Test substance: Product

NOEC Fathead Minnow: 313 mg/l  
Exposure time: 96 hrs  
Test substance: Product

Toxicity to daphnia and other aquatic invertebrates : LC50 Daphnia magna: > 5,000 mg/l  
Exposure time: 48 hrs  
Test substance: Product

LC50 Mysid Shrimp (Mysidopsis bahia): 4,773 mg/l  
Exposure time: 96 hrs  
Test substance: Product

LC50 Ceriodaphnia dubia: > 5,000 mg/l  
Exposure time: 48 hrs  
Test substance: Product

NOEC Daphnia magna: 5,000 mg/l  
Exposure time: 48 hrs  
Test substance: Product

NOEC Mysid Shrimp (Mysidopsis bahia): 1,250 mg/l  
Exposure time: 96 hrs  
Test substance: Product

NOEC Ceriodaphnia dubia: 2,500 mg/l  
Exposure time: 48 hrs  
Test substance: Product

Toxicity to daphnia and other aquatic invertebrates (Chronic toxicity) : NOEC: 15 mg/l  
Exposure time: 7 Days  
Species: Ceriodaphnia dubia  
Test substance: Product

LOEC: 30 mg/l  
Exposure time: 7 Days  
Species: Ceriodaphnia dubia  
Test substance: Product

EC25 / IC25: 7.2 mg/l



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Exposure time: 7 Days  
Species: Ceriodaphnia dubia  
Test substance: Product

IC50: 10.3 mg/l  
Exposure time: 7 Days  
Species: Ceriodaphnia dubia  
Test substance: Product

NOEC: 7.5 mg/l  
Exposure time: 7 Days  
Species: Ceriodaphnia dubia  
Test substance: Product

LOEC: 15 mg/l  
Exposure time: 7 Days  
Species: Ceriodaphnia dubia  
Test substance: Product

### Components

Toxicity to bacteria : Aluminum Chloride Hydroxide  
> 4.4 mg/l

### Components

Toxicity to fish (Chronic toxicity) : Aluminum Chloride Hydroxide  
NOEC: 0.013 mg/l  
Exposure time: 60 d

### Persistence and degradability

Greater than 95% of this product consists of inorganic substances for which a biodegradation value is not applicable.

### Mobility

The environmental fate was estimated using a level III fugacity model embedded in the EPI (estimation program interface) Suite TM, provided by the US EPA. The model assumes a steady state condition between the total input and output. The level III model does not require equilibrium between the defined media. The information provided is intended to give the user a general estimate of the environmental fate of this product under the defined conditions of the models.

If released into the environment this material is expected to distribute to the air, water and soil/sediment in the approximate respective percentages;

Air	: <5%
Water	: 30 - 50%
Soil	: 50 - 70%

The portion in water is expected to be soluble or dispersible.

### Bioaccumulative potential

This preparation or material is not expected to bioaccumulate.

### Other information

## SAFETY DATA SHEET

**ULTRION™ 8187**

no data available

### Section: 13. DISPOSAL CONSIDERATIONS

If this product becomes a waste, it is not a hazardous waste as defined by the Resource Conservation and Recovery Act (RCRA) 40 CFR 261, since it does not have the characteristics of Subpart C, nor is it listed under Subpart D.

Disposal methods : Where possible recycling is preferred to disposal or incineration. If recycling is not practicable, dispose of in compliance with local regulations. Dispose of wastes in an approved waste disposal facility.

Disposal considerations : Dispose of as unused product. Empty containers should be taken to an approved waste handling site for recycling or disposal. Do not re-use empty containers.

### Section: 14. TRANSPORT INFORMATION

The shipper/consignor/sender is responsible to ensure that the packaging, labeling, and markings are in compliance with the selected mode of transport.

#### Land transport (DOT)

Proper shipping name : PRODUCT IS NOT REGULATED DURING TRANSPORTATION

#### Air transport (IATA)

Proper shipping name : PRODUCT IS NOT REGULATED DURING TRANSPORTATION

#### Sea transport (IMDG/IMO)

Proper shipping name : PRODUCT IS NOT REGULATED DURING TRANSPORTATION

### Section: 15. REGULATORY INFORMATION

TSCA list : Not relevant

#### EPCRA - Emergency Planning and Community Right-to-Know Act

##### CERCLA Reportable Quantity

This material does not contain any components with a CERCLA RQ.

##### SARA 304 Extremely Hazardous Substances Reportable Quantity

This material does not contain any components with a section 304 EHS RQ.

SARA 311/312 Hazards : No SARA Hazards

SARA 302 : No chemicals in this material are subject to the reporting requirements of SARA Title III, Section 302.

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.

#### California Prop 65

This product does not contain any chemicals known to State of California to cause cancer, birth defects, or any other reproductive harm.

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**ULTRION™ 8187**

### INTERNATIONAL CHEMICAL CONTROL LAWS :

#### United States TSCA Inventory

The substances in this preparation are included on or exempted from the TSCA 8(b) Inventory (40 CFR 710)

#### Australia. Industrial Chemical (Notification and Assessment) Act

All substances in this product comply with the National Industrial Chemicals Notification & Assessment Scheme (NICNAS).

#### Canadian Domestic Substances List (DSL)

The substance(s) in this preparation are included in or exempted from the Domestic Substance List (DSL).

#### Japan. ENCS - Existing and New Chemical Substances Inventory

All substances in this product comply with the Law Regulating the Manufacture and Importation Of Chemical Substances and are listed on the Existing and New Chemical Substances list (ENCS).

#### Korea. Korean Existing Chemicals Inventory (KECI)

All substances in this product comply with the Chemical Control Act (CCA) and are listed on the Existing Chemicals List (ECL)

#### Philippines Inventory of Chemicals and Chemical Substances (PICCS)

All substances in this product comply with the Republic Act 6969 (RA 6969) and are listed on the Philippines Inventory of Chemicals & Chemical Substances (PICCS).

#### China Inventory of Existing Chemical Substances

All substances in this product comply with the Provisions on the Environmental Administration of New Chemical Substances and are listed on or exempt from the Inventory of Existing Chemical Substances China (IECSC).

#### New Zealand. Inventory of Chemicals (NZIoC), as published by ERMA New Zealand

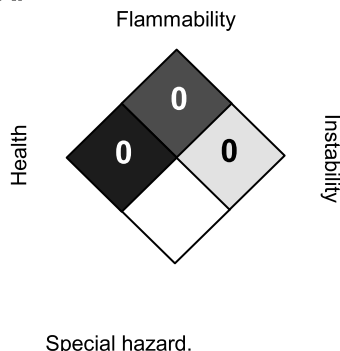
All substances in this product comply with the Hazardous Substances and New Organisms (HSNO) Act 1996, and are listed on or are exempt from the New Zealand Inventory of Chemicals.

#### Taiwan Chemical Substance Inventory

All substances in this product comply with the Taiwan Existing Chemical Substances Inventory (ECSI).

### Section: 16. OTHER INFORMATION

#### NFPA:



#### HMIS III:

HEALTH	1
FLAMMABILITY	0
PHYSICAL HAZARD	0

0 = not significant, 1 = Slight,  
2 = Moderate, 3 = High  
4 = Extreme, \* = Chronic

## SAFETY DATA SHEET

**ULTRION™ 8187**

Revision Date : 02/13/2018  
Version Number : 1.4  
Prepared By : Regulatory Affairs

REVISED INFORMATION: Significant changes to regulatory or health information for this revision is indicated by a bar in the left-hand margin of the SDS.

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. For additional copies of an SDS visit [www.nalco.com](http://www.nalco.com) and request access.



# SDS

## Safety Data Sheet Wheelhouse Industries LLC

### QUANTUM ORGANIC DESCALER

<b>1</b>	<b>PRODUCT AND COMPANY IDENTIFICATION</b>
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1.1 Product Identifier:

- a) Trade Name: Quantum Organic Descaler

1.2 Product Use: Product for removal of scale

- a) Identified Use: Hard water, lime scale and calcium remover, nonionic cleaner

1.3 Manufacturer/Supplier

Company: Wheelhouse Industries

Address: PO Box 685 Lebanon, NJ 08833

Emergency: Infotrac (800) 535-5053

Tele phone: (800) 547-1443

<b>2</b>	<b>HAZARDS IDENTIFICATION</b>
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2.1 Classification of the substance or mixture

- a) GHS Classifications:

- i. Skin Irritation 2: Causes skin irritation.
- ii. Eye Damage 2A: Causes eye damage.

- b) Directive 67/548/EEC

- i. Not classified according to Directives 67/548/EEC

2.2 Label elements

- a) Label elements According GHS Classifications



- b) Hazard Pictogram(s)

- i. Signal Word: Warning

- ii. Hazard Statement:

- a. H315: May cause skin irritation.
- b. H318: May cause serious eye damage.

- iii. Precautionary Statements:

- a. P264: Wash thoroughly after handling.
- b. P280: Wear protective gloves/protective clothing/eye protection/face protection.
- c. P302+P352: IF ON SKIN: Wash with plenty of soap and water.
- d. P305+P351+P338: IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.

2.3 Other hazards

- 1. OSHA: This material is not considered hazardous by the OSHA Hazard Communication Standard, (29 CFR 1910.1200).
- 2. HMIS: Health — 1, Flammability — 0, Reactivity — 0
- 3. WHMIS (Canada): Class D2B - Skin irritant. Class D2B - Eye irritant.

2.4 Additional Information: No Fragrances Added



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**Safety Data Sheet**  
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## QUANTUM ORGANIC DESCALER

### 3 CHEMICAL COMPOSITION

#### 3.1 GHS Classification (EC Classification No. 689/2008/EC)

Component	CAS #	Range %
Deionized Water	7732-18-5	50 - 90
Alcohol Solvent	Proprietary	1 - 15
Alkanolamine	144538-83-0	1 - 15
Organic Acid	Proprietary	1 - 35
Tall Oil Fatty Acid Potassium	61790-12-3	1 - 15
Surfactant	Proprietary	1 - 15
Nonionic Surfactant	Proprietary	1 - 15
Citric Acid	77-92-9	0.1- 15
Formic Acid	64-18-6	0.1 - 15

Note: In accordance with GHS Annex 4, section 3.3, some product identification is considered Confidential Business Information. The manufacturer lists no ingredients as hazardous according to OSHA 29 CFR 1910.1200.

### 4 FIRST AID MEASURES

#### 4.1 Description of first aid measures

- Inhalation Not a likely route of exposure. Remove to fresh air if irritation occurs. If symptoms develop, obtain medical attention.
- Skin Contact May cause skin irritation or redness. No toxicity associated with the product being absorbed through skin. Wash exposed areas with water. In the unlikely event of prolonged irritation, seek medical advice.
- Eye Contact This product causes irritation to the eyes after direct contact. Rinse with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.
- Ingestion If swallowed: Call a poison center or doctor if you feel unwell. If vomiting occurs naturally, have victim lean forward to reduce the risk of aspiration. Do NOT induce vomiting unless directed to do so by medical personnel. Never give anything by mouth to an unconscious person.

#### 4.2 Most important symptoms and effects, both acute and delayed

- Acute Eyes: May cause serious eye irritation. Signs/symptoms may include redness, swelling, pain, tearing, and blurred or hazy vision. Skin: May cause skin irritation. Signs/symptoms may include localized redness, swelling, and itching. Ingestion: May cause gastrointestinal irritation. Signs/symptoms may include abdominal pain, stomach upset, nausea, vomiting and diarrhea.
- Delayed and Chronic Effects Expected to be similar to acute exposures.

#### 4.3 Indication of the immediate medical attention and special treatment needed

Treat symptomatically.



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**Safety Data Sheet**  
Wheelhouse Industries LLC

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## QUANTUM ORGANIC DESCALER

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<b>5</b>	<b>FIRE-FIGHTING MEASURES</b>
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Not flammable or combustible by OSHA/WHMIS criteria. Not Sensitive to mechanical impact and static discharge.

Flash Point > 220° C (428° F) Explosive Limits: NA Auto-Ignition Temperatures: NA

5.1 Extinguishing media

- a) Suitable Extinguishing Media: Use extinguishing media appropriate to surrounding fire conditions. Unsuitable Extinguishing Media: None known.

5.2 Special hazards arising from the substance or mixture

- a) Containers may rupture from exposure to high temperatures, releasing contents that may be slippery.

5.3 Advice for fire-fighters

- a) Suitable protective clothing should be worn in fire conditions. Extinguish preferably with dry chemical, foam or water spray.

<b>6</b>	<b>ACCIDENTAL RELEASE MEASURES</b>
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6.1 Personal precautions, protective equipment and emergency procedures

- a) Do not touch or walk-through spilled material.  
b) Use personal protection recommended in Section 8.

6.2 Environmental Precautions: None

6.3 Methods and material for containment and cleaning up

- a) Rinse area with water. Dispose of material in accordance with local regulations.

6.4 Reference to other sections See Also Section 7, 8, 13

6.5 Additional Information: None

<b>7</b>	<b>HANDLING AND STORAGE</b>
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7.1 Precautions for safe handling

- a) Do not swallow. Wash thoroughly after handling. See Section 8 for information on Personal Protective Equipment.

7.2 Conditions for safe storage

- a) Store away from incompatible materials. See Section 10 for information on Incompatible Materials. Keep out of reach of children



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## QUANTUM ORGANIC DESCALER

<b>8</b>	<b>EXPOSURE CONTROLS/PERSONAL PROTECTION</b>
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### 8.1 Control Parameters

- a) Occupational Exposure Limits
  - i. No Threshold Limit Value (TLV) established (ACGIH).
  - ii. No Permissible Exposure Limit (PEL) established (OSHA).
- b) Biological Limit Value
  - a) No hazardous ingredients in reportable quantities under USA, Canada, EU, and UN regulations are present in this product. No Threshold Limit Value (TLV) established (ACGIH). No Permissible Exposure Limit (PEL) established (OSHA).

### 8.2 PNECs and DNELs

- a) No PNECs or DNELs are available for this product. As with all chemical products, users are cautioned to avoid unnecessary exposures.

### 8.3 Personal protection equipment

- a) Respiratory Protection: Usually not needed.
- b) Eye Protection: Wear safety glasses. Ensure that eyewash stations and safety showers are close to the workstation location. Use equipment for eye protection that meets the standards referenced by OSHA regulations in 29 CFR 1910.133 for Personal Protective Equipment.
- c) Hand Protection: Wear protective gloves. Consult manufacturer specifications for further information.
- d) Skin and Body Protection: Wear protective gloves.
- e) Engineering Controls: No special controls required
- f) General Hygiene Considerations: Handle according to established industrial hygiene and safety practices.

