Technical Package Cover Page

This file contains the following documents:

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

Portada de Paquete Técnico

Este archivo contiene los siguientes documentos:

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

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.

The City of Garland (CN600328694), operates the Garland Municipal Power - Ray Olinger Power Plant (RN100219203), a natural gas steam electric generating facility. The facility is located at 13835 County Road 489, in Nevada, Collin County, Texas 75173.

This application is for a renewal and amendment to discharge of once-through cooling water from Units 1, 2, and 3 and stormwater at a daily average flow not to exceed 404,000,000 gallons per day via Outfall 001. This amendment is to remove Internal Outfall 101.

Discharges from the facility are expected to contain chlorine. Additional pollutants are included in Worksheet 2.0 of the permit application package. Industrial wastewater is treated by using sodium hyperchlorate at the intake for algae control, and the circulating water is used for condenser cooling. Ammonia bisulfate is used for dechlorination at the condenser outlet to limit the chlorine residual.

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.

La ciudad de Garland (CN600328694) opera la planta eléctrica Garland Municipal Power - Ray Olinger (RN100219203), una instalación de generación de electricidad a vapor con gas natural. La instalación está ubicada en 13835 County Road 489, en Nevada, Condado de Collin, Texas 75173.

Esta solicitud es para una renovación y enmienda a la descarga de agua de enfriamiento de un solo paso de las Unidades 1, 2 y 3 y aguas pluviales con un flujo promedio diario que no exceda los 404,000,000 galones por día a través del Emisario 001. Esta enmienda es para eliminar el Emisario Interno 101.

Se espera que las descargas de la instalación contengan cloro. Se incluyen contaminantes adicionales en la Hoja de trabajo 2.0 del paquete de solicitud de permiso. Las aguas residuales industriales se tratan utilizando hiperclorato de sodio en la entrada para controlar las algas y el agua en circulación se utiliza para enfriar el condensador. El bisulfato de amoníaco se utiliza para la dicloración en la salida del condensador para limitar el cloro residual.

TEXAS COMMISSION ON ENVIRONMENTAL QUALITY

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

AMENDEMENT

PERMIT NO. WQ0001923000

APPLICATION. City of Garland, 13835 County Road 489, Nevada, Texas 75173, which owns a natural gas steam electric generating facility, has applied to the Texas Commission on Environmental Quality (TCEQ) to amend Texas Pollutant Discharge Elimination System (TPDES) Permit No. WQ0001923000 (EPA I.D. No. TX0001848) to authorize adding metal cleaning wastes to the evaporation pond Other Requirement No. 12 and removing internal Outfall 101**.** The facility is located at 13835 County Road 489, near the city of Nevada, in Collin County, Texas 75173. The discharge route is from the plant site directly to Lavon Lake. TCEQ received this application on August 8, 2024. The permit application will be available for viewing and copying at Wylie Municipal Complex, Office of City Secretary, 300 Country Club Road, Building 100, Wylie, 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=-96.4525,33.068055&level=18

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

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

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

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

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

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

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

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

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

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

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

Further information may also be obtained from City of Garland at the address stated above or by calling Mr. David Bernard, Production Director, Garland Power & Light, at 972-205-3831.

Issuance Date: September 17, 2024

Comisión de Calidad Ambiental del Estado de Texas

AVISO DE RECEPCIÓN DE LA SOLICITUD Y LA INTENCIÓN DE OBTENER CALIDAD DEL AGUA PERMISO MODIFICACION

PERMISO NO. WQ0001923000

SOLICITUD. La ciudad de Garland, 13835 County Road 489, Nevada, Texas 75173, que posee un Planta de generación eléctrica de vapor de gas natural, ha solicitado a la Comisión de Calidad Ambiental de Texas (TCEQ) para modificar el Permiso No.WQ0001923000 (EPA I.D. No. TX0001848) del Sistema de Eliminación de Descargas de Contaminantes de Texas (TPDES) para autorizar la adición de desechos de limpieza de metales al estanque de evaporación Otro requisito N.º 12 y la eliminación del emisario interno 101. La planta está ubicada en 13835 County Road 489, cerca de la ciudad de Nevada, en el condado de Collin, Texas 75173. La TCEQ recibió esta solicitud el día 8 de agosto de 2024. La solicitud para el permiso estará disponible para leerla y copiarla en Wylie Municipal Complex, Office of City Secretary, 300 Country Club Road, Building 100, Wylie, Texas antes de la fecha de publicación de este aviso en el periódico. La solicitud (cualquier actualización y aviso inclusive) está disponible electrónicamente en la siguiente página web: https://www.tceq.texas.gov/permitting/wastewater/pending-permits/tpdes-applications. Este enlace a un mapa electrónico de la ubicación general del sitio o de la instalación es proporcionado como una cortesía y no es parte de la solicitud o del aviso. Para la ubicación exacta, consulte la solicitud. https://gisweb.tceq.texas.gov/LocationMapper/?marker=-96.4525,33.068055&level=18

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

COMENTARIO PUBLICO / REUNION PUBLICA. Usted puede presentar comentarios públicos o pedir una reunión pública sobre esta solicitud. El

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

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

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

Después del cierre de todos los períodos de comentarios y de petición que aplican, el Director Ejecutivo enviará la solicitud y cualquier petición para reconsideración o para una audiencia de caso impugnado a los Comisionados de la TCEQ para su consideración durante una reunión programada de la Comisión. La Comisión sólo puede conceder una solicitud de una audiencia de caso impugnado sobre los temas que el solicitante haya presentado en sus comentarios oportunos que no fueron retirados

posteriormente. Si se concede una audiencia, el tema de la audiencia estará limitado a cuestiones de hecho en disputa o cuestiones mixtas de hecho y de derecho relacionadas a intereses pertinentes y materiales de calidad del agua que se hayan presentado durante el período de comentarios.

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

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

También se puede obtener información adicional del la ciudad de Garland a la dirección indicada arriba o llamando a Sr. David Bernard, Director de Producción de Garland Power & Light al 972-205-3831.

Fecha de emisión 17 de septiembre de 2024

TEXAS COMMISSION ON ENVIRONMENTAL QUALITY

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

AMENDMENT

PERMIT NO. WQ0001923000

APPLICATION AND PRELIMINARY DECISION. City of Garland, 13835 County Road 489, Nevada, Texas 75173, which operates Garland Municipal Power - Ray Olinger Power Plant, a natural gas-fired steam electric power generating facility, has applied to the Texas Commission on Environmental Quality (TCEQ) for a major amendment of Texas Pollutant Discharge Elimination System (TPDES) Permit No. WQ0001923000 to authorize the consolidation of Internal Outfall 101 with External Outfall 001 in the draft permit to consolidate sampling frequencies for wastewater discharged via Outfall 001, and authorize the disposal of metal cleaning wastes via Evaporation Ponds 2 and 4. The draft permit authorizes the discharge of once through cooling water from Units 1, 2, and 3 commingled with steam condensate, water treatment wastes and stormwater at a daily average flow not to exceed 404,000,000 gallons per day via Outfall 001. The TCEQ received this application on August 8, 2024.

The facility is located at 13835 County Road 489, near the City of Nevada, Collin County, Texas 75173. This link to an electronic map of the site or facility's general location is provided as a public courtesy and is not part of the application or notice. For the exact location, refer to the application.
https://gisweb.tceq.texas.gov/LocationMapper/?marker=-96.4525,33.068055&level=18

The effluent is discharged directly to Lavon Lake in Segment No. 0821 of the Trinity River Basin. The designated uses for Segment No. 0821 are primary contact recreation, public water supply, and high aquatic life use.

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

The TCEQ Executive Director has completed the technical review of the application and prepared a draft permit. The draft permit, if approved, would establish the conditions under which the facility must operate. The Executive Director has made a preliminary decision that this permit, if issued, meets all statutory and regulatory requirements. The permit application, Executive Director's preliminary decision, and draft permit are available for viewing and copying at Wylie Municipal Complex, Office of City Secretary, 300 Country Club Road, Building 100, Wylie, Texas. The application, including any updates, and associated notices are available electronically at the following webpage:
https://www.tceq.texas.gov/permitting/wastewater/pending-permits/tpdes-applications

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

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

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

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

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

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

EXECUTIVE DIRECTOR ACTION. The Executive Director may issue final approval of the application unless a timely contested case hearing request or a timely request for reconsideration is filed. If a timely hearing request or request for reconsideration is filed, the Executive Director will not issue final approval of the permit and will forward the application and requests to the TCEQ Commissioners for their consideration at a scheduled Commission meeting.

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

All written public comments and public meeting requests must be submitted to the Office of the Chief Clerk, MC 105, TCEQ, P.O. Box 13087, Austin, TX 78711-3087 or electronically at https://www.tceq.texas.gov/goto/comment/ within 30 days from the date of newspaper publication of this notice.

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

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

Further information may also be obtained from the City of Garland at the address stated above or by calling Mr. Michael Burr, Environmental Manager, at 972-485-6453.