<b>9</b>	<b>PHYSICAL AND CHEMICAL PROPERTIES</b>
----------	---

### 9.1 Information on basic physical and chemical properties

- |  |   |
|--|---|
| • Ready-To-Use (RTU)                             | Flammable   |
| • Appearance: Water-like liquid                  | • Auto-ignition Temperature: Non-Flammable              |
| • Color: Clear to Amber                          | • Vapor Pressure: Not available.                        |
| • Odor: Slightly Acrid                           | • Vapor Density: 3.2 (Air = 1)                          |
| • Odor Threshold: Not available                  | • Relative Density: Not available                       |
| • pH: 2.3  | • Solubilities: Infinitely miscible with water.         |
| • Melting Point / Freezing Point: < 0 °C (32 °F) | • Partition Coefficient: N-octanol/Water: Not available |
| • Initial Boiling Point: Not available           | • Decomposition Temperature: Not available              |
| • Boiling Point: > 112 °C (233.6° F)             | • Percent Volatile, wt. %: 0%                           |
| • Flash Point: > 112 °C (233.6° F)               | • Density: 1.16 g/mL                                    |
| • Evaporation Rate: 1 (Water = 1)                |   |
| • Flammability (solid, gas): Non-Flammable       |   |
| • Upper/Lower Flammability Limit: Non-           |   |





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## QUANTUM ORGANIC DESCALER

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<b>10</b>	<b>STABILITY AND REACTIVITY</b>
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10.1 Reactivity

- a) Contact with incompatible materials.

10.2 Chemical stability

- a) Stable under normal conditions. Avoid temperature extremes.

10.3 Possibility of hazardous reactions None known.

10.4 Conditions to avoid

- a) Do not freeze. Do not use above ambient temperature. 10.5

Incompatible materials , possibly Oxidizers

10.6 Hazardous Decomposition Product(s) Not available.

<b>11</b>	<b>TOXICOLOGICAL INFORMATION</b>
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11.1 Information on toxicological effects

a) Mixtures

- i. Effects of Acute Exposure
- ii. Ingestion: May cause gastrointestinal irritation. Signs/symptoms may include abdominal pain, stomach upset, nausea, vomiting and diarrhea.
- iii. Inhalation: Not Known. Not a likely route of exposure.
- iv. Skin Contact: May causes skin irritation. Signs/symptoms may include localized redness, swelling, and itching.
- v. Eye Contact: May causes serious eye irritation. Signs/symptoms may include redness, swelling, pain, tearing, and blurred or loss of vision.
- vi. Corrosivity: None expected.
- vii. Repeated Dose toxicity: Prolonged or repeated contact may dry skin and cause irritation.
- viii. Carcinogenicity: This product does not contain any carcinogens or potential carcinogens as listed by ACGIH, IARC, OSHA,NTP.
- ix. Mutagenicity: Not available
- x. Toxicity for reproduction: Not available

11.2 Other information None



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**Safety Data Sheet**  
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## QUANTUM ORGANIC DESCALER

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<b>12</b>	<b>ECOLOGICAL INFORMATION</b>
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- 12.1 Toxicity: Not expected to be harmful to aquatic or soil environments.
- 12.2 Persistence and degradability: Readily biodegradable organic liquid.
- 12.3 Bio accumulative potential: Not available
- 12.4 Mobility in soil: Not available
- 12.5 Results of PBT and vPvB assessment: Not available
- 12.6 Additional Information on Eco toxicity: Not available

<b>13</b>	<b>DISPOSAL CONSIDERATIONS</b>
-----------	--------------------------------

- 13.1 Waste treatment methods
  - a) Disposal should be in accordance with local, state or national legislation. For disposal within the EC, the appropriate code according to the European Waste Catalogue (EWC) should be used. Containers must not be punctured or destroyed by burning, even when empty.
- 13.2 Additional Information: None

<b>14</b>	<b>TRANSPORT INFORMATION</b>
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- 14.1 Land transport (ADR/RID) (c)(d): Not classified as dangerous for transport.
  - a) U.S. Department of Transportation (DOT) (c)(d): Not classified as dangerous for transport.
  - b) Canada Transportation of Dangerous Goods (TDG) (c)(d): Not classified as dangerous for transport.
  - c) Sea transport (IMDG) (c)(d): Not classified as dangerous for transport.
  - d) Air transport (ICAO/IATA) (c) (d): Not classified as dangerous for transport.

Note: Consult with transport provider and check relevant regulations for Special Provisions.



# SDS

## Safety Data Sheet Wheelhouse Industries LLC

### QUANTUM ORGANIC DESCALER

**15****REGULATORY INFORMATION****15.1 Safety, health and environmental regulations and associated hazards for the mixture**

Country	Chemical Inventory or Regulation	Classification	Associated Hazards
Australia	Australian Inventory of Chemical Substances (AICS)	Listed	None
Canada	Domestic Substances List (DSL/NDSL)	The components of this product are in compliance with the chemical notification requirements of the NSN Regulations under CEPA, 1999.	
	WHMIS Classification		
	Canada Ingredient Disclosure List (CIDL)		
China	Inventory of Existing Chemical Substances in China (IECSC)	Listed	None
Europe	European Inventory of Existing Commercial Chemical Substances (EINECS)	Listed	None
Japan	Inventory of Existing and New Chemical Substances (ENCS)	Listed	None
Korea	Korea Existing Chemicals Inventory (KECI)	Listed	None
New Zealand	New Zealand Inventory of Chemicals (NZIoC)	Listed	None
Philippines	Philippine Inventory of Chemicals and Chemical Substances (PICCS)	Listed	None
Taiwan	National Existing Chemical Inventory in Taiwan (NECI)	Listed	None
USA	TSCA (Toxic Substance Control Act)	The components of this product are in compliance with the chemical notification requirements of TSCA.	
	SARA 311/312 - Hazard Categories	None	None
	SARA 302 - Extremely Hazardous Substances	Not Listed	None
	SARA 313 - Toxic Chemicals	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.	
	CERCLA (Comprehensive Environmental Response Compensation and Liability Act)	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).	
	CAA (Clean Air Act 1990)	This product does not contain any substances regulated as hazardous air pollutants (HAPS) under Section 112 of the Clean Air Act Amendments of 1990.	
	CWA (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).	
	State Right to Know Lists	This product does not contain any substances regulated by state right-to-know regulations.	
	Proposition 65 (California)	This product does not contain chemicals known to the State of California to cause cancer, birth defects or other reproductive harm.	



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**Safety Data Sheet**  
Wheelhouse Industries LLC

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## QUANTUM ORGANIC DESCALER

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16	OTHER INFORMATION
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Additional Information: 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.

References: RTECS, CAS Registry, EINECS/ESIS, Manufacturer Information

**End of Safety Data Sheet**

## SAFETY DATA SHEET

### PURATE

#### Section: 1. PRODUCT AND COMPANY IDENTIFICATION

Product name : PURATE

Other means of identification : Not applicable.

Recommended use : BIOCIDES PRECURSOR

Restrictions on use : Refer to available product literature or ask your local Sales Representative for restrictions on use and dose limits.

Company : Nalco Company  
1601 W. Diehl Road  
Naperville, Illinois 60563-1198  
USA  
TEL: (630) 305-1000

Emergency telephone number : (800) 424-9300 (24 Hours) CHEMTREC

Issuing date : 05/28/2024

#### Section: 2. HAZARDS IDENTIFICATION

##### GHS Classification

Oxidizing liquids : Category 1  
Acute toxicity (Inhalation) : Category 4  
Acute toxicity (Dermal) : Category 4  
Serious eye damage : Category 1

##### GHS Label element

Hazard pictograms : 

Signal Word : Danger

Hazard Statements : May cause fire or explosion; strong oxidiser.  
Harmful in contact with skin or if inhaled.  
Causes serious eye damage.

Precautionary Statements : **Prevention:**  
Keep away from heat. Keep/Store away from clothing and other combustible materials. Avoid breathing mist or vapours. Wear protective gloves/ eye protection/ face protection. Wear fire/ flame resistant/ retardant clothing.  
**Response:**  
IF ON SKIN: Wash with plenty of water. Call a POISON CENTER or doctor/ physician if you feel unwell. IF INHALED: Remove person to fresh air and keep comfortable for breathing. Call a POISON CENTER or doctor/ physician if you feel unwell. 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 or doctor/ physician. IF ON CLOTHING:

# SAFETY DATA SHEET

## PURATE

rinse immediately contaminated clothing and skin with plenty of water before removing clothes.

**Disposal:**

Dispose of contents/ container to an approved waste disposal plant.

**Other hazards** : None known.

### Section: 3. COMPOSITION/INFORMATION ON INGREDIENTS

Pure substance/mixture : Mixture

Chemical Name	CAS-No.	Concentration: (%)
Sodium Chlorate	7775-09-9	40
Hydrogen Peroxide	7722-84-1	5 - 10

### Section: 4. FIRST AID MEASURES

In case of eye contact : Rinse immediately with plenty of water, also under the eyelids, for at least 15 minutes. Remove contact lenses, if present and easy to do. Continue rinsing. Get medical attention immediately.

In case of skin contact : Wash off immediately with plenty of water for at least 15 minutes. Wash clothing before reuse. Thoroughly clean shoes before reuse. Get medical attention immediately.

If swallowed : Rinse mouth with water. Do NOT induce vomiting. Never give anything by mouth to an unconscious person. Get medical attention immediately.

If inhaled : Remove to fresh air. Treat symptomatically. Get medical attention.

Protection of first-aiders : In event of emergency assess the danger before taking action. Do not put yourself at risk of injury. If in doubt, contact emergency responders. Use personal protective equipment as required.

Most important symptoms and effects, both acute and delayed : See Section 11 for more detailed information on health effects and symptoms.

### Section: 5. FIRE-FIGHTING MEASURES

Suitable extinguishing media : Water

Unsuitable extinguishing media : Foam  
Carbon dioxide (CO<sub>2</sub>)  
Dry chemical

Specific hazards during firefighting : Oxidizer. Contact with other material may cause fire.  
Cool closed containers exposed to fire with water spray.

Hazardous combustion products : Decomposition products may include the following materials: Carbon oxides  
nitrogen oxides (NO<sub>x</sub>) Sulphur oxides Oxides of phosphorus

Special protective equipment : Use personal protective equipment.

## SAFETY DATA SHEET

### PURATE

for firefighters

Specific extinguishing methods : Fire residues and contaminated fire extinguishing water must be disposed of in accordance with local regulations. In the event of fire and/or explosion do not breathe fumes.

#### Section: 6. ACCIDENTAL RELEASE MEASURES

Personal precautions, protective equipment and emergency procedures : Ensure adequate ventilation. Keep people away from and upwind of spill/leak. Avoid inhalation, ingestion and contact with skin and eyes. When workers are facing concentrations above the exposure limit they must use appropriate certified respirators. Ensure clean-up is conducted by trained personnel only. Move all flammable sources out of danger and keep them away from the scene. Refer to protective measures listed in sections 7 and 8.

Environmental precautions : Do not allow contact with soil, surface or ground water. DO NOT hermetically seal any defective containers, including drums (risk of bursting due to the decomposition of the product)

Methods and materials for containment and cleaning up : Stop leak if safe to do so. Contain spillage, and then collect with non-combustible absorbent material, (e.g. sand, earth, diatomaceous earth, vermiculite) and place in container for disposal according to local / national regulations (see section 13). Flush away traces with water. Isolate absorbed wastes contaminated with this product from other waste streams containing combustible materials (paper, wood fibers, cloth, etc.). Combustible materials exposed to this product should be rinsed immediately with large amounts of water to ensure that all product is removed. Residual product which is allowed to dry on organic materials such as rags, cloths, paper, fabrics, cotton, leather, wood, or other combustibles may spontaneously ignite and result in a fire.

#### Section: 7. HANDLING AND STORAGE

Advice on safe handling : Do not ingest. Do not breathe dust/fume/gas/mist/vapours/spray. Do not get in eyes, on skin, or on clothing. Wash hands thoroughly after handling. Use only with adequate ventilation.

Conditions for safe storage : Keep in a cool, well-ventilated place. Keep away from reducing agents. Keep away from combustible material. Keep out of reach of children. Keep container tightly closed. Store in suitable labelled containers. Do not hermetically seal the container. Always transport and store the containers upright. Risk of overpressure and bursting in the event of decomposition in closed containers and in pipes.

Suitable material : The following compatibility data is suggested based on similar product data and/or industry experience: Compatibility with Plastic Materials can vary; we therefore recommend that compatibility is tested prior to use.

Unsuitable material : not determined

#### Section: 8. EXPOSURE CONTROLS/PERSONAL PROTECTION

##### Components with workplace control parameters

Components	CAS-No.	Form of exposure	Permissible	Basis
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## SAFETY DATA SHEET

### PURATE

			concentration	
Hydrogen Peroxide	7722-84-1	TWA	1 ppm	ACGIH
		TWA	1 ppm 1.4 mg/m3	NIOSH REL
		TWA	1 ppm 1.4 mg/m3	OSHA Z1

Engineering measures : Effective exhaust ventilation system. Maintain air concentrations below occupational exposure standards.

#### Personal protective equipment

Eye protection : Safety goggles  
Face-shield

Hand protection : Wear the following personal protective equipment:  
Standard glove type.  
Gloves should be discarded and replaced if there is any indication of degradation or chemical breakthrough.

Skin protection : Flame retardant protective clothing

Respiratory protection : When workers are facing concentrations above the exposure limit they must use appropriate certified respirators.

Hygiene measures : Handle in accordance with good industrial hygiene and safety practice. Remove and wash contaminated clothing before re-use. Wash face, hands and any exposed skin thoroughly after handling. Provide suitable facilities for quick drenching or flushing of the eyes and body in case of contact or splash hazard.

The Personal Protective Equipment (PPE) recommendations provided above have been made in good faith based on typical expected conditions of use. PPE selection should always be completed in conjunction with a proper risk assessment and in accordance with a PPE management program.

#### Section: 9. PHYSICAL AND CHEMICAL PROPERTIES

Appearance : Liquid

Colour : clear colourless to light blue yellow

Odour : Slight, Pungent

Flash point : does not flash

pH : 2 - 6

Odour Threshold : no data available

Melting point/freezing point : no data available

Initial boiling point and boiling range : 104.0 °C

Evaporation rate : > 1

Flammability (solid, gas) : The product is not flammable.

Upper explosion limit : no data available



## SAFETY DATA SHEET

### PURATE

Lower explosion limit	: no data available
Vapour pressure	: 6.7 kPa, (40 °C),
Relative vapour density	: no data available
Relative density	: 1.3400 - 1.3900, (25 °C),
Density	: 11.4 lb/gal
Water solubility	: completely soluble
Solubility in other solvents	: no data available
Partition coefficient: n-octanol/water	: no data available
Auto-ignition temperature	: Not applicable
Thermal decomposition	: no data available
Viscosity, dynamic	: 1.8 mPa.s (20 °C)
Viscosity, kinematic	: no data available
Molecular weight	: no data available
VOC	: 0 %, Calculation method

#### Section: 10. STABILITY AND REACTIVITY

Reactivity	: No dangerous reaction known under conditions of normal use.
Chemical stability	: Decomposes on heating. Contamination may result in dangerous pressure increases - closed containers may rupture.
Possibility of hazardous reactions	: No dangerous reaction known under conditions of normal use.
Conditions to avoid	: None known.
Incompatible materials	: Flammable materials
Hazardous decomposition products	: In case of fire, hazardous decomposition products may be produced such as: Chlorine HCl

#### Section: 11. TOXICOLOGICAL INFORMATION

Information on likely routes of exposure : Inhalation, Eye contact, Skin contact, Ingestion

##### Potential Health Effects

Skin	: Harmful in contact with skin. Causes severe skin burns.
Ingestion	: Causes digestive tract burns.
Inhalation	: Harmful if inhaled. May cause nose, throat, and lung irritation.

## SAFETY DATA SHEET

### PURATE

Chronic Exposure : Health injuries are not known or expected under normal use.

#### Experience with human exposure

Eye contact : Redness, Pain, Corrosion

Skin contact : No symptoms known or expected.  
Redness, Pain, Corrosion

Ingestion : No symptoms known or expected.  
Corrosion, Abdominal pain

Inhalation : No symptoms known or expected.  
Respiratory irritation, Cough

#### Toxicity

##### Product

Acute oral toxicity : Acute toxicity estimate: > 5,000 mg/kg  
Acute toxicity estimate: 3,531 mg/kg

Acute inhalation toxicity : Acute toxicity estimate: > 10 mg/l  
Exposure time: 4 h  
Test atmosphere: vapour

Acute dermal toxicity : Acute toxicity estimate: > 1,000 mg/kg

Skin corrosion/irritation : no data available

Serious eye damage/eye irritation : Result: Irreversible effects on the eye  
Method: Expert judgement

Respiratory or skin sensitization : no data available

Carcinogenicity : no data available

Reproductive effects : no data available

Germ cell mutagenicity : no data available

Teratogenicity : no data available

STOT - single exposure : no data available

STOT - repeated exposure : no data available

Aspiration toxicity : Based on available data, the classification criteria are not met.

### Section: 12. ECOLOGICAL INFORMATION

#### Toxicity

Environmental Effects : Harmful to aquatic life.

#### Components

## SAFETY DATA SHEET

### PURATE

Toxicity to fish : Sodium Chlorate  
LC50 Fish: > 1,000 mg/l  
Exposure time: 96 h

Hydrogen Peroxide  
LC50 Pimephales promelas (fathead minnow): 16.4 mg/l  
Exposure time: 96 h

#### Components

Toxicity to daphnia and other : Sodium Chlorate  
aquatic invertebrates EC50 : > 1,000 mg/l  
Exposure time: 48 h

#### Components

Toxicity to algae : Sodium Chlorate  
EC50 : > 1,000 mg/l  
Exposure time: 72 h

Hydrogen Peroxide  
EC50 Skeletonema costatum (marine diatom): 1.38 mg/l  
Exposure time: 72 h

#### Persistence and degradability

Biodegradability : Result: Not applicable - inorganic

Greater than 95% of this product consists of inorganic substances for which a biodegradation value is not applicable.

#### Mobility

The environmental fate was estimated using a level III fugacity model embedded in the EPI (estimation program interface) Suite TM, provided by the US EPA. The model assumes a steady state condition between the total input and output. The level III model does not require equilibrium between the defined media. The information provided is intended to give the user a general estimate of the environmental fate of this product under the defined conditions of the models.

If released into the environment this material is expected to distribute to the air, water and soil/sediment in the approximate respective percentages;

Air : <5%  
Water : 30 - 50%  
Soil : 50 - 70%

The portion in water is expected to be soluble or dispersible.

#### Bioaccumulative potential

This preparation or material is not expected to bioaccumulate.

#### Other information

no data available

### Section: 13. DISPOSAL CONSIDERATIONS

## SAFETY DATA SHEET

### PURATE

- Disposal methods : Do not contaminate storm water drains, natural waterways or soil with chemical or used container. Where possible recycling is preferred to disposal or incineration. If recycling is not practicable, dispose of contents/container in accordance with local regulations. Dispose of wastes in an approved waste disposal facility.  
Do not contaminate storm water drains, natural waterways or soil with chemical or used container. Where possible recycling is preferred to disposal or incineration. If recycling is not practicable, dispose of contents/container in accordance with local regulations. Dispose of wastes in an approved waste disposal facility.
- Disposal considerations : Dispose of as unused product. Empty containers should be taken to an approved waste handling site for recycling or disposal. Do not re-use empty containers.  
Dispose of as unused product. Empty containers should be taken to an approved waste handling site for recycling or disposal. Do not re-use empty containers.

### Section: 14. TRANSPORT INFORMATION

The shipper/consignor/sender is responsible to ensure that the packaging, labeling, and markings are in compliance with the selected mode of transport.

#### Land transport (DOT)

- Proper shipping name : SODIUM CHLORATE, AQUEOUS SOLUTION  
Technical name(s) :  
UN/ID No. : UN 2428  
Transport hazard class(es) : 5.1  
Packing group : II

#### Air transport (IATA)

- Proper shipping name : SODIUM CHLORATE, AQUEOUS SOLUTION  
Technical name(s) :  
UN/ID No. : UN 2428  
Transport hazard class(es) : 5.1  
Packing group : II

#### Sea transport (IMDG/IMO)

- Proper shipping name : SODIUM CHLORATE, AQUEOUS SOLUTION  
Technical name(s) :  
UN/ID No. : UN 2428  
Transport hazard class(es) : 5.1  
Packing group : II

### Section: 15. REGULATORY INFORMATION

- TSCA list : No substances are subject to a Significant New Use Rule.  
No substances are subject to TSCA 12(b) export notification requirements.

## SAFETY DATA SHEET

### PURATE

EPA Reg. No. : 1706-242

#### EPCRA - Emergency Planning and Community Right-to-Know Act

##### CERCLA Reportable Quantity

This product does not contain a RQ substance, or this product contains a substance with a RQ, however the calculated RQ exceeds the reasonably attainable upper limit.

##### SARA 304 Extremely Hazardous Substances Reportable Quantity

This material does not contain any components with a section 304 EHS RQ.

**SARA 311/312 Hazards** : Oxidiser (liquid, solid or gas)  
Acute toxicity (any route of exposure)  
Serious eye damage or eye irritation

**SARA 302** : The following components are subject to reporting levels established by SARA Title III, Section 302:  
Hydrogen Peroxide 7722-84-1

**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.

#### California Prop. 65

This product does not contain any chemicals known to State of California to cause cancer, birth defects, or any other reproductive harm.

#### INTERNATIONAL CHEMICAL CONTROL LAWS :

##### United States TSCA Inventory

This product is exempted under TSCA and regulated under FIFRA. The inerts are on the Inventory List.

##### Canadian Domestic Substances List (DSL)

Substances regulated under the Pest Control Products Act are exempt from CEPA New Substance Notification requirements.

##### Korea. Korean Existing Chemicals Inventory (KECI)

On the Korea Existing Chemicals Inventory.

##### Japan. ENCS - Existing and New Chemical Substances Inventory

All substances in this product comply with the Law Regulating the Manufacture and Importation Of Chemical Substances and are listed on the Existing and New Chemical Substances list (ENCS).

##### Australia. Australian Industrial Chemicals Introduction Scheme (AICIS)

All substances in this product comply with the Australian Industrial Chemicals Introduction Scheme (AICIS)

##### Philippines Inventory of Chemicals and Chemical Substances (PICCS)

All substances in this product comply with the Republic Act 6969 (RA 6969) and are listed on the Philippines Inventory of Chemicals & Chemical Substances (PICCS).

##### China Inventory of Existing Chemical Substances

All substances in this product comply with the Provisions on the Environmental Administration of New Chemical Substances and are listed on or exempt from the Inventory of Existing Chemical Substances China (IECSC).

## SAFETY DATA SHEET

### PURATE

#### New Zealand. Inventory of Chemicals (NZIoC), as published by ERMA New Zealand

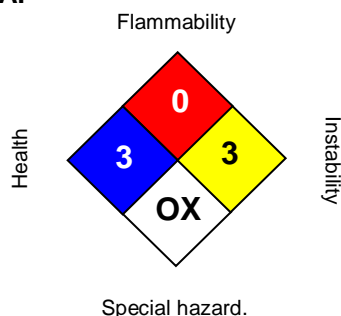
All substances in this product comply with the Hazardous Substances and New Organisms (HSNO) Act 1996, and are listed on or are exempt from the New Zealand Inventory of Chemicals.

#### Taiwan Chemical Substance Inventory

All substances in this product comply with the Taiwan Existing Chemical Substances Inventory (ECSI).

### Section: 16. OTHER INFORMATION

#### NFPA:



#### HMIS III:

HEALTH	3
FLAMMABILITY	0
PHYSICAL HAZARD	3

0 = not significant, 1 = Slight,  
2 = Moderate, 3 = High  
4 = Extreme, \* = Chronic

Revision Date : 05/28/2024  
Version Number : 1.9  
Prepared By : Regulatory Affairs

REVISED INFORMATION: Significant changes to regulatory or health information for this revision is indicated by a bar in the left-hand margin of the SDS.

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. For additional copies of an SDS visit [www.ecolab.com/sds](http://www.ecolab.com/sds) and request access.

## 1. Identification

**Other means of identification** None known.  
**Product identifier** **SULFURIC ACID 78% NSF**  
**Recommended use** ALL PROPER AND LEGAL PURPOSES  
**Recommended restrictions** None known.

### Manufacturer/Importer/Supplier/Distributor information

#### Manufacturer

**Company name** Brenntag Southwest, Inc.  
**Address** 610 Fisher Road  
Longview, TX 75604  
**Telephone** 903-759-7151  
**E-mail** Not available.  
**Emergency phone number** 800-424-9300 CHEMTREC

## 2. Hazard(s) identification

**Physical hazards** Not classified.  
**Health hazards** Skin corrosion/irritation Category 1  
Serious eye damage/eye irritation Category 1  
**Environmental hazards** Not classified.  
**OSHA defined hazards** Not classified.

#### Label elements



**Signal word** Danger  
**Hazard statement** Causes severe skin burns and eye damage. Causes serious eye damage.

#### Precautionary statement

**Prevention** Do not breathe mist/vapors. Wash thoroughly after handling. Wear protective gloves/protective clothing/eye protection/face protection.

**Response** 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. Wash contaminated clothing before reuse.

**Storage** 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** 78.02% of the mixture consists of component(s) of unknown acute oral toxicity. 78.02% of the mixture consists of component(s) of unknown acute dermal toxicity. 100% of the mixture consists of component(s) of unknown acute inhalation toxicity.

## 3. Composition/information on ingredients

#### Mixtures

Chemical name	Common name and synonyms	CAS number	%
SULFURIC ACID		7664-93-9	78.018
Other components below reportable levels			21.982

## 4. First-aid measures

<b>Inhalation</b>	Move to fresh air. Call a physician if symptoms develop or persist.
<b>Skin contact</b>	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.
<b>Eye contact</b>	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.
<b>Ingestion</b>	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.
<b>Most important symptoms/effects, acute and delayed</b>	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.
<b>Indication of immediate medical attention and special treatment needed</b>	Provide general supportive measures and treat symptomatically. 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 under observation. Symptoms may be delayed.
<b>General information</b>	Ensure that medical personnel are aware of the material(s) involved, and take precautions to protect themselves.

## 5. Fire-fighting measures

<b>Suitable extinguishing media</b>	Foam. Powder. Carbon dioxide (CO <sub>2</sub> ).
<b>Unsuitable extinguishing media</b>	Do not use water jet as an extinguisher, as this will spread the fire.
<b>Specific hazards arising from the chemical</b>	During fire, gases hazardous to health may be formed.
<b>Special protective equipment and precautions for firefighters</b>	Self-contained breathing apparatus and full protective clothing must be worn in case of fire.
<b>Fire fighting equipment/instructions</b>	Move containers from fire area if you can do so without risk.
<b>Specific methods</b>	Use standard firefighting procedures and consider the hazards of other involved materials.
<b>General fire hazards</b>	No unusual fire or explosion hazards noted.

## 6. Accidental release measures

<b>Personal precautions, protective equipment and emergency procedures</b>	Keep unnecessary personnel away. Keep people away from and upwind of spill/leak. Wear appropriate protective equipment and clothing during clean-up. Do not breathe mist/vapors. Do not touch damaged containers or spilled material unless wearing appropriate protective clothing. Ensure adequate ventilation. Local authorities should be advised if significant spillages cannot be contained. For personal protection, see section 8 of the SDS.
<b>Methods and materials for containment and cleaning up</b>	Large Spills: Stop the flow of material, if this is without risk. Dike the spilled material, where this is possible. Absorb in vermiculite, dry sand or earth and place into containers. Following product recovery, flush area with water.  Small Spills: 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.
<b>Environmental precautions</b>	Avoid discharge into drains, water courses or onto the ground.

## 7. Handling and storage

<b>Precautions for safe handling</b>	Respiratory protection is "only required" when sprays are present in the air.
<b>Conditions for safe storage, including any incompatibilities</b>	Store locked up. Store in tightly closed container. Store away from incompatible materials (see Section 10 of the SDS).

## 8. Exposure controls/personal protection

### Occupational exposure limits

#### US. OSHA Table Z-1 Limits for Air Contaminants (29 CFR 1910.1000)

Components	Type	Value
SULFURIC ACID (CAS 7664-93-9)	PEL	1 mg/m <sup>3</sup>



**US. ACGIH Threshold Limit Values**

Components	Type	Value	Form
SULFURIC ACID (CAS 7664-93-9)	TWA	0.2 mg/m3	Thoracic fraction.

**US. NIOSH: Pocket Guide to Chemical Hazards**

Components	Type	Value
SULFURIC ACID (CAS 7664-93-9)	TWA	1 mg/m3

<b>Biological limit values</b>	No biological exposure limits noted for the ingredient(s).
<b>Appropriate engineering controls</b>	Good general ventilation 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. Eye wash facilities and emergency shower must be available when handling this product.

**Individual protection measures, such as personal protective equipment**

The following are recommendations for Personnel Protective Equipment (PPE). The employer/user of this product must perform a Hazard Assessment of the workplace according to OSHA regulations 29 CFR 1910.132 to determine the appropriate PPE for use while performing any task involving potential exposure to this product.