Issued: July 2, 2025

Comisión De Calidad Ambiental Del Estado De Texas

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

MODIFICACIÓN

PERMISO NO. WQ0001923000

SOLICITUD Y DECISIÓN PRELIMINAR. City of Garland, 13835 County Road 489, Nevada, Texas 75173, que opera Garland Municipal Power - Ray Olinger Power Plant, una instalación de generación de energía eléctrica a vapor alimentada con gas natural, ha solicitado a la Comisión de Calidad Ambiental del Estado de Texas (TCEQ) un/una modificación principal para autorizar la consolidación del Emisario Interno 101 con el Emisario Externo 001 en el proyecto de permiso para consolidar las frecuencias de muestreo de las aguas residuales descargadas a través del Emisario 001, y autorizar la disposición de los desechos de limpieza de metales a través de los estanques de evaporación 2 y 4. El proyecto de permiso autoriza la descarga de agua de enfriamiento de una sola pasada de las Unidades 1, 2 y 3 mezclada con condensado de vapor, desechos de tratamiento de agua y aguas pluviales a un flujo promedio diario que no exceda los 404,000,000 de galones por día a través del emisario 001. La TCEQ recibió esta solicitud el 8 de agosto de 2024.

La planta está ubicada en 13835 County Road 489, cerca de la ciudad de Nevada, en el Condado de Collin, Texas. El efluente tratado es descargado al Lavon Lake en el Segmento No. 0821 de la Cuenca del Río Trinity. Los usos no clasificados de las aguas receptoras son elevados elevados usos de la vida acuática para Lavon Lake. Los usos designados para el Segmento No. 0821 son elevados de vida acuática; abastecimiento de agua potable y recreación de contacto primario.

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

El Director Ejecutivo de la TCEQ ha completado la revisión técnica de la solicitud y ha preparado un borrador del permiso. El borrador del permiso, si es aprobado, establecería las condiciones bajo las cuales la instalación debe operar. El Director Ejecutivo ha tomado una decisión preliminar que si este permiso es emitido, cumple con todos los requisitos normativos y legales. La solicitud del permiso, la decisión preliminar del Director Ejecutivo y el borrador del permiso están disponibles para leer y copiar en Complejo Municipal de Wylie, Oficina del Secretario de la Ciudad, 300 Country Club Road, Edificio 100, Wylie, Texas. La solicitud (cualquier actualización y aviso inclusive) está disponible electrónicamente en la siguiente página web: https://www.tceq.texas.gov/permitting/wastewater/pending-permits/tpdes-applications.

Este enlace a un mapa electrónico de la ubicación general del sitio o de la instalación es proporcionado como una cortesía y no es parte de la solicitud o del aviso. Para la ubicación exacta, consulte la solicitud.
https://gisweb.tceq.texas.gov/LocationMapper/?marker=-96.4525,33.068055&level=18

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

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

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

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

dirección de un miembro del grupo que sería afectado adversamente por la planta o la actividad propuesta; proveer la información indicada anteriormente con respecto a la ubicación del miembro afectado y su distancia de la planta o actividad propuesta; explicar cómo y porqué el miembro sería afectado; y explicar cómo los intereses que el grupo desea proteger son pertinentes al propósito del grupo.

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

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

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

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

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

visite su sitio web en www.tceq.texas.gov/goto/pep. Si desea información en español, puede llamar al 1-800-687-4040.

También se puede obtener información adicional del Ciudad de Garland a la dirección indicada arriba o llamando a Sr. Michael Burr al 972-485-6453.

Fecha de emission: 2 de julio de 2025

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

TPDES PERMIT NO.
WQ0001923000
[For TCEQ office use only -
EPA I.D. No. TX0001848]

This major amendment with renewal replaces TPDES Permit No. WQ0001923000, issued on February 5, 2020.

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

City of Garland

whose mailing address is

13835 County Road 489
Nevada, Texas 75173

is authorized to treat and discharge wastes from Garland Municipal Power - Ray Olinger Power Plant, a natural gas-fired steam electric power generating facility (SIC 4911)

located at 13835 County Road 489, near the City of Nevada, in Collin County, Texas 75173

directly to Lavon Lake in Segment No. 0821 of the Trinity River Basin

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

This permit shall expire at midnight, three years from the date of permit issuance.

ISSUED DATE:

_____
For the Commission

1. During the period beginning upon the date of permit issuance and lasting through the date of permit expiration, the permittee is authorized to discharge once-through cooling water from Units 1, 2, and 3 commingled with steam condensate, water treatment wastes [1], and stormwater subject to the following effluent limitations:

   The daily average flow of effluent shall not exceed 404 million gallons per day (MGD). The daily maximum flow shall not exceed 404 MGD.

Effluent Characteristics	Discharge Limitations					Minimum Self-Monitoring Requirements	
	Daily Average		Daily Maximum		Single Grab	Report Daily Average and Daily Maximum	
	lbs/day	mg/L	lbs/day	mg/L	mg/L	Measurement Frequency	Sample Type
Flow	404 MGD		404 MGD		N/A	Continuous	Record [2]
Temperature	105 °F [3]		110 °F [3]		N/A	Continuous	Record [2]
Free Available Chlorine [1]	46	0.2	114	0.5	0.5	1/week [4]	Grab [2]
Total Residual Chlorine [1]	N/A	N/A	137	0.2	0.2	1/week [4]	Grab [2]
Total Aluminum [5]	N/A	Report	N/A	Report	N/A	1/year	Grab [2]
Total Dissolved Solids	N/A	Report	N/A	Report	N/A	1/week	Grab [2]
Total Mercury [6]	N/A	Report	N/A	Report	N/A	1/month	Grab [2]
Total Thallium [6]	N/A	Report	N/A	Report	N/A	1/month	Grab [2]

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

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

4. Effluent monitoring samples shall be taken at the following location: At Outfall 001, at the end of the two discharge pipes (located approximately 40 feet apart) prior to entering Lake Lavon.

[1] See Other Requirement No. 10.
[2] See Other Requirement No. 1.
[3] See Other Requirement No. 8.
[4] Samples shall be representative of chlorination.
[5] See Other Requirement No 4.
[6] See Other Requirement No. 14.

DEFINITIONS AND STANDARD PERMIT CONDITIONS

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

1. Flow Measurements

   a. Annual average flow - the arithmetic average of all daily flow determinations taken within the preceding 12 consecutive calendar months. The annual average flow determination shall consist of daily flow volume determinations made by a totalizing meter, charted on a chart recorder, and limited to major domestic wastewater discharge facilities with a one million gallons per day or greater permitted flow.

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

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

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

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

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

2. Concentration Measurements

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

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

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

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

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

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

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

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

e. Bacteria concentration (Fecal coliform, *E. coli*, or Enterococci) – the number of colonies of bacteria per 100 milliliters effluent. The daily average bacteria concentration is a geometric mean of the values for the effluent samples collected in a calendar month. The geometric mean shall be determined by calculating the nth root of the product of all measurements made in a calendar month, where n equals the number of measurements made; or computed as the antilogarithm of the arithmetic mean of the logarithms of all measurements made in a calendar month. For any measurement of bacteria equaling zero, a substitute value of one shall be made for input into either computation method. If specified, the 7-day average for bacteria is the geometric mean of the values for all effluent samples collected during a calendar week.

f. Daily average loading (lbs/day) - the arithmetic average of all daily discharge loading calculations during a period of one calendar month. These calculations must be made for each day of the month that a parameter is analyzed. The daily discharge, in terms of mass (lbs/day), is calculated as (Flow, MGD × Concentration, mg/L × 8.34).

g. Daily maximum loading (lbs/day) - the highest daily discharge, in terms of mass (lbs/day), within a period of one calendar month.

3. Sample Type

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

   b. Grab sample - an individual sample collected in less than 15 minutes.

4. Treatment Facility (facility) - wastewater facilities used in the conveyance, storage, treatment, recycling, reclamation or disposal of domestic sewage, industrial wastes, agricultural wastes, recreational wastes, or other wastes including sludge handling or disposal facilities under the jurisdiction of the Commission.

5. The term "sewage sludge" is defined as solid, semi-solid, or liquid residue generated during the treatment of domestic sewage in 30 TAC Chapter 312. This includes the solids that have not been classified as hazardous waste separated from wastewater by unit processes.

6. Bypass - the intentional diversion of a waste stream from any portion of a treatment facility.

MONITORING AND REPORTING REQUIREMENTS

1. Self-Reporting

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

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

2. Test Procedures

   a. Unless otherwise specified in this permit, test procedures for the analysis of pollutants shall comply with procedures specified in 30 TAC §§319.11 - 319.12. Measurements, tests, and calculations shall be accurately accomplished in a representative manner.

   b. All laboratory tests submitted to demonstrate compliance with this permit must meet the requirements of 30 TAC Chapter 25, Environmental Testing Laboratory Accreditation and Certification.

3. Records of Results

   a. Monitoring samples and measurements shall be taken at times and in a manner so as to be representative of the monitored activity.

   b. Except for records of monitoring information required by this permit related to the permittee's sewage sludge use and disposal activities, which shall be retained for a period of at least five years (or longer as required by 40 CFR Part 503), monitoring and reporting records, including strip charts and records of calibration and maintenance, copies of all records required by this permit, records of all data used to complete the application for this permit, and the certification required by 40 CFR §264.73(b)(9) shall be retained at the facility site, or shall be readily available for review by a TCEQ representative for a period of three years from the date of the record or sample, measurement, report, application or certification. This period shall be extended at the request of the Executive Director.

   c. Records of monitoring activities shall include the following:

      i. date, time, and place of sample or measurement;
      ii. identity of individual who collected the sample or made the measurement;
      iii. date and time of analysis;
      iv. identity of the individual and laboratory who performed the analysis;
      v. the technique or method of analysis; and
      vi. the results of the analysis or measurement and quality assurance/quality control records.

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

4. Additional Monitoring by Permittee

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

5. Calibration of Instruments

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

6. Compliance Schedule Reports

   Reports of compliance or noncompliance with, or any progress reports on, interim and final requirements contained in any compliance schedule of the permit shall be submitted no later than 14 days following each schedule date to the regional office and the Enforcement Division (MC 224).

7. Noncompliance Notification

   a. In accordance with 30 TAC §305.125(9) any noncompliance that may endanger human health or safety, or the environment shall be reported by the permittee to the TCEQ. Report of such information shall be provided orally or by facsimile transmission (FAX) to the regional office within 24 hours of becoming aware of the noncompliance. A written submission of such information shall also be provided by the permittee to the regional office and the Enforcement Division (MC 224) within five working days of becoming aware of the noncompliance. For Publicly Owned Treatment Works (POTWs), effective September 1, 2020, the permittee must submit the written report for unauthorized discharges and unanticipated bypasses that exceed any effluent limit in the permit using the online electronic reporting system available through the TCEQ website unless the permittee requests and obtains an electronic reporting waiver. The written submission shall contain a description of the noncompliance and its cause; the potential danger to human health or safety, or the environment; the period of noncompliance, including exact dates and times; if the noncompliance has not been corrected, the time it is expected to continue; and steps taken or planned to reduce, eliminate, and prevent recurrence of the noncompliance, and to mitigate its adverse effects.

   b. The following violations shall be reported under Monitoring and Reporting Requirement 7.a.:

      i. unauthorized discharges as defined in Permit Condition 2(g).
      ii. any unanticipated bypass that exceeds any effluent limitation in the permit.
      iii. violation of a permitted maximum daily discharge limitation for pollutants listed specifically in the Other Requirements section of an Industrial TPDES permit.

   c. In addition to the above, any effluent violation that deviates from the permitted effluent limitation by more than 40% shall be reported by the permittee in writing to the regional office and the Enforcement Division (MC 224) within 5 working days of becoming aware of the noncompliance.

   d. Any noncompliance other than that specified in this section, or any required information not submitted or submitted incorrectly, shall be reported to the Enforcement Division (MC 224) as promptly as possible. For effluent limitation violations, noncompliances shall be reported on the approved self-report form.

8. In accordance with the procedures described in 30 TAC §§35.301 - 35.303 (relating to Water Quality Emergency and Temporary Orders) if the permittee knows in advance of the need for a bypass, it shall submit prior notice by applying for such authorization.

9. Changes in Discharges of Toxic Substances

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

   a. That any activity has occurred or will occur that would result in the discharge, on a routine or frequent basis, of any toxic pollutant listed at 40 CFR Part 122, Appendix D, Tables II and III (excluding Total Phenols) that is not limited in the permit, if that discharge will exceed the highest of the following “notification levels”:

      i. one hundred micrograms per liter (100 µg/L);
      ii. two hundred micrograms per liter (200 µg/L) for acrolein and acrylonitrile; five hundred micrograms per liter (500 µg/L) for 2,4-dinitrophenol and for 2-methyl-4,6-dinitrophenol; and one milligram per liter (1 mg/L) for antimony;
      iii. five (5) times the maximum concentration value reported for that pollutant in the permit application; or
      iv. the level established by the TCEQ.

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

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

10. Signatories to Reports

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

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

a. any new introduction of pollutants into the POTW from an indirect discharger that would be subject to CWA §301 or §306 if it were directly discharging those pollutants;

b. any substantial change in the volume or character of pollutants being introduced into that POTW by a source introducing pollutants into the POTW at the time of issuance of the permit; and

c. for the purpose of this paragraph, adequate notice shall include information on:

i. the quality and quantity of effluent introduced into the POTW; and
ii. any anticipated impact of the change on the quantity or quality of effluent to be discharged from the POTW.

PERMIT CONDITIONS

1. General

a. When the permittee becomes aware that it failed to submit any relevant facts in a permit application, or submitted incorrect information in an application or in any report to the Executive Director, it shall promptly submit such facts or information.

b. This permit is granted on the basis of the information supplied and representations made by the permittee during action on an application, and relying upon the accuracy and completeness of that information and those representations. After notice and opportunity for a hearing, this permit may be modified, suspended, or revoked, in whole or in part, in accordance with 30 TAC Chapter 305, Subchapter D, during its term for good cause including, but not limited to, the following:

i. violation of any terms or conditions of this permit;
ii. obtaining this permit by misrepresentation or failure to disclose fully all relevant facts; or
iii. a change in any condition that requires either a temporary or permanent reduction or elimination of the authorized discharge.

c. The permittee shall furnish to the Executive Director, upon request and within a reasonable time, any information to determine whether cause exists for amending, revoking, suspending, or terminating the permit. The permittee shall also furnish to the Executive Director, upon request, copies of records required to be kept by the permit.

2. Compliance

a. Acceptance of the permit by the person to whom it is issued constitutes acknowledgment and agreement that such person will comply with all the terms and conditions embodied in the permit, and the rules and other orders of the Commission.

b. The permittee has a duty to comply with all conditions of the permit. Failure to comply with any permit condition constitutes a violation of the permit and the Texas Water Code or the Texas Health and Safety Code, and is grounds for enforcement action, for permit amendment,

revocation, or suspension, or for denial of a permit renewal application or an application for a permit for another facility.

c. It shall not be a defense for a permittee in an enforcement action that it would have been necessary to halt or reduce the permitted activity in order to maintain compliance with the conditions of the permit.

d. The permittee shall take all reasonable steps to minimize or prevent any discharge or sludge use or disposal or other permit violation that has a reasonable likelihood of adversely affecting human health or the environment.

e. Authorization from the Commission is required before beginning any change in the permitted facility or activity that may result in noncompliance with any permit requirements.

f. A permit may be amended, suspended and reissued, or revoked for cause in accordance with 30 TAC §§305.62 and 305.66 and TWC §7.302. The filing of a request by the permittee for a permit amendment, suspension and reissuance, or termination, or a notification of planned changes or anticipated noncompliance, does not stay any permit condition.

g. There shall be no unauthorized discharge of wastewater or any other waste. For the purpose of this permit, an unauthorized discharge is considered to be any discharge of wastewater into or adjacent to water in the state at any location not permitted as an outfall or otherwise defined in the Other Requirements section of this permit.

h. In accordance with 30 TAC §305.535(a), the permittee may allow any bypass to occur from a TPDES permitted facility that does not cause permitted effluent limitations to be exceeded or an unauthorized discharge to occur, but only if the bypass is also for essential maintenance to assure efficient operation.

i. The permittee is subject to administrative, civil, and criminal penalties, as applicable, under Texas Water Code §§7.051 - 7.075 (relating to Administrative Penalties), 7.101 - 7.111 (relating to Civil Penalties), and 7.141 - 7.202 (relating to Criminal Offenses and Penalties) for violations including, but not limited to, negligently or knowingly violating the federal CWA §§301, 302, 306, 307, 308, 318, or 405, or any condition or limitation implementing any sections in a permit issued under the CWA §402, or any requirement imposed in a pretreatment program approved under the CWA §§402(a)(3) or 402(b)(8).

3. Inspections and Entry

a. Inspection and entry shall be allowed as prescribed in the TWC Chapters 26, 27, and 28, and THSC Chapter 361.

b. The members of the Commission and employees and agents of the Commission are entitled to enter any public or private property at any reasonable time for the purpose of inspecting and investigating conditions relating to the quality of water in the state or the compliance with any rule, regulation, permit, or other order of the Commission. Members, employees, or agents of the Commission and Commission contractors are entitled to enter public or private property at any reasonable time to investigate or monitor or, if the responsible party is not responsive or there is an immediate danger to public health or the environment, to remove or remediate a condition related to the quality of water in the state. Members, employees, Commission contractors, or agents acting under this authority who enter private property shall observe the establishment's rules and regulations concerning safety, internal security, and fire protection, and if the property has management in residence, shall notify management or the person then in charge of his presence and shall exhibit proper credentials. If any member, employee, Commission contractor, or agent is refused the right to enter in or on public or private property under this authority, the Executive Director may invoke the remedies authorized in TWC §7.002. The statement above, that Commission entry shall occur in accordance with an establishment's rules and regulations concerning safety, internal security, and fire protection, is not grounds for denial or restriction of entry to any part of the facility, but merely describes the Commission's duty to observe appropriate rules and regulations during an inspection.