**Eye/face protection** Wear safety glasses with side shields (or goggles) and a face shield.

**Skin protection**

**Hand protection** Wear appropriate chemical resistant gloves.

**Other** Wear appropriate chemical resistant clothing.

**Respiratory protection** In case of insufficient ventilation, wear suitable respiratory equipment.

**Thermal hazards** Wear appropriate thermal protective clothing, when necessary.

**General hygiene considerations** 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**

<b>Physical state</b>	Liquid.
<b>Form</b>	Liquid.
<b>Color</b>	CLEAR COLORLESS

**Odor** ODORLESS

**Odor threshold** Not available.

**pH** 0

**Melting point/freezing point** -20 °F (-28.89 °C)

**Initial boiling point and boiling range** 478.82 °F (248.23 °C) estimated

**Flash point** Not available.

**Evaporation rate** Not available.

**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** Not available.

**Vapor density** Not available.

**Relative density** Not available.

<b>Solubility(ies)</b>	
<b>Solubility (water)</b>	Not available.
<b>Partition coefficient (n-octanol/water)</b>	Not available.
<b>Auto-ignition temperature</b>	Not available.
<b>Decomposition temperature</b>	Not available.
<b>Viscosity</b>	Not available.
<b>Other information</b>	
<b>Density</b>	14.24 lbs/gal 1.71 g/ml
<b>Explosive properties</b>	Not explosive.
<b>Oxidizing properties</b>	Not oxidizing.
<b>Percent volatile</b>	21.98 % estimated
<b>Specific gravity</b>	1.71

## 10. Stability and reactivity

<b>Reactivity</b>	The product is stable and non-reactive under normal conditions of use, storage and transport.
<b>Chemical stability</b>	Material is stable under normal conditions.
<b>Possibility of hazardous reactions</b>	Hazardous polymerization does not occur.
<b>Conditions to avoid</b>	Contact with incompatible materials.
<b>Incompatible materials</b>	Strong oxidizing agents.
<b>Hazardous decomposition products</b>	No hazardous decomposition products are known.

## 11. Toxicological information

### Information on likely routes of exposure

<b>Inhalation</b>	May cause irritation to the respiratory system. Prolonged inhalation may be harmful.
<b>Skin contact</b>	Causes severe skin burns.
<b>Eye contact</b>	Causes serious eye damage.
<b>Ingestion</b>	Causes digestive tract burns.

<b>Symptoms related to the physical, chemical and toxicological characteristics</b>	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.
---	---

### Information on toxicological effects

<b>Acute toxicity</b>	Not known.
<b>Skin corrosion/irritation</b>	Causes severe skin burns and eye damage.
<b>Serious eye damage/eye irritation</b>	Causes serious eye damage.

### Respiratory or skin sensitization

<b>Respiratory sensitization</b>	Due to partial or complete lack of data the classification is not possible.
<b>Skin sensitization</b>	Due to partial or complete lack of data the classification is not possible.
<b>Germ cell mutagenicity</b>	Due to partial or complete lack of data the classification is not possible.
<b>Carcinogenicity</b>	Due to partial or complete lack of data the classification is not possible.

#### IARC Monographs. Overall Evaluation of Carcinogenicity

Not listed.

#### OSHA Specifically Regulated Substances (29 CFR 1910.1001-1053)

Not listed.

#### US. National Toxicology Program (NTP) Report on Carcinogens

Not listed.

<b>Reproductive toxicity</b>	Due to partial or complete lack of data the classification is not possible.
<b>Specific target organ toxicity - single exposure</b>	Due to partial or complete lack of data the classification is not possible.

**Specific target organ toxicity - repeated exposure** Due to partial or complete lack of data the classification is not possible.

**Aspiration hazard** Due to partial or complete lack of data the classification is not possible.

**Chronic effects** Prolonged inhalation may be harmful.

## 12. Ecological information

**Ecotoxicity** The product is not classified as environmentally hazardous. However, this does not exclude the possibility that large or frequent spills can have a harmful or damaging effect on the environment.

Components	Species	Test Results
SULFURIC ACID (CAS 7664-93-9)		
<b>Aquatic</b>		
Crustacea	EC50	Daphnia magna > 100 mg/l, 48 hours
	LC50	Aesop shrimp (Pandalus montagui) 42.5 mg/l, 48 hours
		Cockle (Cerastoderma edule) 200 - 500 mg/l, 48 hours
		Common shrimp, sand shrimp (Crangon crangon) 70 - 80 mg/l, 48 hours
		Green or European shore crab (Carcinus maenas) 70 - 80 mg/l, 48 hours
Fish	LC50	Starry, european flounder (Platichthys flesus) 100 - 330 mg/l, 48 hours
		Western mosquitofish (Gambusia affinis) 42 mg/l, 24 hours
		42 mg/l, 48 hours
		42 mg/l, 96 hours

**Persistence and degradability** No data is available on the degradability of this product.

**Bioaccumulative potential** No data available.

**Mobility in soil** No data available.

**Other adverse effects** No other adverse environmental effects (e.g. ozone depletion, photochemical ozone creation potential, endocrine disruption, global warming potential) are expected from this component.

## 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. 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** 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** Since emptied containers may retain product residue, follow label warnings even after container is emptied. Empty containers should be taken to an approved waste handling site for recycling or disposal.

## 14. Transport information

**DOT**

<b>UN number</b>	UN1830
<b>UN proper shipping name</b>	SULFURIC ACID
<b>Transport hazard class(es)</b>	
<b>Class</b>	8
<b>Subsidiary risk</b>	-
<b>Packing group</b>	II

**Special precautions for user** Read safety instructions, SDS and emergency procedures before handling.  
Transport information on packaging may be different from that listed. Transportation information on packaging may be different from that listed.

### IATA

<b>UN number</b>	UN1830
------------------	--------

**UN proper shipping name** SULFURIC ACID  
**Transport hazard class(es)**  
**Class** 8  
**Subsidiary risk** -  
**Packing group** II  
**Environmental hazards** No.  
**Special precautions for user** Read safety instructions, SDS and emergency procedures before handling.

#### IMDG

**UN number** UN1830  
**UN proper shipping name** SULPHURIC ACID with more than 51% acid solution (SULFURIC ACID)  
**Transport hazard class(es)**  
**Class** 8  
**Subsidiary risk** -  
**Packing group** II  
**Environmental hazards**  
**Marine pollutant** No.  
**EmS** F-A, S-B  
**Special precautions for user** Read safety instructions, SDS and emergency procedures before handling.

#### DOT



#### IATA; IMDG



## 15. Regulatory information

**US federal regulations** This product is a "Hazardous Chemical" as defined by the OSHA Hazard Communication Standard, 29 CFR 1910.1200.

#### Toxic Substances Control Act (TSCA)

##### TSCA Section 12(b) Export Notification (40 CFR 707, Subpt. D)

Not regulated.

#### CERCLA Hazardous Substance List (40 CFR 302.4)

SULFURIC ACID (CAS 7664-93-9) Listed.

#### SARA 304 Emergency release notification

SULFURIC ACID (CAS 7664-93-9) 1000 LBS

#### OSHA Specifically Regulated Substances (29 CFR 1910.1001-1053)

Not listed.

**Superfund Amendments and Reauthorization Act of 1986 (SARA)****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)
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SULFURIC ACID	7664-93-9	1000	1000		
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**SARA 311/312 Hazardous chemical**

<b>Classified hazard categories</b>	Skin corrosion or irritation Serious eye damage or eye irritation
-------------------------------------	--

**SARA 313 (TRI reporting)**

Chemical name	CAS number	% by wt.
SULFURIC ACID	7664-93-9	78.018

**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)**

Not regulated.

**Safe Drinking Water Act (SDWA)** Not regulated.

**Drug Enforcement Administration (DEA). List 2, Essential Chemicals (21 CFR 1310.02(b) and 1310.04(f)(2) and Chemical Code Number**

SULFURIC ACID (CAS 7664-93-9)	6552
-------------------------------	------

**Drug Enforcement Administration (DEA). List 1 & 2 Exempt Chemical Mixtures (21 CFR 1310.12(c))**

SULFURIC ACID (CAS 7664-93-9)	20 %WV
-------------------------------	--------

**DEA Exempt Chemical Mixtures Code Number**

SULFURIC ACID (CAS 7664-93-9)	6552
-------------------------------	------

**US state regulations****California Proposition 65**

California Safe Drinking Water and Toxic Enforcement Act of 1986 (Proposition 65): This material is not known to contain any chemicals currently listed as carcinogens or reproductive toxins. For more information go to [www.P65Warnings.ca.gov](http://www.P65Warnings.ca.gov).

**US. California. Candidate Chemicals List. Safer Consumer Products Regulations (Cal. Code Regs, tit. 22, 69502.3, subd. (a))**

SULFURIC ACID (CAS 7664-93-9)	
-------------------------------	--

**International Inventories**

Country(s) or region	Inventory name	On inventory (yes/no)*
Australia	Australian Inventory of Chemical Substances (AICS)	Yes
Canada	Domestic Substances List (DSL)	Yes
Canada	Non-Domestic Substances List (NDSL)	No
China	Inventory of Existing Chemical Substances in China (IECSC)	Yes
Europe	European Inventory of Existing Commercial Chemical Substances (EINECS)	Yes
Europe	European List of Notified Chemical Substances (ELINCS)	No
Japan	Inventory of Existing and New Chemical Substances (ENCS)	Yes
Korea	Existing Chemicals List (ECL)	Yes
New Zealand	New Zealand Inventory	Yes
Philippines	Philippine Inventory of Chemicals and Chemical Substances (PICCS)	Yes
Taiwan	Taiwan Chemical Substance Inventory (TCSI)	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).

## 16. Other information, including date of preparation or last revision

<b>Issue date</b>	05-05-2015
<b>Revision date</b>	05-29-2021
<b>Version #</b>	09
<b>HMIS® ratings</b>	Health: 3 Flammability: 0 Physical hazard: 0
<b>NFPA ratings</b>	Health: 3 Flammability: 0 Instability: 1
<b>Disclaimer</b>	While Brenntag believes the information contained herein to be accurate, Brenntag makes no representation or warranty, express or implied, regarding, and assumes no liability for, the accuracy or completeness of the information. The Buyer assumes all responsibility for handling, using and/or reselling the Product in accordance with applicable federal, state, and local law. This SDS shall not in any way limit or preclude the operation and effect of any of the provisions of Brenntag's terms and conditions of sale.

**ATTACHMENT D**

**STORMWATER MANAGEMENT**

**Attachment D**  
**Stormwater Management**

6. Briefly describe the industrial processes and activities that occur outdoors or in some manner that may result in exposure of the materials to precipitation or runoff in areas where runoff is generated.

Storm water drainage from production and non-production areas is discharged through permitted outfalls or under the TPDES Stormwater General Permit. For production areas, at least the first flush of stormwater runoff from SPCC sources and production equipment areas is collected and treated by the Oily Waste Treatment Systems (Outfall 201). Secondary containment is provided for chemical and other storage tank areas.



**ATTACHMENT E**  
**LABORATORY INFORMATION**

**Attachment E**  
**Laboratory Information**

If any of the analyses reported in this application are performed by a contract laboratory or a consulting firm, provide the name and contact information for each laboratory/firm. Also specify which pollutants were analyzed by which laboratory/firm.