4. Permit Amendment or Renewal

   a. The permittee shall give notice to the Executive Director as soon as possible of any planned physical alterations or additions to the permitted facility if such alterations or additions would require a permit amendment or result in a violation of permit requirements. Notice shall also be required under this paragraph when:

      i. the alteration or addition to a permitted facility may meet one of the criteria for determining whether a facility is a new source in accordance with 30 TAC §305.534 (relating to New Sources and New Dischargers); or

      ii. the alteration or addition could significantly change the nature or increase the quantity of pollutants discharged. This notification applies to pollutants that are subject neither to effluent limitations in the permit, nor to notification requirements in Monitoring and Reporting Requirements No. 9; or

      iii. the alteration or addition results in a significant change in the permittee's sludge use or disposal practices, and such alteration, addition, or change may justify the application of permit conditions that are different from or absent in the existing permit, including notification of additional use or disposal sites not reported during the permit application process or not reported pursuant to an approved land application plan.

   b. Prior to any facility modifications, additions, or expansions that will increase the plant capacity beyond the permitted flow, the permittee must apply for and obtain proper authorization from the Commission before commencing construction.

   c. The permittee must apply for an amendment or renewal at least 180 days prior to expiration of the existing permit in order to continue a permitted activity after the expiration date of the permit. If an application is submitted prior to the expiration date of the permit, the existing permit shall remain in effect until the application is approved, denied, or returned. If the application is returned or denied, authorization to continue such activity shall terminate upon the effective date of the action. If an application is not submitted prior to the expiration date of the permit, the permit shall expire and authorization to continue such activity shall terminate.

   d. Prior to accepting or generating wastes that are not described in the permit application or that would result in a significant change in the quantity or quality of the existing discharge, the permittee must report the proposed changes to the Commission. The permittee must apply for a permit amendment reflecting any necessary changes in permit conditions, including effluent limitations for pollutants not identified and limited by this permit.

   e. In accordance with the TWC §26.029(b), after a public hearing, notice of which shall be given to the permittee, the Commission may require the permittee, from time to time, for good cause, in accordance with applicable laws, to conform to new or additional conditions.

   f. If any toxic effluent standard or prohibition (including any schedule of compliance specified in such effluent standard or prohibition) is promulgated under CWA §307(a) for a toxic pollutant that is present in the discharge and that standard or prohibition is more stringent than any limitation on the pollutant in this permit, this permit shall be modified or revoked and reissued to conform to the toxic effluent standard or prohibition. The permittee shall comply with effluent standards or prohibitions established under CWA §307(a) for toxic pollutants within the time provided in the regulations that established those standards or prohibitions, even if the permit has not yet been modified to incorporate the requirement.

5. Permit Transfer

   a. Prior to any transfer of this permit, Commission approval must be obtained. The Commission shall be notified in writing of any change in control or ownership of facilities authorized by this permit. Such notification should be sent to the Applications Review and Processing Team (MC 148) of the Water Quality Division.

   b. A permit may be transferred only according to the provisions of 30 TAC §305.64 (relating to Transfer of Permits) and 30 TAC §50.133 (relating to Executive Director Action on Application or WQMP update).

6. Relationship to Hazardous Waste Activities

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

7. Relationship to Water Rights

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

8. Property Rights

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

9. Permit Enforceability

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

10. Relationship to Permit Application

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

11. Notice of Bankruptcy.

    a. Each permittee shall notify the Executive Director, in writing, immediately following the filing of a voluntary or involuntary petition for bankruptcy under any chapter of Title 11 (Bankruptcy) of the United States Code (11 USC) by or against:

       i. the permittee;
       ii. an entity (as that term is defined in 11 USC, §101(15)) controlling the permittee or listing the permit or permittee as property of the estate; or
       iii. an affiliate (as that term is defined in 11 USC, §101(2)) of the permittee.

    b. This notification must indicate:

       i. the name of the permittee;
       ii. the permit number(s);
       iii. the bankruptcy court in which the petition for bankruptcy was filed; and
       iv. the date of filing of the petition.

OPERATIONAL REQUIREMENTS

1. The permittee shall at all times ensure that the facility and all of its systems of collection, treatment, and disposal are properly operated and maintained. This includes, but is not limited to, the regular, periodic examination of wastewater solids within the treatment plant by the operator in order to maintain an appropriate quantity and quality of solids inventory as described in the various operator training manuals and according to accepted industry standards for process control. Process control, maintenance, and operations records shall be retained at the facility site, or shall be readily available for review by a TCEQ representative, for a period of three years.

2. Upon request by the Executive Director, the permittee shall take appropriate samples and provide proper analysis in order to demonstrate compliance with Commission rules. Unless otherwise specified in this permit or otherwise ordered by the Commission, the permittee shall comply with all applicable provisions of 30 TAC Chapter 312 concerning sewage sludge use and disposal and 30 TAC §§319.21 - 319.29 concerning the discharge of certain hazardous metals.

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

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

   b. The permittee shall submit a closure plan for review and approval to the Municipal Permits Team, Wastewater Permitting Section (MC 148) of the Water Quality Division, for any closure activity at least 90 days prior to conducting such activity. Closure is the act of permanently taking a waste management unit or treatment facility out of service and includes the permanent removal from service of any pit, tank, pond, lagoon, surface impoundment or other treatment unit regulated by this permit.

4. The permittee is responsible for installing prior to plant start-up, and subsequently maintaining, adequate safeguards to prevent the discharge of untreated or inadequately treated wastes during electrical power failures by means of alternate power sources, standby generators, or retention of inadequately treated wastewater.

5. Unless otherwise specified, the permittee shall provide a readily accessible sampling point and, where applicable, an effluent flow measuring device or other acceptable means by which effluent flow may be determined.

6. The permittee shall remit an annual water quality fee to the Commission as required by 30 TAC Chapter 21. Failure to pay the fee may result in revocation of this permit under TWC §7.302(b)(6).

7. Documentation

   For all written notifications to the Commission required of the permittee by this permit, the permittee shall keep and make available a copy of each such notification under the same conditions as self-monitoring data are required to be kept and made available. Except for information required for TPDES permit applications, effluent data, including effluent data in permits, draft permits and permit applications, and other information specified as not confidential in 30 TAC §1.5(d), any information submitted pursuant to this permit may be claimed as confidential by the submitter. Any such claim must be asserted in the manner prescribed in the application form or by stamping the words “confidential business information” on each page containing such information. If no claim is made at the time of submission, information may be made available to the public without further notice. If the Commission or Executive Director agrees with the designation of confidentiality, the TCEQ will not provide the information for public inspection unless required by the Texas Attorney General or a court pursuant to an open records request. If the Executive Director does not agree with the designation of confidentiality, the person submitting the information will be notified.

8. Facilities that generate domestic wastewater shall comply with the following provisions; domestic wastewater treatment facilities at permitted industrial sites are excluded.

   a. Whenever flow measurements for any domestic sewage treatment facility reach 75% of the permitted daily average or annual average flow for three consecutive months, the permittee must initiate engineering and financial planning for expansion or upgrading of the domestic wastewater treatment or collection facilities. Whenever the flow reaches 90% of the permitted daily average or annual average flow for three consecutive months, the permittee shall obtain necessary authorization from the Commission to commence construction of the necessary additional treatment or collection facilities. In the case of a domestic wastewater treatment facility that reaches 75% of the permitted daily average or annual average flow for three consecutive months, and the planned population to be served or the quantity of waste produced is not expected to exceed the design limitations of the treatment facility, the permittee shall submit an engineering report supporting this claim to the Executive Director of the Commission.

      If in the judgment of the Executive Director the population to be served will not cause permit noncompliance, then the requirement of this section may be waived. To be effective, any waiver must be in writing and signed by the Director of the Enforcement Division (MC 219) of the Commission, and such waiver of these requirements will be reviewed upon expiration of the existing permit; however, any such waiver shall not be interpreted as condoning or excusing any violation of any permit parameter.

b. The plans and specifications for domestic sewage collection and treatment works associated with any domestic permit must be approved by the Commission, and failure to secure approval before commencing construction of such works or making a discharge is a violation of this permit and each day is an additional violation until approval has been secured.

c. Permits for domestic wastewater treatment plants are granted subject to the policy of the Commission to encourage the development of area-wide waste collection, treatment, and disposal systems. The Commission reserves the right to amend any domestic wastewater permit in accordance with applicable procedural requirements to require the system covered by this permit to be integrated into an area-wide system, should such be developed; to require the delivery of the wastes authorized to be collected in, treated by or discharged from said system, to such area-wide system; or to amend this permit in any other particular to effectuate the Commission's policy. Such amendments may be made when the changes required are advisable for water quality control purposes and are feasible on the basis of waste treatment technology, engineering, financial, and related considerations existing at the time the changes are required, exclusive of the loss of investment in or revenues from any then existing or proposed waste collection, treatment or disposal system.

9. Domestic wastewater treatment plants shall be operated and maintained by sewage plant operators holding a valid certificate of competency at the required level as defined in 30 TAC Chapter 30.

10. For Publicly Owned Treatment Works (POTWs), the 30-day average (or monthly average) percent removal for BOD and TSS shall not be less than 85%, unless otherwise authorized by this permit.