**All analyses were performed by:**

A & B Labs

10100 East Freeway

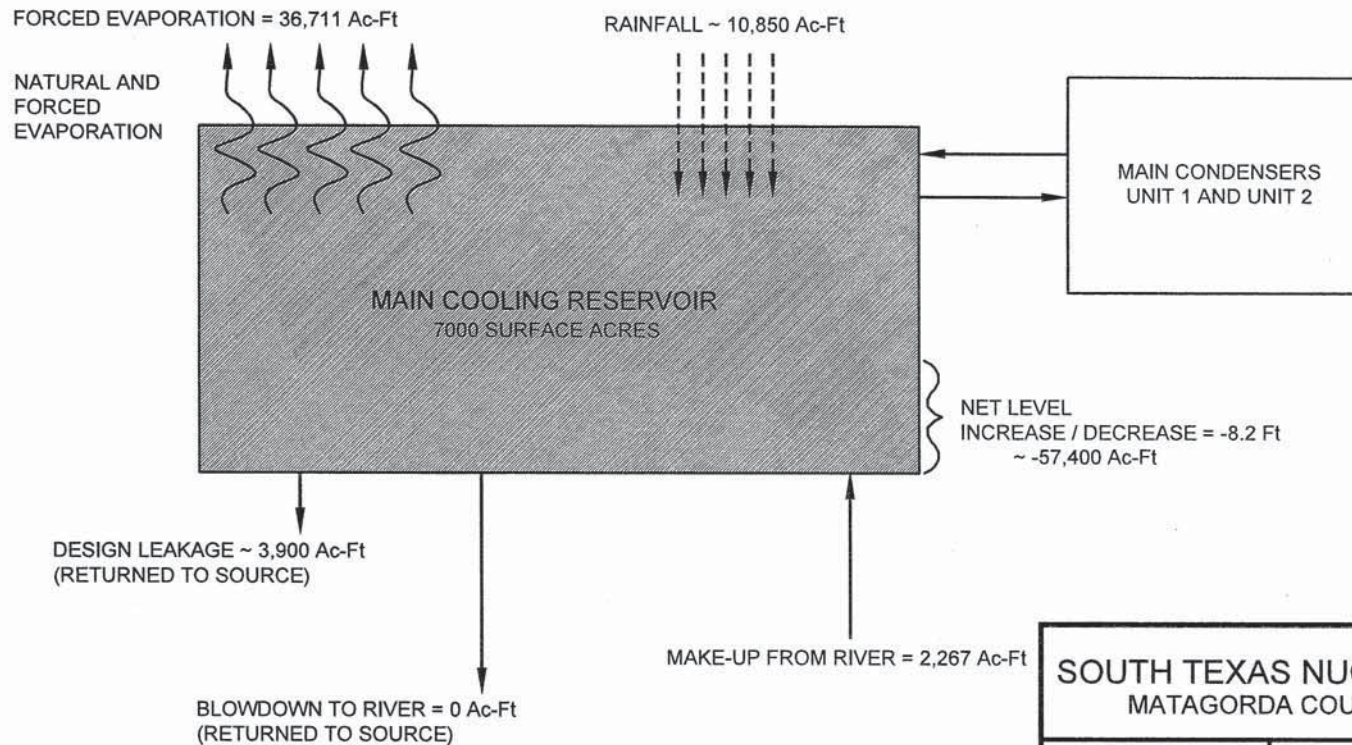
Suite 100

Houston, TX 77029

713-453-6060

**Temperature, pH, dissolved oxygen (DO), and total residual chlorine were collected on-site.**

# SIMPLIFIED WATER BALANCE FOR THE SOUTH TEXAS PROJECT MAIN COOLING RESERVOIR



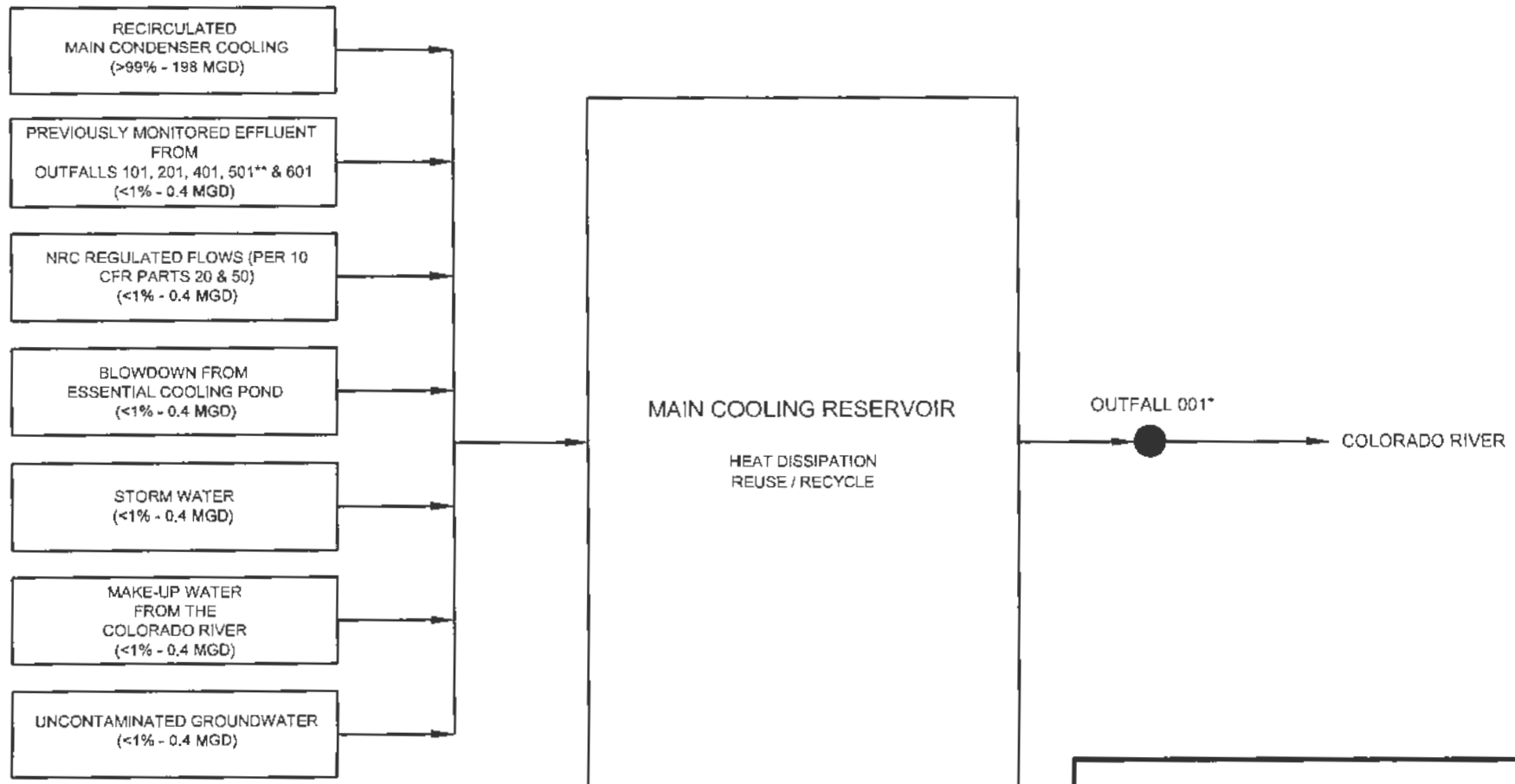
**SOUTH TEXAS NUCLEAR PLANT**  
MATAGORDA COUNTY, TEXAS

PROJ. NO.: S Tx Nuclear DATE: 09/29/14 FILE: STxNuclearA02

ATTACHMENT H  
WATER BALANCE



Cielo Center  
1250 S. Capital of Texas Highway  
Building 3, Suite 200  
Austin, Texas 78746  
TBPE No. 1298



**SOUTH TEXAS NUCLEAR PLANT**  
MATAGORDA COUNTY, TEXAS

PROJ. NO.: S Tx Nuclear DATE: 09/29/14 FILE: STxNuclearA01

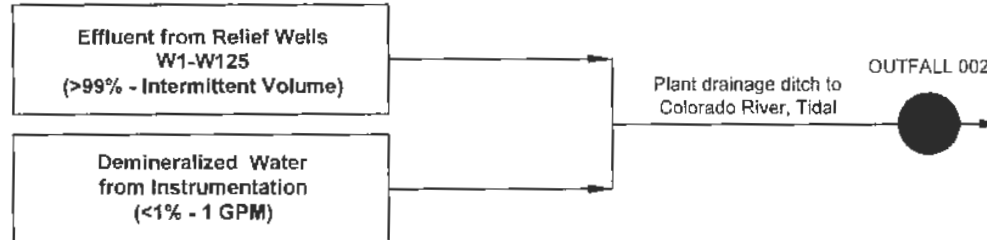
**ATTACHMENT H**  
**FLOW SCHEMATIC**  
**OUTFALL 001**


**NOTES:**

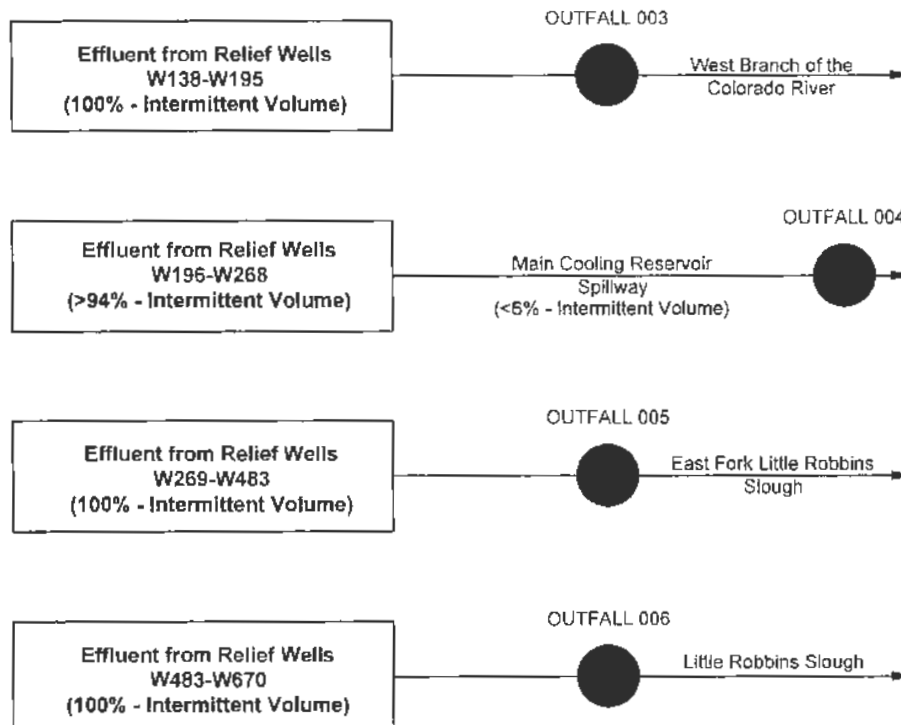
- \* OUTFALL HAS NOT DISCHARGED SINCE MARCH 4, 1997
- \*\* OUTFALL HAS NOT DISCHARGED SINCE DECEMBER 1992




Cielo Center  
1250 S. Capital of Texas Highway  
Building 3, Suite 200  
Austin, Texas 78746  
TBPE No. 1298



SOUTH TEXAS NUCLEAR PLANT MATAGORDA COUNTY, TEXAS			
ATTACHMENT H FLOW SCHEMATIC - OUTFALL 002			
DRAWN BY: SSWILSON	SCALE:	PROJ: 2014TPDES	
CHECKED BY: T KOENIGS	See bar scale	FILE NO. STR_Flow Diagrams.dwg	
APPROVED BY:	DATE PRINTED:		
DATE: May 11, 2014			
		Gelsi Centre, Building 10, State 200 1250 Capital of Texas Highway South Austin, Texas 78746 512-247-7555	



SOUTH TEXAS NUCLEAR PLANT MATAGORDA COUNTY, TEXAS			
ATTACHMENT H FLOW SCHEMATIC - OUTFALL 003, 004, 005, 006			
DRAWN BY	SSWILSON	SCALE	PROJ 2014TPDES
CHECKED BY	T KOENINGS	See bar scale	FILE NO. SH_Flow Diagrams.dwg
APPROVED BY		DATE PRINTED	
DATE	May 12, 2014		
		Cielo Center, Building III, Suite 203 1250 Capital of Texas Highway South Austin, Texas 78746 512-347-7588	

## LOW VOLUME WASTEWATER

including wastewater from the following operations and sources:

- demineralizer regenerant wastewater;
- condenser polishing regenerant wastewater;
- boiler blowdown;
- boiler drainage;
- laboratory, instrument, and sampling sources;
- well water filter backwash;
- water softener regenerate;
- floor drains in chemical storage containment areas;
- rinse water from triple rinsing empty chemical drums;
- fuel handling building HVAC blowdown; and
- miscellaneous low volume wastewater.

(>99% - 0.247 MGD)

Metal Cleaning Waste Effluent  
(Outfall 501\*\*)  
(<.01% - Intermittent / No Volume)

Storm Water  
(<1% - 0.003 MGD)

## NEUTRALIZATION BASINS

Neutralization\*  
Mixing\*  
Sedimentation

sludge to landfill

OUTFALL 101

to Main Cooling  
Reservoir

### Notes:

\* Treatment may be used based on influent quality

\*\* Outfall 501 has not discharged since December 1992.

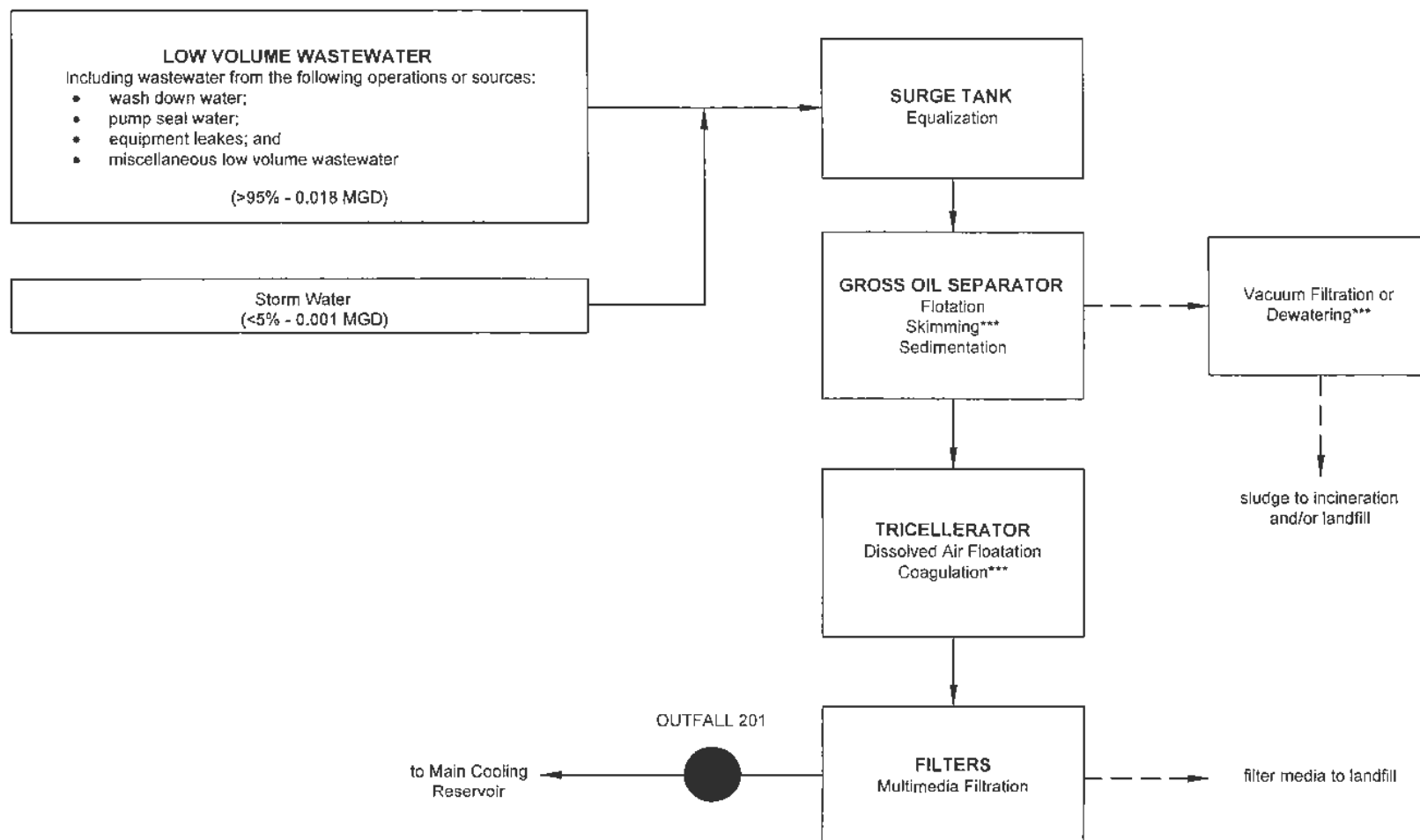
SOUTH TEXAS NUCLEAR PLANT  
MATAGORDA COUNTY, TEXAS

### ATTACHMENT H FLOW SCHEMATIC - OUTFALL 101

DRAWN BY: SSWILSON	SCALE	PROJ	2014TPDES
CHECKED BY: T KOENIGS	See bar scale	FILE NO	STM_Flow Diagrams.dwg
APPROVED BY:	DATE PRINTED		
DATE: May 12, 2014			

RPS

Civil Centre Building III, Suite 200  
1250 Capital of Texas Highway, South  
Austin, Texas 78746  
512-347-7588



**Notes:**

\*\*\* Treatment process may be used based on influent characteristics.

**SOUTH TEXAS NUCLEAR PLANT  
MATAGORDA COUNTY, TEXAS**

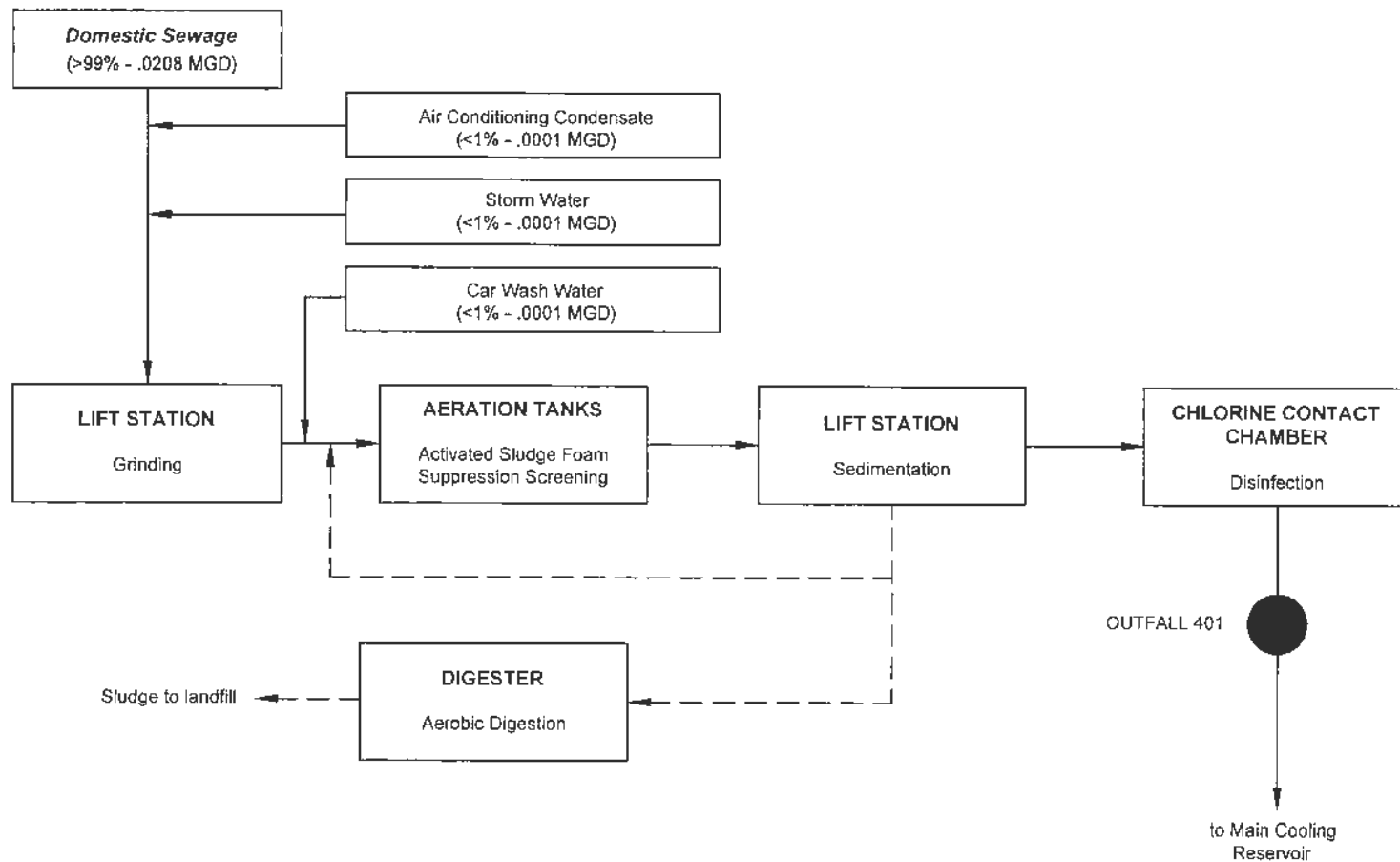
**ATTACHMENT H  
FLOW SCHEMATIC - OUTFALL 201**

DRAWN BY: SSWILSON	SCALE:	PROJ.: 2014TPOES
CHECKED BY: T KOENIGS	See bar scale	FILE NO: STN_Flow Diagrams.dwg
APPROVED BY:	DATE PRINTED:	
DATE: May 12, 2014		

**RPS**

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Austin, Texas 78746  
512-247-7589





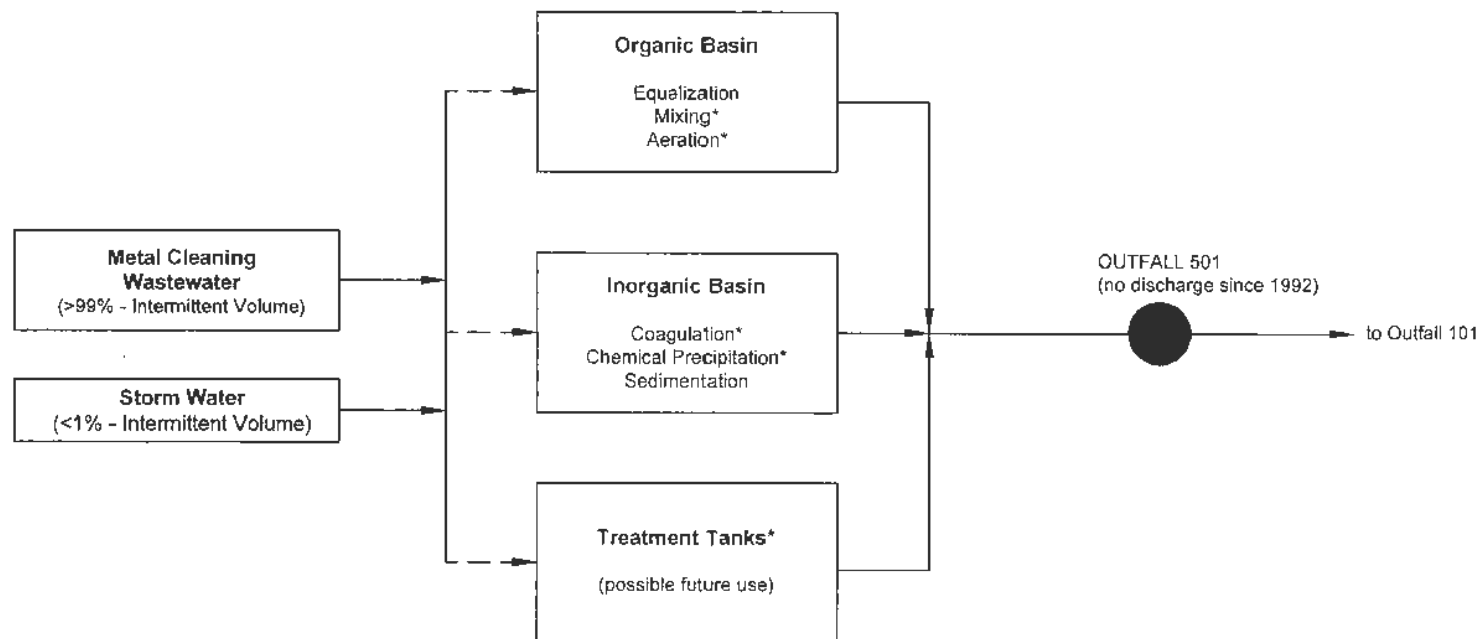
SOUTH TEXAS NUCLEAR PLANT  
MATAGORDA COUNTY, TEXAS

ATTACHMENT H  
FLOW SCHEMATIC - OUTFALL 401

DRAWN BY: SSWILSON	SCALE	PROJ: 2014TPDES
CHECKED BY: T KOENINGS	See bar scale	FILE NO: STH_Flow Diagrams.dwg
APPROVED BY:	DATE PRINTED:	
DATE: May 12, 2014		

**RPS**

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1250 Capital of Texas Highway, South  
Austin, Texas 78746  
512-347-7588



Notes:

\* Treatment process may be used based on influent characteristics.

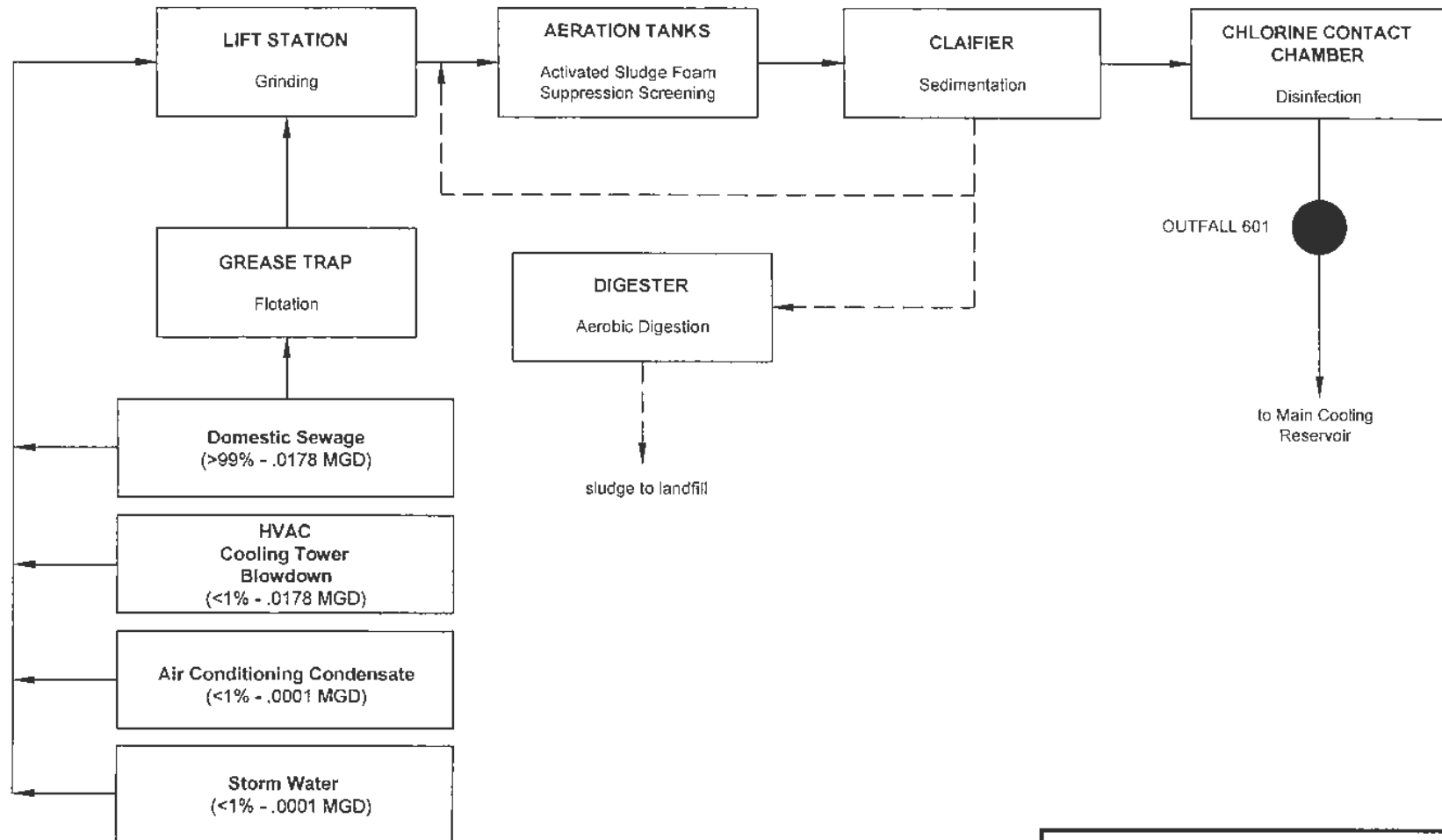
SOUTH TEXAS NUCLEAR PLANT  
MATAGORDA COUNTY, TEXAS

ATTACHMENT H  
FLOW SCHEMATIC - OUTFALL 501

DRAWN BY: SSWILSON	SCALE:	PROJ: 2014TPDES
CHECKED BY: T.KOENINGS	See bar scale	FILE NO. \$TN_Flow Diagrams.dwg
APPROVED BY: -	DATE PRINTED:	-
DATE: May 12, 2014		

**RPS**

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SOUTH TEXAS NUCLEAR PLANT  
MATAGORDA COUNTY, TEXAS

ATTACHMENT H  
FLOW SCHEMATIC - OUTFALL 601

DRAWN BY: SSWILSON	SCALE: See bar scale	PRCJ: 2014TPOES
CHECKED BY: T KOENINGS	FILE NO: 3TH_Flow Diagrams.dwg	
APPROVED BY: _____	DATE PRINTED: _____	
DATE: May 12, 2014		

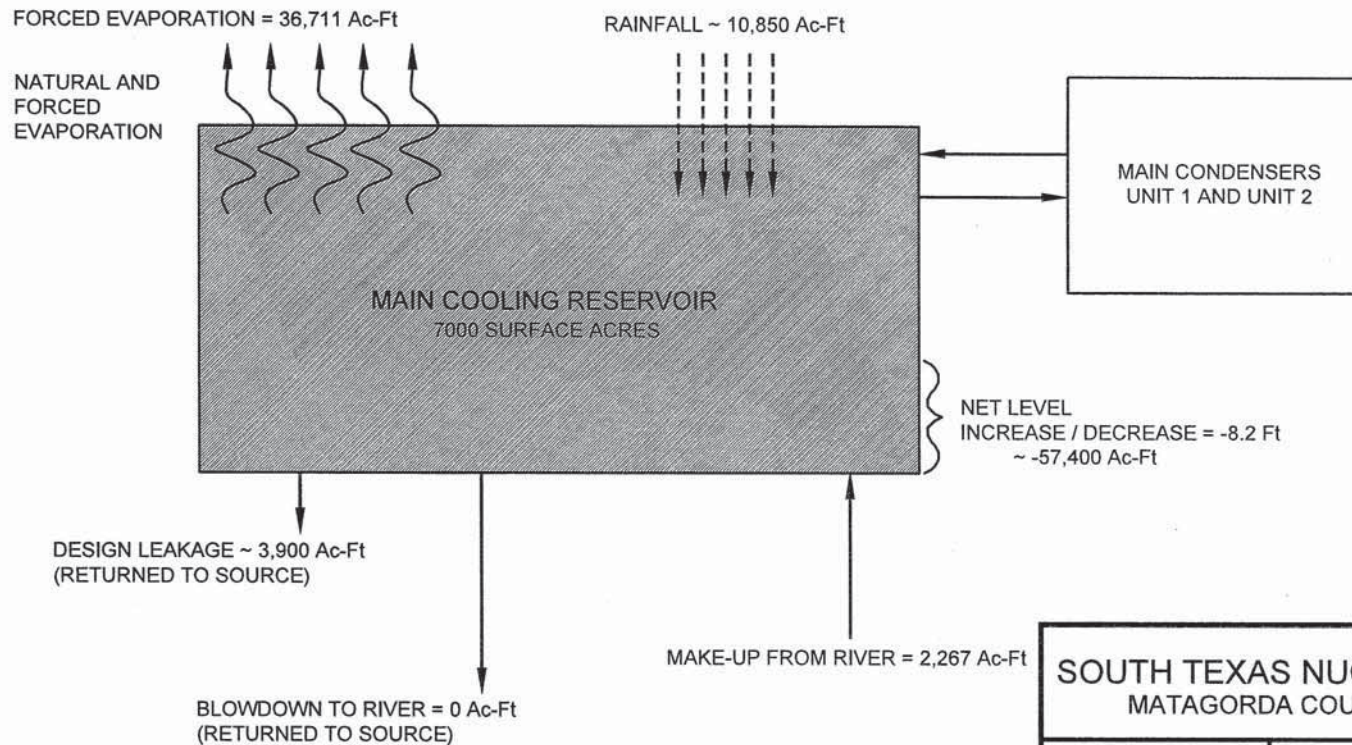
**RPS**

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1250 Capital of Texas Highway, South  
Austin, Texas 78746  
512-347-7588

## **Design Calculations**

STP Nuclear Operating Company does not have any design calculations to submit with this renewal application for the STP Electric Generating Station.