11. Facilities that generate industrial solid waste as defined in 30 TAC §335.1 shall comply with these provisions:

a. Any solid waste, as defined in 30 TAC §335.1 (including but not limited to such wastes as garbage, refuse, sludge from a waste treatment, water supply treatment plant or air pollution control facility, discarded materials, discarded materials to be recycled, whether the waste is solid, liquid, or semisolid), generated by the permittee during the management and treatment of wastewater, must be managed in accordance with all applicable provisions of 30 TAC Chapter 335, relating to Industrial Solid Waste Management.

b. Industrial wastewater that is being collected, accumulated, stored, or processed before discharge through any final discharge outfall, specified by this permit, is considered to be industrial solid waste until the wastewater passes through the actual point source discharge and must be managed in accordance with all applicable provisions of 30 TAC Chapter 335.

c. The permittee shall provide written notification, pursuant to the requirements of 30 TAC §335.8(b)(1), to the Corrective Action Section (MC 127) of the Remediation Division informing the Commission of any closure activity involving an Industrial Solid Waste Management Unit, at least 90 days prior to conducting such an activity.

d. Construction of any industrial solid waste management unit requires the prior written notification of the proposed activity to the Registration and Reporting Section (MC 129) of the Permitting and Remediation Support Division. No person shall dispose of industrial solid waste, including sludge or other solids from wastewater treatment processes, prior to fulfilling the deed recordation requirements of 30 TAC §335.5.

e. The term “industrial solid waste management unit” means a landfill, surface impoundment, waste-pile, industrial furnace, incinerator, cement kiln, injection well, container, drum, salt dome waste containment cavern, or any other structure vessel, appurtenance, or other improvement on land used to manage industrial solid waste.

f. The permittee shall keep management records for all sludge (or other waste) removed from any wastewater treatment process. These records shall fulfill all applicable requirements of 30 TAC Chapter 335 and must include the following, as it pertains to wastewater treatment and discharge:

i. volume of waste and date(s) generated from treatment process;
ii. volume of waste disposed of on-site or shipped off-site;
iii. date(s) of disposal;

iv. identity of hauler or transporter;
v. location of disposal site; and
vi. method of final disposal.

The above records shall be maintained on a monthly basis. The records shall be retained at the facility site, or shall be readily available for review by authorized representatives of the TCEQ for at least five years.

12. For industrial facilities to which the requirements of 30 TAC Chapter 335 do not apply, sludge and solid wastes, including tank cleaning and contaminated solids for disposal, shall be disposed of in accordance with THSC Code Chapter 361.

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OTHER REQUIREMENTS

1. Effluent analysis for Outfall 001 shall be flow-weighted from the two separate discharge points located within 40 feet of each other. The first discharge point services Units 1 and 2, and the second discharge point services Unit 3. Grab samples from each source may be either individually analyzed for reporting of the arithmetic average and maximum values or physically combined into a single flow-weighted sample for analysis and reporting.

   The permittee shall maintain an operating log which records the flow from the first discharge point and the second discharge point for use in calculating the mass limits for free available chlorine and total residual chlorine. The operating log shall be retained on-site for five years and available for inspection by authorized representatives of the TCEQ in accordance with MONITORING AND REPORTING REQUIREMENTS, Item 3.c. of this permit.

2. Violations of daily maximum limitations for the following pollutants shall be reported orally or by facsimile to TCEQ Region 4 within 24 hours from the time the permittee becomes aware of the violation, followed by a written report within five working days to TCEQ Region 4 and Compliance Monitoring Team (MC 224): None.

   Test methods used must be sensitive enough to demonstrate compliance with the permit effluent limitations. If an effluent limit for a pollutant is less than the MAL, then the test method for that pollutant must be sensitive enough to demonstrate compliance at the MAL. Permit compliance/noncompliance determinations will be based on the effluent limitations contained in this permit, with consideration given to the MAL for the pollutants specified above.

Pollutant	MAL (mg/L)
Aluminum (Total)	0.0025
Mercury (Total)	0.000005
Thallium (Total)	0.0005

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

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

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

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

3. COOLING WATER INTAKE STRUCTURE REQUIREMENTS

   a. Specialized Definition

      Low-capacity utilization power generation unit means an individual electrical generation unit which has an annual average capacity utilization of less than 8% over the previous 24-month block contiguous period.

   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 monitor and record the capacity utilization of each individual power generation unit at the facility on a daily basis.

   c. Record-Keeping Requirements

      Records (e.g. electronic logs, data acquisition system records, operating procedures, operator logs, etc.) documenting the operation and maintenance described above shall be kept on site until the subsequent permit is issued, per the requirements of 40 CFR § 125.97(d), and made available to TCEQ personnel upon request.

   d. Changes to the Cooling Water Intake Structure

      The facility must notify the TCEQ Industrial Permits Team (MC 148), Compliance Monitoring Team (MC 224), and TCEQ Region 4 Office in writing at least 30 days prior any changes or modifications of the design or in the operation of the CWIS.

      If it is determined that the proposed CWIS configuration does not meet best technology available standards for impingement mortality and entrainment, the permit may be reopened to incorporate additional requirements.

4. On January 9, 2002, the facility received a once-through cooling water discharge exemption for total aluminum at Outfall 001 which discharges through a channel to Lavon Lake in Segment No. 0821 of the Trinity River Basin. If the facility changes its water source or discharges to another receiving water, this exemption will no longer be valid.

5. The chronic aquatic life mixing zone is defined as a volume within a radius of 100 feet from the point of discharge. Chronic toxic criteria apply at the edge of the chronic aquatic life mixing zone.

   The width of Lake Lavon at the point of discharge is greater than or equal to 200 feet. The ZID is defined as a volume within a radius of 25 feet from the point of discharge. The human health mixing zone is defined as a volume within a radius of 200 feet from the point of discharge.

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

7. There shall be no discharge of polychlorinated biphenyl compounds such as those commonly used for transformer fluid.

8. The flow-weighted average temperature (FWAT) must be computed and recorded on a daily basis. FWAT must be computed at equal time intervals not greater than two hours. The method of calculating FWAT is as follows:

$$FWAT = \frac{\sum (\text{INSTANTANEOUS FLOW} \times \text{INSTANTANEOUS TEMPERATURE})}{\sum (\text{INSTANTANEOUS FLOW})}$$

9. There shall be no discharge of cooling tower blowdown or any wastewaters resulting from cooling towers which contain the 126 priority pollutants (Appendix A of 40 CFR Part 423).

10. DEFINITIONS

a. The term *total residual chlorine* (or total residual oxidants for intake water with bromides) means the value obtained using any of the "chlorine—total residual" methods in Table IB in 40 CFR §136.3(a), or other methods approved by the permitting authority.

Total residual chlorine (TRC) may not be discharged from any single generating unit for more than two hours per day unless the discharger demonstrates to the permitting authority that discharge for more than two hours is required for macroinvertebrate control.

Simultaneous multi-unit chlorination is permitted.

The daily maximum mass loading of TRC must be calculated using the following equation:

TRC (lbs/day) = TRC (mg/L) × flow (MGD) × 8.345 × (total hours of chlorination/24 hours) × (# of units)

where: TRC (mg/L) = maximum concentration of TRC measured in the effluent during representative period of chlorination

flow (MGD) = total actual flow of discharge via outfall during sampling day

b. The term *low volume waste sources* means, taken collectively as if from one source, wastewater from all sources except those for which specific limitations or standards are otherwise established in 40 CFR Part 423. Low volume waste sources include, but are not limited to, the following: Wastewaters from ion exchange water treatment systems, water treatment evaporator blowdown, laboratory and sampling streams, boiler blowdown, floor drains, cooling tower basin cleaning wastes, recirculating house service water systems, and wet scrubber air pollution control systems whose primary purpose is particulate removal. Sanitary wastes, air conditioning wastes, and wastewater from carbon capture or sequestration systems are not included in this definition.

c. The term *chemical metal cleaning waste* means any wastewater resulting from the cleaning of any metal process equipment with chemical compounds, including, but not limited to, boiler tube cleaning.

d. The term *metal cleaning waste* means any wastewater resulting from cleaning [with or without chemical cleaning compounds] any metal process equipment including, but not limited to, boiler tube cleaning, boiler fireside cleaning, and air preheater cleaning.

e. The term *once through cooling water* means water passed through the main cooling condensers in one or two passes for the purpose of removing waste heat.

f. The term *free available chlorine* means the value obtained using any of the "chlorine—free available" methods in Table IB in 40 CFR 136.3(a) where the method has the capability of measuring free available chlorine, or other methods approved by the permitting authority.

Free available chlorine (FAC) may not be discharged from any unit for more than two hours in any one day, and not more than one unit in any plant may discharge free available chlorine at

any one time unless the permittee can demonstrate to the permitting authority that the units in a particular location cannot operate at or below this level of chlorination.

Daily mass loading of FAC must be calculated using the following equation:

FAC (lbs/day) = FAC (mg/L) × flow (MGD) × 8.345 × (2 hours/24 hours)

where: FAC (mg/L) = concentration of FAC measured in the effluent during representative period of chlorination.

flow (MGD) = total actual flow of discharge via outfall during sampling day

g. The term *water treatment wastes* includes, but is not limited to: cold lime water treatment wastes, filter backwash, ion exchange water treatment system wastes, membrane regeneration wastes, and reverse osmosis reject water. For the purposes of this permit, the definition of water treatment wastes does not include ion exchange water treatment system wastes.

11. There shall be no discharge of metal cleaning waste or chemical metal cleaning waste into surface waters in the state.

12. EVAPORATION PONDS

a. Some low volume waste sources (LVW) and all metal cleaning wastes (MCW) generated at this plant are routed into a series of evaporation ponds as described in the following table.

Pond No.	Type Wastewater	Pond Size	Approximate Capacity	Pond Liner	Monitor Wells
1	LVW MCW	200 ft × 184 ft × 5 ft	4.22 acre-feet	Clay	None
2	LVW MCW	100 ft × 90 ft × 5 ft	1.03 acre-feet	Clay	None
3	LVW MCW	378 ft × 274 ft × 5 ft	12.07 acre-feet	Clay	None
4	LVW MCW	400 ft × 321 ft × 6 ft	17.69 acre-feet	Synthetic	None

b. There shall be no discharge of wastewater from Ponds 1, 2, 3, and 4 into surface waters in the state.

c. All wastewater retention ponds shall be operated in such a manner as to maintain a minimum freeboard of two feet.

d. The permittee shall maintain a plant area map showing the location of the ponds and pond numbers at the plant site for inspection by the TCEQ personnel. For ponds constructed after this permit issuance date, the permittee shall submit to the TCEQ Wastewater Permitting Section (MC 148) and Regional Office and updated plant area map showing the location of the new pond(s) and pond(s) number. Additional pond data as contained in Item 12. a. shall also be submitted. A permit amendment is not required unless there will be a discharge of wastewater into surface waters in the state from the new pond(s).

e. The permittee shall notify the Executive Director in writing, at least 90 days prior to discontinuing use of any surface impoundment, pit, or basin authorized by this permit. The permittee shall, at the request of the Executive Director, submit such information as is necessary to evaluate closure of the water management unit(s) including, but not limited to, chemical analyses of bottom sediments, soils, and groundwater samples.

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

    a. A wastewater pond **subject to 40 CFR Part 257, Subpart D** (related to coal combustion residuals) must comply with those requirements in lieu of the requirements in b. through g. of POND REQUIREMENTS.

    b. An **existing** wastewater pond must be maintained to meet or exceed the original approved design and liner requirements; or, in the absence of original approved requirements, must be maintained to prevent unauthorized discharges of wastewater into or adjacent to water in the state. The permittee shall maintain copies of all liner construction and testing documents at the facility or in a reasonably accessible location and make the information available to the executive director upon request.

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

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

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

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

        (3) Alternate liner: The permittee shall submit plans signed and sealed by a Texas-licensed professional engineer for any other equivalently protective pond lining method to the Industrial Permits Team (MC-148) and copy the Compliance Monitoring Team (MC-224).

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

   The certification must be provided to the TCEQ Water Quality Assessment Team (MC-150), Industrial Permits Team (MC-148), Compliance Monitoring Team (MC-224) and regional office. A copy of the liner certification and construction details (i.e., as-built drawings, construction QA/QC documentation, and post construction testing) must be kept on-site or in a reasonably accessible location (in either hardcopy or digital format) until the pond is closed.

e. Protection and maintenance requirements for a pond subject to subparagraph b. or c. (including ponds with in-situ soil liners).

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

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

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

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

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

      B. Pond liner damage must be repaired at the recommendation of a Texas-licensed professional engineer or Texas-licensed professional geoscientist. If the damage is significant or could result in an unauthorized discharge, then the repair must be documented and certified by a Texas-licensed professional engineer. Within 60 days after a repair is completed, the liner certification must be provided to the TCEQ Water Quality Assessment Team (MC-150), Compliance Monitoring Section (MC-224), and regional office. A copy of the liner certification must be maintained at the facility or in a reasonably accessible location and made available to the executive director upon request.

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

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

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

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

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

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

14. Once-Through Cooling Water Exemption Study

a. In accordance with 30 TAC § 307.8(d), the permittee is authorized to conduct a study to determine if the discharge of once-through cooling water via Outfall 001 does not measurably alter the intake concentration of total mercury and total thallium.

b. The permittee shall submit a work plan for the study of total mercury and total thallium concentrations in the intake and effluent within 90 days of permit issuance. The permittee shall work with the staff of the Water Quality Standards Team of the Water Quality Assessment Section to develop an acceptable plan.

The draft study plan must, at a minimum, include the following components:

1. a sampling plan to collect at least ten paired (intake and effluent) grab samples, with each sample of a pair collected within one hour of the other;
2. a method for statistical analysis of the data to determine if a statistically significant increase at the 95 percent confidence level occurs; and
3. a plan to conduct a source investigation of the pollutant.

c. Upon approval of the study plan, the permittee shall conduct the study. If the permittee does not conduct or complete a study and submit the results to the Water Quality Standards Team (MC-150) at least two years prior to the permit's expiration date, the effluent limitations for total mercury and total thallium will become effective three years after the date of permit issuance.

d. The once-through cooling water exemption will be approved or denied based upon the findings of the statistical analysis and of the source investigation. Should the exemption be denied, upon renewal the permittee may request a compliance period not to exceed three years to install

additional treatment units or take other action necessary to meet the effluent limits.

e. If the study is approved, the permit may be renewed without final effluent limits for total mercury and total thallium. The renewed permit may include long-term monitoring requirements of both the effluent and intake water.

BIOMONITORING REQUIREMENTS

CHRONIC BIOMONITORING REQUIREMENTS: FRESHWATER

The provisions of this section apply to Outfall 001 for whole effluent toxicity (WET) testing.

1. Scope, Frequency, and Methodology

a. The permittee shall test the effluent for toxicity in accordance with the provisions below. Such testing will determine if an appropriately dilute effluent sample adversely affects the survival, reproduction, or growth of the test organisms.

b. The permittee shall conduct the following toxicity tests utilizing the test organisms, procedures, and quality assurance requirements specified in this part of this permit and in accordance with "Short-Term Methods for Estimating the Chronic Toxicity of Effluents and Receiving Waters to Freshwater Organisms," fourth edition (EPA-821-R-02-013) or its most recent update:

1) Chronic static renewal survival and reproduction test using the water flea (*Ceriodaphnia dubia*) (Method 1002.0). This test should be terminated when 60% of the surviving adults in the control produce three broods or at the end of eight days, whichever occurs first. This test shall be conducted once per quarter.

2) Chronic static renewal 7-day larval survival and growth test using the fathead minnow (*Pimephales promelas*) (Method 1000.0). A minimum of five replicates with eight organisms per replicate shall be used in the control and in each dilution. This test shall be conducted once per quarter.

The permittee must perform and report a valid test for each test species during the prescribed reporting period. An invalid test must be repeated during the same reporting period. An invalid test is defined as any test failing to satisfy the test acceptability criteria, procedures, and quality assurance requirements specified in the test methods and permit.

c. The permittee shall use five effluent dilution concentrations and a control in each toxicity test. These effluent dilution concentrations are 32%, 42%, 56%, 75%, and 100% effluent. The critical dilution, defined as 100% effluent, is the effluent concentration representative of the proportion of effluent in the receiving water during critical low flow or critical mixing conditions.

d. This permit may be amended to require a WET limit, a chemical-specific effluent limit, a best management practice, or other appropriate actions to address toxicity. The permittee may be required to conduct a toxicity reduction evaluation (TRE) after multiple toxic events.

e. Testing Frequency Reduction

1) If none of the first four consecutive quarterly tests demonstrates significant toxicity, the permittee may submit this information in writing and, upon approval, reduce the testing frequency to once per six months for the invertebrate test species and once per year for the vertebrate test species.

2) If one or more of the first four consecutive quarterly tests demonstrates

significant toxicity, the permittee shall continue quarterly testing for that species until this permit is reissued. If a testing frequency reduction had been previously granted and a subsequent test demonstrates significant toxicity, the permittee will resume a quarterly testing frequency for that species until this permit is reissued.

2. Required Toxicity Testing Conditions

a. Test Acceptance - The permittee shall repeat any toxicity test, including the control and all effluent dilutions, which fail to meet the following criteria:

1) a control mean survival of 80% or greater;

2) a control mean number of water flea neonates per surviving adult of 15 or greater;

3) a control mean dry weight of surviving fathead minnow larvae of 0.25 mg or greater;

4) a control coefficient of variation percent (CV%) of 40 or less between replicates for the young of surviving females in the water flea test; and the growth and survival endpoints in the fathead minnow test;

5) a critical dilution CV% of 40 or less for the young of surviving females in the water flea test; and the growth and survival endpoints for the fathead minnow test. However, if statistically significant lethal or nonlethal effects are exhibited at the critical dilution, a CV% greater than 40 shall not invalidate the test;

6) a percent minimum significant difference of 47 or less for water flea reproduction; and

7) a percent minimum significant difference of 30 or less for fathead minnow growth.

b. Statistical Interpretation

1) For the water flea survival test, the statistical analyses used to determine if there is a significant difference between the control and an effluent dilution shall be the Fisher's exact test as described in the manual referenced in Part 1.b.

2) For the water flea reproduction test and the fathead minnow larval survival and growth tests, the statistical analyses used to determine if there is a significant difference between the control and an effluent dilution shall be in accordance with the manual referenced in Part 1.b.

3) The permittee is responsible for reviewing test concentration-response relationships to ensure that calculated test-results are interpreted and reported correctly. The document entitled "Method Guidance and Recommendation for Whole Effluent Toxicity (WET) Testing (40 CFR Part 136)" (EPA 821-B-00-004) provides guidance on determining the validity of test results.