# SIMPLIFIED WATER BALANCE FOR THE SOUTH TEXAS PROJECT MAIN COOLING RESERVOIR



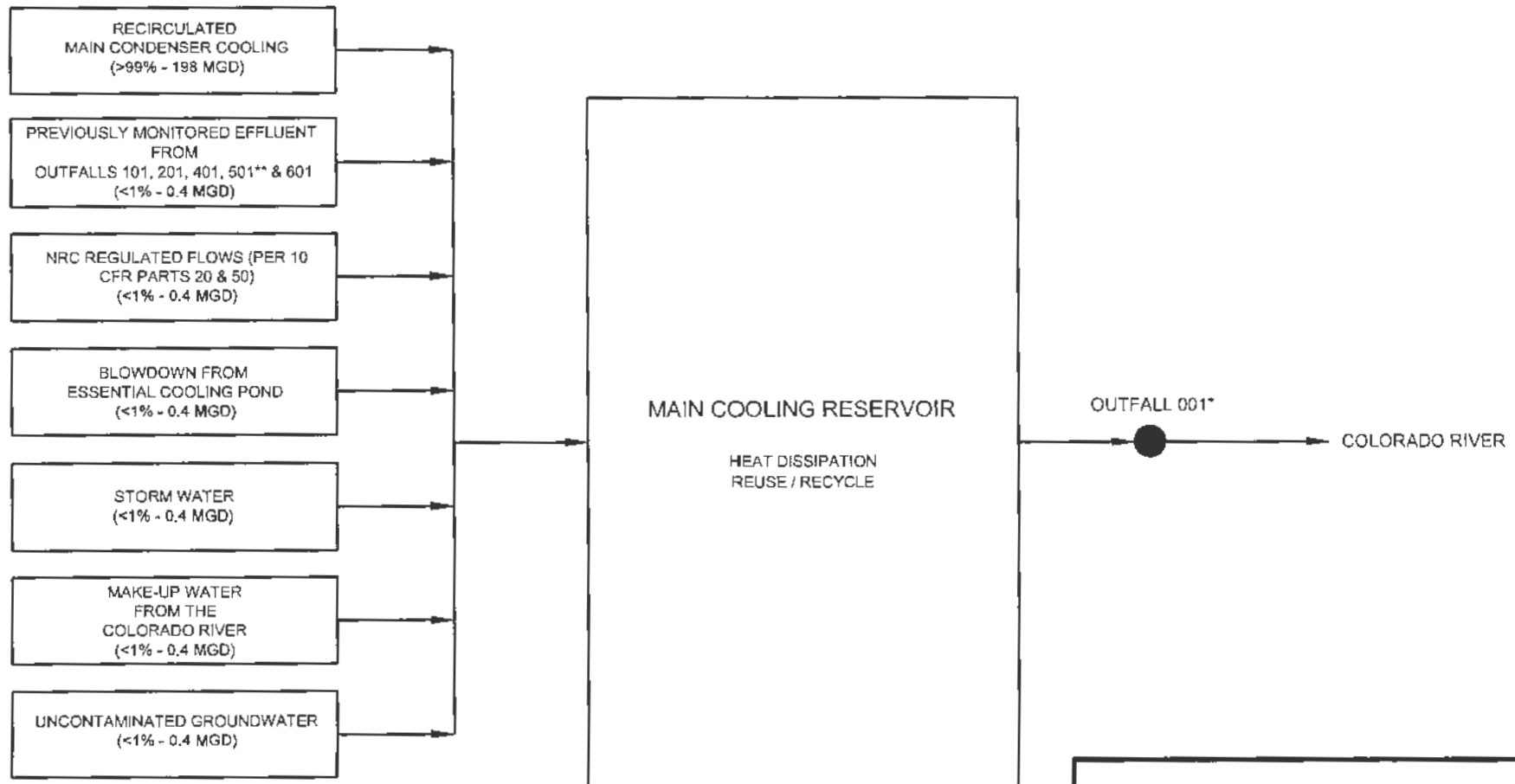
**SOUTH TEXAS NUCLEAR PLANT**  
MATAGORDA COUNTY, TEXAS

PROJ. NO.: S Tx Nuclear DATE: 09/29/14 FILE: STxNuclearA02

ATTACHMENT H  
WATER BALANCE



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Austin, Texas 78746  
TBPE No. 1298



**SOUTH TEXAS NUCLEAR PLANT**  
MATAGORDA COUNTY, TEXAS

PROJ. NO.: S Tx Nuclear DATE: 09/29/14 FILE: STxNuclearA01

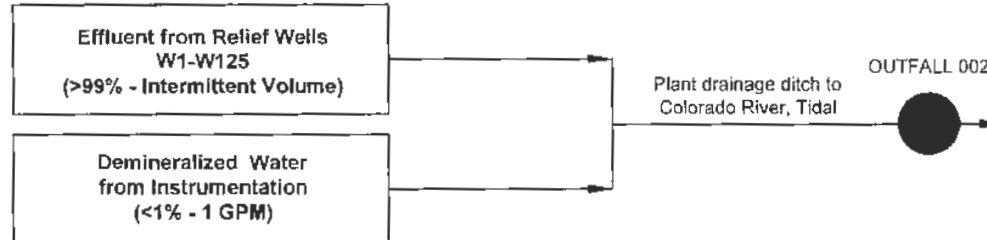
ATTACHMENT H  
FLOW SCHEMATIC  
OUTFALL 001

NOTES:

- \* OUTFALL HAS NOT DISCHARGED SINCE MARCH 4, 1997  
\*\* OUTFALL HAS NOT DISCHARGED SINCE DECEMBER 1992



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Building 3, Suite 200  
Austin, Texas 78746  
TBPE No. 1298



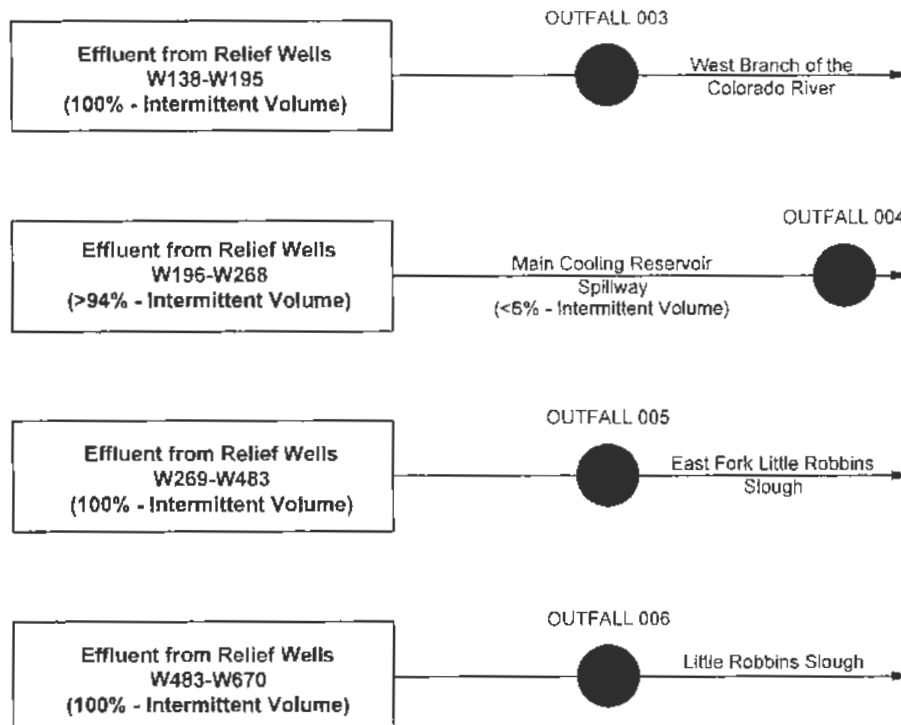
**SOUTH TEXAS NUCLEAR PLANT  
MATAGORDA COUNTY, TEXAS**


**ATTACHMENT H  
FLOW SCHEMATIC - OUTFALL 002**

DRAWN BY: SSWILSON	SCALE:	PROJ: 2014TPDES
CHECKED BY: T KOENIGS	See bar scale	FILE NO: STR_Flow Diagrams.dwg
APPROVED BY:	DATE PRINTED:	
DATE: May 11, 2014		

**RPS**

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1250 Capital of Texas Highway South  
Austin, Texas 78746  
512-247-7555



SOUTH TEXAS NUCLEAR PLANT MATAGORDA COUNTY, TEXAS			
ATTACHMENT H FLOW SCHEMATIC - OUTFALL 003, 004, 005, 006			
DRAWN BY	SSWILSON	SCALE	PROJ 2014TPDES
CHECKED BY	T KOENINGS	See bar scale	FILE NO. SH_Flow Diagrams.dwg
APPROVED BY		DATE PRINTED	
DATE	May 12, 2014		
		Cielo Center, Building III, Suite 203 1250 Capital of Texas Highway South Austin, Texas 78746 512-347-7588	



## LOW VOLUME WASTEWATER

including wastewater from the following operations and sources:

- demineralizer regenerant wastewater;
- condenser polishing regenerant wastewater;
- boiler blowdown;
- boiler drainage;
- laboratory, instrument, and sampling sources;
- well water filter backwash;
- water softener regenerate;
- floor drains in chemical storage containment areas;
- rinse water from triple rinsing empty chemical drums;
- fuel handling building HVAC blowdown; and
- miscellaneous low volume wastewater.

(>99% - 0.247 MGD)

Metal Cleaning Waste Effluent  
(Outfall 501\*\*)  
(<.01% - Intermittent / No Volume)

Storm Water  
(<1% - 0.003 MGD)

## NEUTRALIZATION BASINS

Neutralization\*  
Mixing\*  
Sedimentation

sludge to landfill

OUTFALL 101

to Main Cooling  
Reservoir

### Notes:

\* Treatment may be used based on influent quality

\*\* Outfall 501 has not discharged since December 1992.

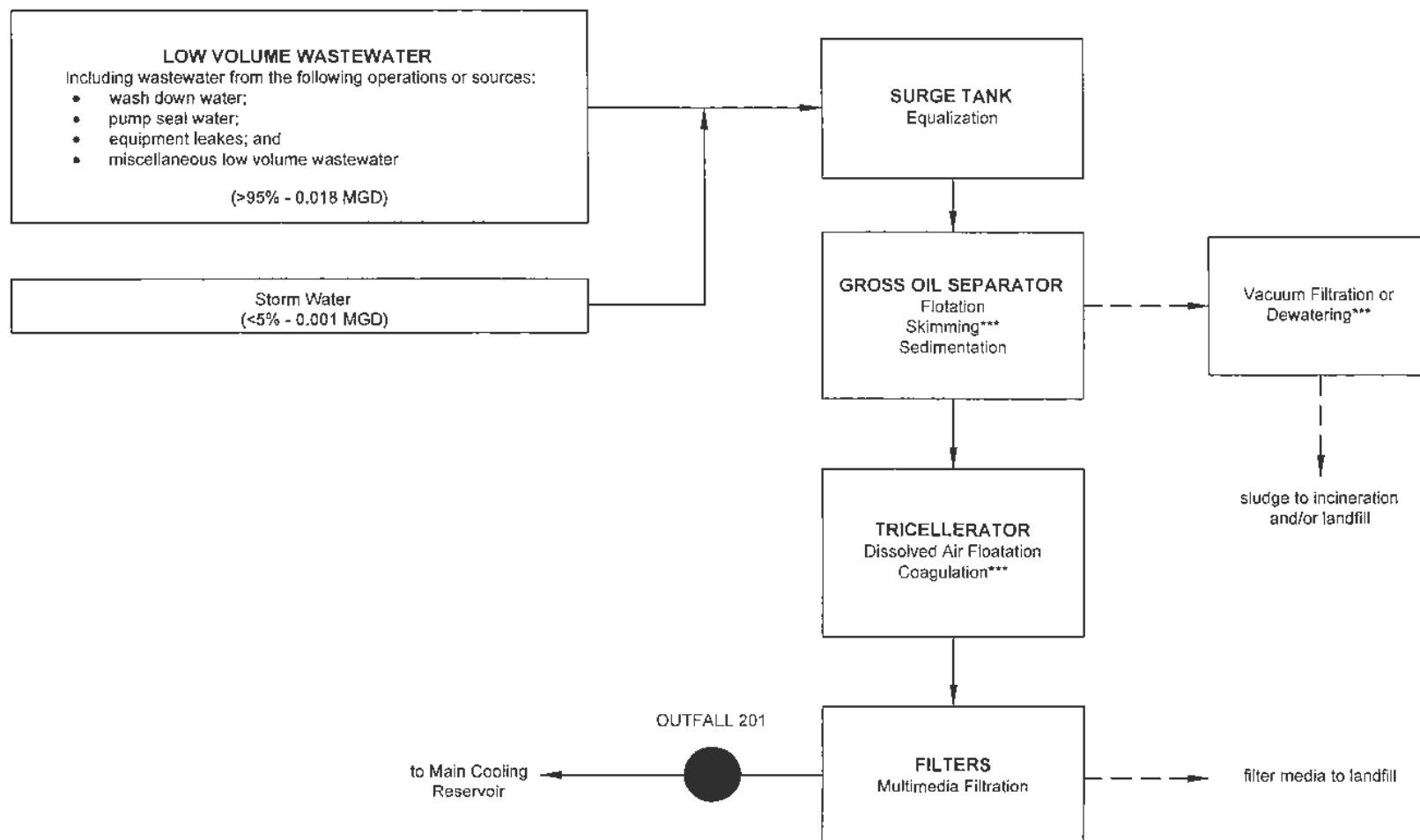
SOUTH TEXAS NUCLEAR PLANT  
MATAGORDA COUNTY, TEXAS

### ATTACHMENT H FLOW SCHEMATIC - OUTFALL 101

DRAWN BY: SSWILSON	SCALE	PROJ	2014TPDES
CHECKED BY: T KOENIGS	See bar scale	FILE NO	STM_Flow Diagrams.dwg
APPROVED BY:	DATE PRINTED		
DATE: May 12, 2014			

RPS

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1250 Capital of Texas Highway, South  
Austin, Texas 78746  
512-347-7588



**Notes:**

\*\*\* Treatment process may be used based on influent characteristics.