4) If significant lethality is demonstrated (that is, there is a statistically significant difference in survival at the critical dilution when compared to the survival in

the control), the conditions of test acceptability are met, and the survival of the test organisms are equal to or greater than 80% in the critical dilution and all dilutions below that, then the permittee shall report a survival No Observed Effect Concentration (NOEC) of not less than the critical dilution for the reporting requirements.

5) The NOEC is defined as the greatest effluent dilution at which no significant effect is demonstrated. The Lowest Observed Effect Concentration (LOEC) is defined as the lowest effluent dilution at which a significant effect is demonstrated. A significant effect is herein defined as a statistically significant difference between the survival, reproduction, or growth of the test organism in a specified effluent dilution when compared to the survival, reproduction, or growth of the test organism in the control.

6) The use of NOECs and LOECs assumes either a monotonic (continuous) concentration-response relationship or a threshold model of the concentration-response relationship. For any test result that demonstrates a non-monotonic (non-continuous) response, the NOEC should be determined based on the guidance manual referenced in Item 3.

7) Pursuant to the responsibility assigned to the permittee in Part 2.b.3), test results that demonstrate a non-monotonic (non-continuous) concentration-response relationship may be submitted, prior to the due date, for technical review. The guidance manual referenced in Item 3 will be used when making a determination of test acceptability.

8) TCEQ staff will review test results for consistency with rules, procedures, and permit requirements.

c. Dilution Water

1) Dilution water used in the toxicity tests must be the receiving water collected as close to the point of discharge as possible but unaffected by the discharge.

2) Where the receiving water proves unsatisfactory as a result of pre-existing instream toxicity (i.e. fails to fulfill the test acceptance criteria of Part 2.a.), the permittee may substitute synthetic dilution water for the receiving water in all subsequent tests provided the unacceptable receiving water test met the following stipulations:

a) a synthetic lab water control was performed (in addition to the receiving water control) which fulfilled the test acceptance requirements of Part 2.a;

b) the test indicating receiving water toxicity was carried out to completion (i.e., 7 days);

c) the permittee submitted all test results indicating receiving water toxicity with the reports and information required in Part 3.

3) The synthetic dilution water shall consist of standard, moderately hard, reconstituted water. Upon approval, the permittee may substitute other appropriate dilution water with chemical and physical characteristics similar to

that of the receiving water.

d. Samples and Composites

1) The permittee shall collect a minimum of three composite samples from Outfall 001. The second and third composite samples will be used for the renewal of the dilution concentrations for each toxicity test.

2) The permittee shall collect the composite samples such that the samples are representative of any periodic episode of chlorination, biocide usage, or other potentially toxic substance being discharged on an intermittent basis.

3) The permittee shall initiate the toxicity tests within 36 hours after collection of the last portion of the first composite sample. The holding time for any subsequent composite sample shall not exceed 72 hours. Samples shall be maintained at a temperature of 0-6 degrees Centigrade during collection, shipping, and storage.

4) If Outfall 001 ceases discharging during the collection of effluent samples, the requirements for the minimum number of effluent samples, the minimum number of effluent portions, and the sample holding time are waived during that sampling period. However, the permittee must have collected an effluent composite sample volume sufficient to complete the required toxicity tests with renewal of the effluent. When possible, the effluent samples used for the toxicity tests shall be collected on separate days if the discharge occurs over multiple days. The sample collection duration and the static renewal protocol associated with the abbreviated sample collection must be documented in the full report.

3. Reporting

All reports, tables, plans, summaries, and related correspondence required this section shall be submitted to the attention of the Standards Implementation Team (MC 150) of the Water Quality Division.

a. The permittee shall prepare a full report of the results of all tests conducted in accordance with the manual referenced in Part 1.b. for every valid and invalid toxicity test initiated whether carried to completion or not.

b. The permittee shall routinely report the results of each biomonitoring test on the Table 1 forms provided with this permit.

1) Annual biomonitoring test results are due on or before January 20th for biomonitoring conducted during the previous 12-month period.

2) Semiannual biomonitoring test results are due on or before July 20th and January 20th for biomonitoring conducted during the previous 6-month period.

3) Quarterly biomonitoring test results are due on or before April 20th, July 20th, October 20th, and January 20th for biomonitoring conducted during the previous calendar quarter.

4) Monthly biomonitoring test results are due on or before the 20th day of the month following sampling.

c. Enter the following codes for the appropriate parameters for valid tests only:

1) For the water flea, Parameter TLP3B, enter a "1" if the NOEC for survival is less than the critical dilution; otherwise, enter a "0."

2) For the water flea, Parameter TOP3B, report the NOEC for survival.

3) For the water flea, Parameter TXP3B, report the LOEC for survival.

4) For the water flea, Parameter TWP3B, enter a "1" if the NOEC for reproduction is less than the critical dilution; otherwise, enter a "0."

5) For the water flea, Parameter TPP3B, report the NOEC for reproduction.

6) For the water flea, Parameter TYP3B, report the LOEC for reproduction.

7) For the fathead minnow, Parameter TLP6C, enter a "1" if the NOEC for survival is less than the critical dilution; otherwise, enter a "0."

8) For the fathead minnow, Parameter TOP6C, report the NOEC for survival.

9) For the fathead minnow, Parameter TXP6C, report the LOEC for survival.

10) For the fathead minnow, Parameter TWP6C, enter a "1" if the NOEC for growth is less than the critical dilution; otherwise, enter a "0."

11) For the fathead minnow, Parameter TPP6C, report the NOEC for growth.

12) For the fathead minnow, Parameter TYP6C, report the LOEC for growth.

d. Enter the following codes for retests only:

1) For retest number 1, Parameter 22415, enter a "1" if the NOEC for survival is less than the critical dilution; otherwise, enter a "0."

2) For retest number 2, Parameter 22416, enter a "1" if the NOEC for survival is less than the critical dilution; otherwise, enter a "0."

4. Persistent Toxicity

The requirements of this Part apply only when a test demonstrates a significant effect at the critical dilution. Significant effect and significant lethality were defined in Part 2.b. Significant sublethality is defined as a statistically significant difference in growth/reproduction at the critical dilution when compared to the growth/reproduction of the test organism in the control.

a. The permittee shall conduct a total of 2 additional tests (retests) for any species that demonstrates a significant effect (lethal or sublethal) at the critical dilution. The two retests shall be conducted monthly during the next two consecutive months. The permittee shall not substitute either of the two retests in lieu of routine toxicity testing. All reports shall be submitted within 20 days of test completion. Test completion is defined as the last day of the test.

b. If the retests are performed due to a demonstration of significant lethality, and one or both of the two retests specified in Part 4.a. demonstrates significant lethality, the permittee shall initiate the TRE requirements as specified in Part 5. The provisions of Part 4.a. are suspended upon completion of the two retests and submittal of the TRE action plan and schedule defined in Part 5.

If neither test demonstrates significant lethality and the permittee is testing under the reduced testing frequency provision of Part 1.e., the permittee shall return to a quarterly testing frequency for that species.

c. If the two retests are performed due to a demonstration of significant sublethality, and one or both of the two retests specified in Part 4.a. demonstrates significant lethality, the permittee shall again perform two retests as stipulated in Part 4.a.

d. If the two retests are performed due to a demonstration of significant sublethality, and neither test demonstrates significant lethality, the permittee shall continue testing at the quarterly frequency.

e. Regardless of whether retesting for lethal or sublethal effects or a combination of the two, no more than one retest per month is required for a species.

5. Toxicity Reduction Evaluation

a. Within 45 days of the retest that demonstrates significant lethality, or within 45 days of being so instructed due to multiple toxic events, the permittee shall submit a general outline for initiating a TRE. The outline shall include, but not be limited to, a description of project personnel, a schedule for obtaining consultants (if needed), a discussion of influent and effluent data available for review, a sampling and analytical schedule, and a proposed TRE initiation date.

b. Within 90 days of the retest that demonstrates significant lethality, or within 90 days of being so instructed due to multiple toxic events, the permittee shall submit a TRE action plan and schedule for conducting a TRE. The plan shall specify the approach and methodology to be used in performing the TRE. A TRE is a step-wise investigation combining toxicity testing with physical and chemical analyses to determine actions necessary to eliminate or reduce effluent toxicity to a level not effecting significant lethality at the critical dilution. The TRE action plan shall describe an approach for the reduction or elimination of lethality for both test species defined in Part 1.b. At a minimum, the TRE action plan shall include the following:

1) Specific Activities - The TRE action plan shall specify the approach the permittee intends to utilize in conducting the TRE, including toxicity characterizations, identifications, confirmations, source evaluations, treatability studies, and alternative approaches. When conducting characterization analyses, the permittee shall perform multiple characterizations and follow the procedures specified in the document entitled “Toxicity Identification Evaluation: Characterization of Chronically Toxic Effluents, Phase I” (EPA/600/6-91/005F) or alternate procedures. The permittee shall perform multiple identifications and follow the methods specified in the documents entitled “Methods for Aquatic Toxicity Identification Evaluations: Phase II Toxicity Identification Procedures for Samples Exhibiting Acute and Chronic Toxicity” (EPA/600/R-92/080) and “Methods for Aquatic Toxicity Identification