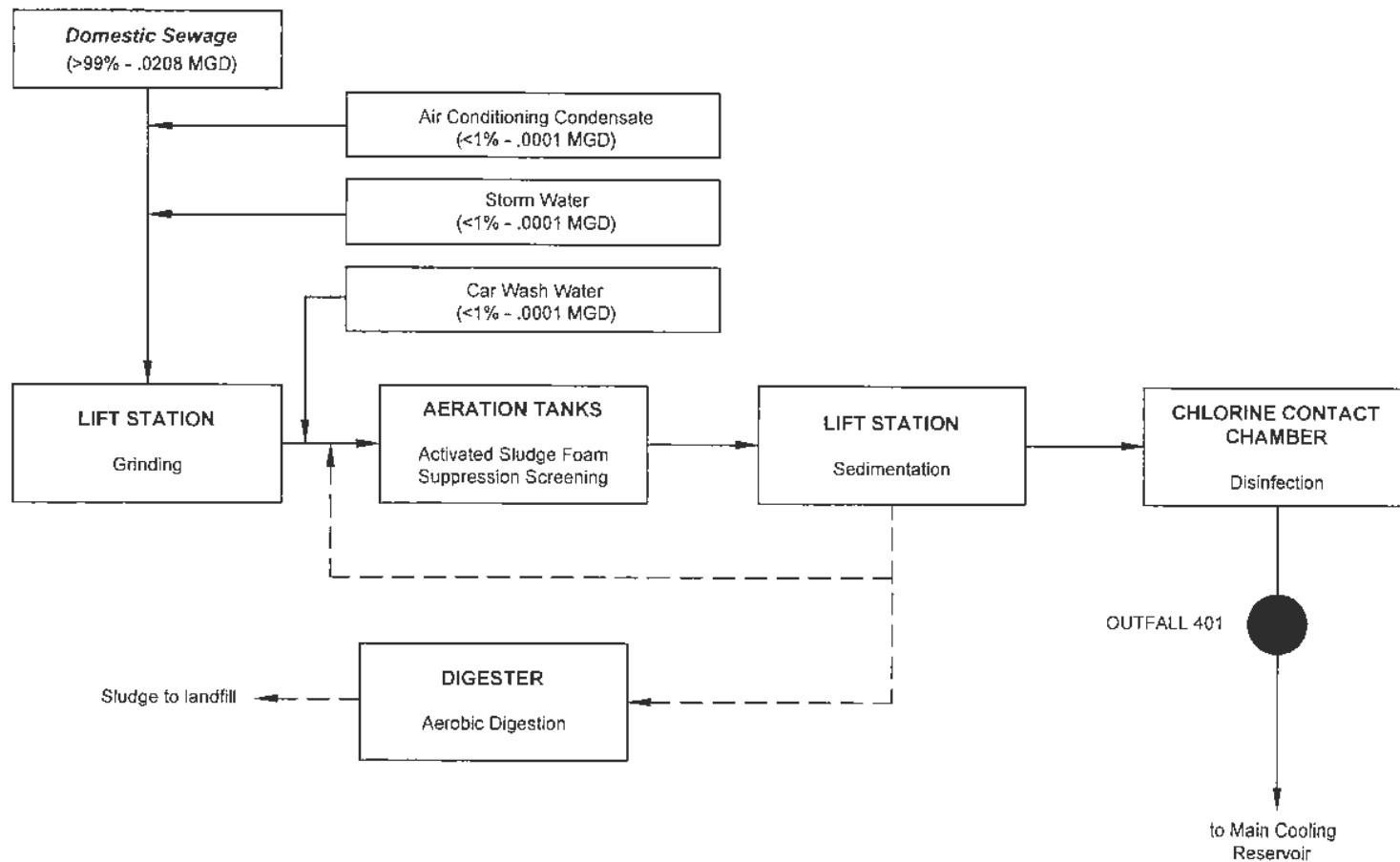
**SOUTH TEXAS NUCLEAR PLANT  
MATAGORDA COUNTY, TEXAS**

**ATTACHMENT H  
FLOW SCHEMATIC - OUTFALL 201**

DRAWN BY: SSWILSON	SCALE:	PROJ: 2014TPOES
CHECKED BY: T KOENIGS	See bar scale	FILE NO: STN_Flow Diagrams.dwg
APPROVED BY:	DATE PRINTED:	
DATE: May 12, 2014		

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Austin, Texas 78746  
512-247-7589



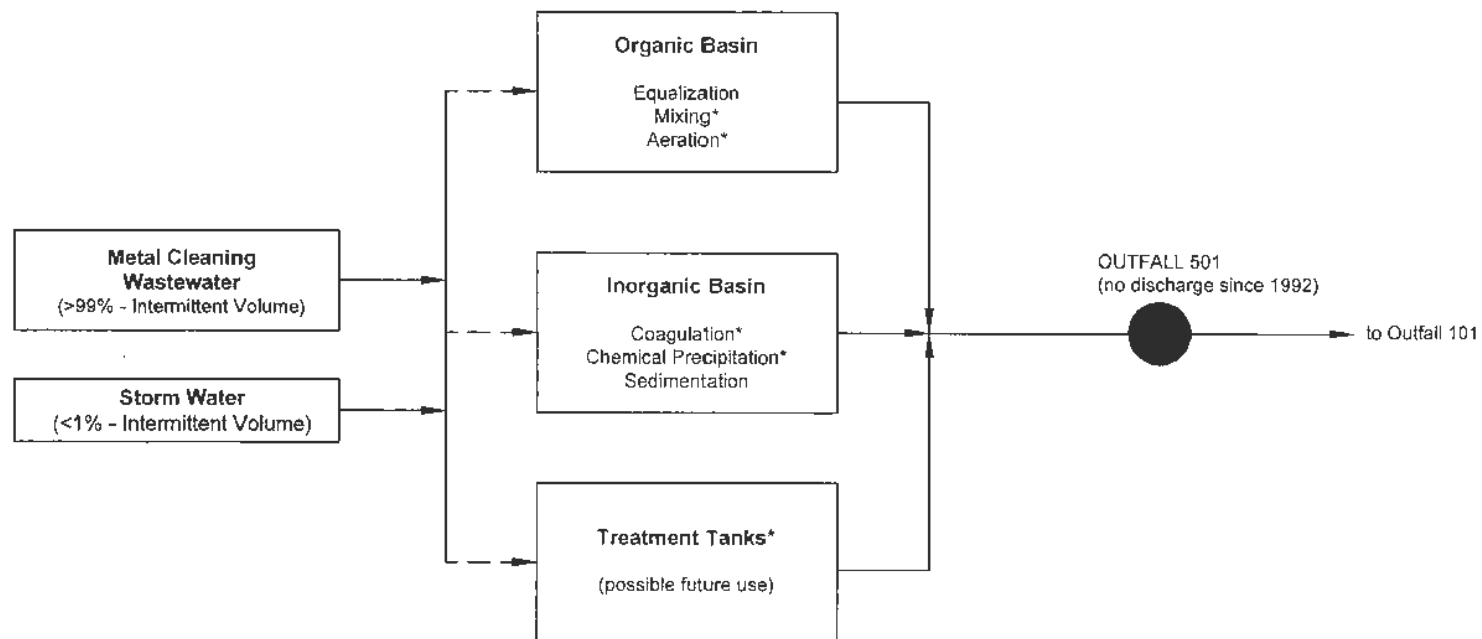
SOUTH TEXAS NUCLEAR PLANT  
MATAGORDA COUNTY, TEXAS

ATTACHMENT H  
FLOW SCHEMATIC - OUTFALL 401

DRAWN BY: SSWILSON	SCALE	PROJ: 2014TPDES
CHECKED BY: T KOENINGS	See bar scale	FILE NO: STH_Flow Diagrams.dwg
APPROVED BY:	DATE PRINTED:	
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**RPS**

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Austin, Texas 78746  
512-347-7588



Notes:

\* Treatment process may be used based on influent characteristics.

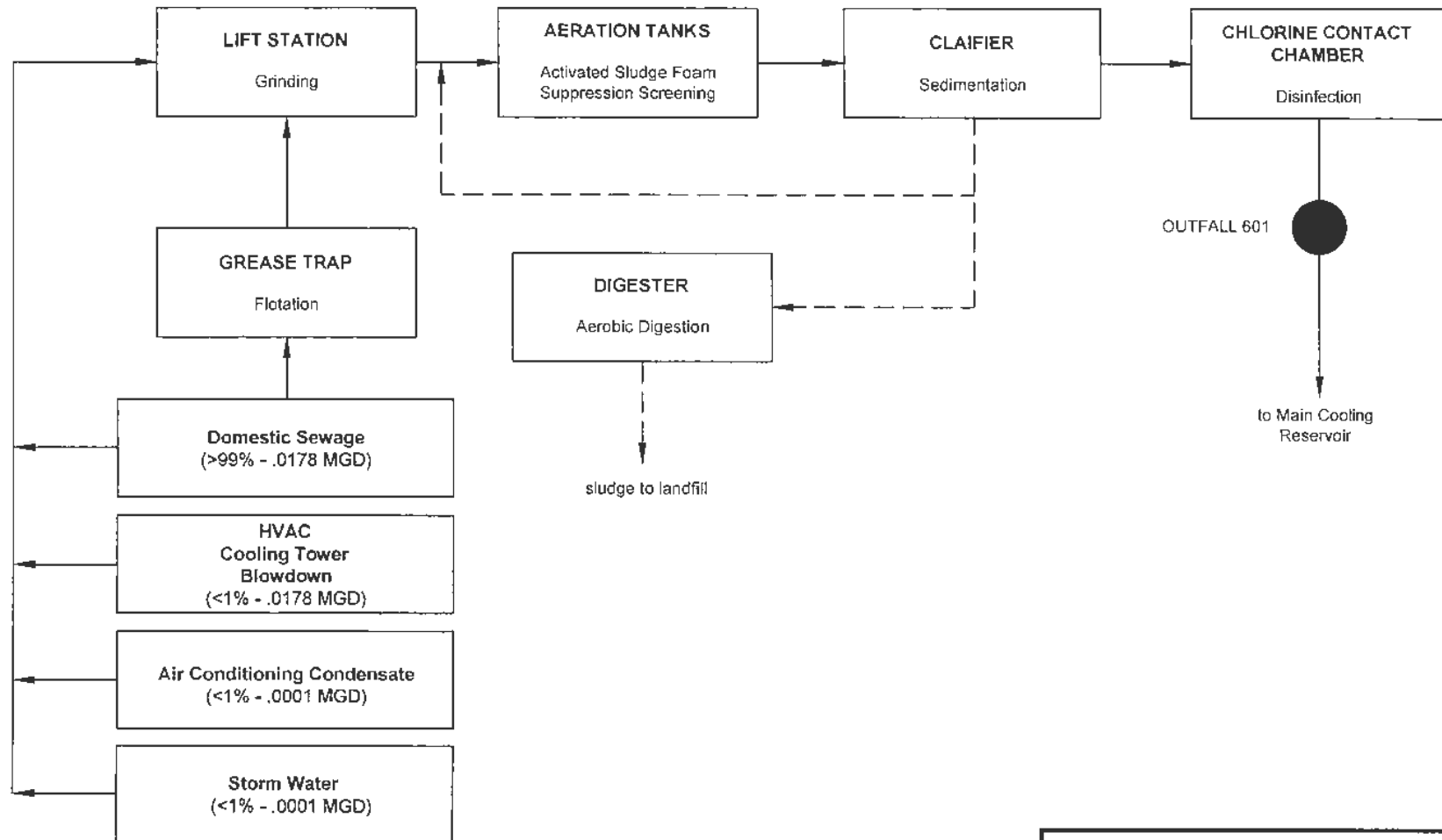
SOUTH TEXAS NUCLEAR PLANT  
MATAGORDA COUNTY, TEXAS

ATTACHMENT H  
FLOW SCHEMATIC - OUTFALL 501

DRAWN BY: SSWILSON	SCALE: See bar scale	PROJ: 2014TPDES
CHECKED BY: T.KOENINGS		FILE NO: \$TN_Flow Diagrams.dwg
APPROVED BY: -	DATE PRINTED: -	
DATE: May 12, 2014		

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512-547-7589



SOUTH TEXAS NUCLEAR PLANT  
MATAGORDA COUNTY, TEXAS

ATTACHMENT H  
FLOW SCHEMATIC - OUTFALL 601

DRAWN BY: SSWILSON	SCALE: See bar scale	PRJ: 2014TPDES
CHECKED BY: T KOENINGS	FILE NO: 3TH_Flow Diagrams.dwg	
APPROVED BY: _____	DATE PRINTED: _____	
DATE: May 12, 2014		

RPS

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1250 Capital of Texas Highway, South  
Austin, Texas 78746  
512-347-7588

## Candice Calhoun

---

**From:** Amanda Ragatz <Amanda.Ragatz@jsheld.com>  
**Sent:** Tuesday, August 20, 2024 3:19 PM  
**To:** Candice Calhoun  
**Cc:** Jones, Elizabeth; Nies, Robert; Kurtis Schlicht  
**Subject:** RE: Application to Renew Permit No. WQ0001908000 - STP Nuclear Operating Company; South Texas Project Electric Generating Station  
**Attachments:** Admin NOD Cover letter\_JSH.pdf; Industrial Discharge Renewal Spanish NORI\_STP.docx  
**Follow Up Flag:** Follow up  
**Flag Status:** Flagged

Good afternoon, Ms. Calhoun,

On behalf of STP Nuclear Operating Company, please find attached the additional information requested in the NOD dated August 14, 2024.

Thank you,

**Amanda Ragatz** | Project Manager

J.S. Held LLC

9909 Manchester Rd, Unit 159, St. Louis, MO 63122

Office +1 636 755 8950 | Mobile +1 636 673 4729

[email](mailto:jsheld.com) | [jsheld.com](http://jsheld.com)



**50 & Forward: Watch the J.S. Held story from foundation to future**

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---

**From:** Candice Calhoun <[Candice.Calhoun@tceq.texas.gov](mailto:Candice.Calhoun@tceq.texas.gov)>  
**Sent:** Wednesday, August 14, 2024 12:38 PM  
**To:** Jones, Elizabeth <[evjones@STPEGS.COM](mailto:evjones@STPEGS.COM)>  
**Cc:** Nies, Robert <[renies@STPEGS.COM](mailto:renies@STPEGS.COM)>  
**Subject:** Application to Renew Permit No. WQ0001908000 - STP Nuclear Operating Company; South Texas Project Electric Generating Station  
**Importance:** High

**Caution:** This is an external email. Please take care when clicking links or opening attachments. When in doubt, contact the Technical Assistance Center at 361-972-7000 or x7000.

August 20, 2024

Candice Calhoun  
Applications Review and Processing Team (MC148)  
Water Quality Division  
Texas Commission of Environmental Quality

RE: Application to Renew Permit No.: WQ0001908000 (EPA I.D. No. TX0064947)  
Applicant Name: STP Nuclear Operating Company (CN601658669)  
Site Name: South Texas Project Electric Generating Station (RN102395654)  
Type of Application: Renewal

VIA EMAIL

Dear Ms. Calhoun:

On behalf of STP Nuclear Operating Company (STP), J.S. Held, LLC (J.S. Held) is submitting the enclosed response to the additional information request made on August 14, 2024, as part of the administrative review for the TCEQ permit renewal for Water Quality Permit (WQ0001908000).

1. General Information

Item 6.7 – The question “Is the daily average discharge at your facility of 5 MGD or more?” was inadvertently answered as no. The current permit authorizes a discharge of more than 5 MGD. Please provide the names of all counties located within 100 statute miles downstream of the point(s) of discharge.

*a. Matagorda County is the only county located within 100 statute miles downstream of the point of discharge.*

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

*a. No changes to text.*

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

*a. The NORI translated into Spanish is attached as a Microsoft Word document.*

Should you have any questions or comments concerning the submittal, please do not hesitate to contact me at 713.591.3864 or by email at [kschlicht@jsheld.com](mailto:kschlicht@jsheld.com).

Regards,



Kurtis Schlicht  
Senior Director – Environmental Health and Safety