Evaluations: Phase III Toxicity Confirmation Procedures for Samples Exhibiting Acute and Chronic Toxicity" (EPA/600/R-92/081). All characterization, identification, and confirmation tests shall be conducted in an orderly and logical progression;

2) Sampling Plan - The TRE action plan should describe sampling locations, methods, holding times, chain of custody, and preservation techniques. The effluent sample volume collected for all tests shall be adequate to perform the toxicity characterization/identification/confirmation procedures and chemical-specific analyses when the toxicity tests show significant lethality. Where the permittee has identified or suspects a specific pollutant and source of effluent toxicity, the permittee shall conduct, concurrent with toxicity testing, chemical-specific analyses for the identified and suspected pollutant and source of effluent toxicity;

3) Quality Assurance Plan - The TRE action plan should address record keeping and data evaluation, calibration and standardization, baseline tests, system blanks, controls, duplicates, spikes, toxicity persistence in the samples, randomization, reference toxicant control charts, and mechanisms to detect artifactual toxicity; and

4) Project Organization - The TRE action plan should describe the project staff, project manager, consulting engineering services (where applicable), consulting analytical and toxicological services, etc.

c. Within 30 days of submittal of the TRE action plan and schedule, the permittee shall implement the TRE.

d. The permittee shall submit quarterly TRE activities reports concerning the progress of the TRE. The quarterly reports are due on or before April 20th, July 20th, October 20th, and January 20th. The report shall detail information regarding the TRE activities including:

1) results and interpretation of any chemical-specific analyses for the identified and suspected pollutant performed during the quarter;

2) results and interpretation of any characterization, identification, and confirmation tests performed during the quarter;

3) any data and substantiating documentation which identifies the pollutant and source of effluent toxicity;

4) results of any studies/evaluations concerning the treatability of the facility's effluent toxicity;

5) any data which identifies effluent toxicity control mechanisms that will reduce effluent toxicity to the level necessary to meet no significant lethality at the critical dilution; and

6) any changes to the initial TRE plan and schedule that are believed necessary as a result of the TRE findings.

e. During the TRE, the permittee shall perform, at a minimum, quarterly testing using the

more sensitive species. Testing for the less sensitive species shall continue at the frequency specified in Part 1.b.

f. If the effluent ceases to effect significant lethality, i.e., there is a cessation of lethality, the permittee may end the TRE. A cessation of lethality is defined as no significant lethality for a period of 12 consecutive months with at least monthly testing. At the end of the 12 months, the permittee shall submit a statement of intent to cease the TRE and may then resume the testing frequency specified in Part 1.b.

This provision accommodates situations where operational errors and upsets, spills, or sampling errors triggered the TRE, in contrast to a situation where a single toxicant or group of toxicants cause lethality. This provision does not apply as a result of corrective actions taken by the permittee. Corrective actions are herein defined as proactive efforts that eliminate or reduce effluent toxicity. These include, but are not limited to, source reduction or elimination, improved housekeeping, changes in chemical usage, and modifications of influent streams and effluent treatment.

The permittee may only apply this cessation of lethality provision once. If the effluent again demonstrates significant lethality to the same species, the permit will be amended to add a WET limit with a compliance period, if appropriate. However, prior to the effective date of the WET limit, the permittee may apply for a permit amendment removing and replacing the WET limit with an alternate toxicity control measure by identifying and confirming the toxicant and an appropriate control measure.

g. The permittee shall complete the TRE and submit a final report on the TRE activities no later than 28 months from the last test day of the retest that confirmed significant lethal effects at the critical dilution. The permittee may petition the Executive Director (in writing) for an extension of the 28-month limit. However, to warrant an extension the permittee must have demonstrated due diligence in its pursuit of the toxicity identification evaluation/TRE and must prove that circumstances beyond its control stalled the toxicity identification evaluation/TRE. The report shall provide information pertaining to the specific control mechanism selected that will, when implemented, result in reduction of effluent toxicity to no significant lethality at the critical dilution. The report will also provide a specific corrective action schedule for implementing the selected control mechanism.

h. Based upon the results of the TRE and proposed corrective actions, this permit may be amended to modify the biomonitoring requirements, where necessary, require a compliance schedule for implementation of corrective actions, specify a WET limit, specify a best management practice, and specify a chemical-specific limit.

i. Copies of any and all required TRE plans and reports shall also be submitted to the U.S. EPA Region 6 office, 6WQ-PO.

TABLE 1 (SHEET 1 OF 4)

BIOMONITORING REPORTING

CERIODAPHNIA DUBIA SURVIVAL AND REPRODUCTION

Dates and Times Composites Collected

Date Time Date Time

No. 1 FROM: _____ TO: _____

No. 2 FROM: _____ TO: _____

No. 3 FROM: _____ TO: _____

Test initiated: _____am/pm _____date

Dilution water used: _____ Receiving Water _____ Synthetic Dilution Water

NUMBER OF YOUNG PRODUCED PER ADULT AT END OF TEST

	Percent effluent (%)					
REP	0%	32%	42%	56%	75%	100%
A						
B						
C						
D						
E						
F						
G						
H						
I						
J						
Survival Mean						
Total Mean						
CV%*						
PMSD						

*Coefficient of Variation = standard deviation x 100/mean (calculation based on young of the surviving adults) Designate males (M), and dead females (D), along with number of neonates (x) released prior to death.

TABLE 1 (SHEET 2 OF 4)

CERIODAPHNIA DUBIA SURVIVAL AND REPRODUCTION TEST

1. Dunnett's Procedure or Steel's Many-One Rank Test or Wilcoxon Rank Sum Test (with Bonferroni adjustment) or t-test (with Bonferroni adjustment) as appropriate:

   Is the mean number of young produced per adult significantly less than the number of young per adult in the control for the % effluent corresponding to significant nonlethal effects?

   CRITICAL DILUTION (100%): _____ YES _____ NO

PERCENT SURVIVAL

	Percent effluent					
Time of Reading	0%	32%	42%	56%	75%	100%
24h						
48h						
End of Test						

2. Fisher's Exact Test:

   Is the mean survival at test end significantly less than the control survival for the % effluent corresponding to lethality?

   CRITICAL DILUTION (100%): _____ YES _____ NO

3. Enter percent effluent corresponding to each NOEC/LOEC below:

   a.) NOEC survival = _____% effluent

   b.) LOEC survival = _____% effluent

   c.) NOEC reproduction = _____% effluent

   d.) LOEC reproduction = _____% effluent

TABLE 1 (SHEET 3 OF 4)

BIOMONITORING REPORTING

FATHEAD MINNOW LARVAE GROWTH AND SURVIVAL

Dates and Times Composites Collected

Date Time Date Time

No. 1 FROM: _____ TO: _____

No. 2 FROM: _____ TO: _____

No. 3 FROM: _____ TO: _____

Test initiated: _____am/pm _____date

Dilution water used: _____ Receiving Water _____ Synthetic Dilution Water

FATHEAD MINNOW GROWTH DATA

Effluent Concentration	Average Dry Weight in milligrams in replicate chambers					Mean Dry Weight	CV%*
	A	B	C	D	E		
0%							
32%							
42%							
56%							
75%							
100%							
PMSD							

* Coefficient of Variation = standard deviation x 100/mean

1. Dunnett's Procedure or Steel's Many-One Rank Test or Wilcoxon Rank Sum Test (with Bonferroni adjustment) or t-test (with Bonferroni adjustment) as appropriate:

   Is the mean dry weight (growth) at 7 days significantly less than the control's dry weight (growth) for the % effluent corresponding to significant nonlethal effects?

CRITICAL DILUTION (100%): _____ YES _____ NO

TABLE 1 (SHEET 4 OF 4)

BIOMONITORING REPORTING

FATHEAD MINNOW GROWTH AND SURVIVAL TEST

FATHEAD MINNOW SURVIVAL DATA

Effluent Concentration	Percent Survival in replicate chambers					Mean percent survival			CV%*
	A	B	C	D	E	24h	48h	7 day	
0%									
32%									
42%									
56%									
75%									
100%									

* Coefficient of Variation = standard deviation x 100/mean

2. Dunnett's Procedure or Steel's Many-One Rank Test or Wilcoxon Rank Sum Test (with Bonferroni adjustment) or t-test (with Bonferroni adjustment) as appropriate:

   Is the mean survival at 7 days significantly less (p=0.05) than the control survival for the % effluent corresponding to lethality?

   CRITICAL DILUTION (100%): _____ YES _____ NO

3. Enter percent effluent corresponding to each NOEC/LOEC below:

   a.) NOEC survival = _____% effluent

   b.) LOEC survival = _____% effluent

   c.) NOEC growth = _____% effluent

   d.) LOEC growth = _____% effluent

24-HOUR ACUTE BIOMONITORING REQUIREMENTS: FRESHWATER

The provisions of this section apply to Outfall 001 for whole effluent toxicity (WET) testing.

1. Scope, Frequency, and Methodology

a. The permittee shall test the effluent for lethality in accordance with the provisions in this section. Such testing will determine compliance with Texas Surface Water Quality Standard 30 TAC § 307.6(e)(2)(B), which requires greater than 50% survival of the appropriate test organisms in 100% effluent for a 24-hour period.

b. The toxicity tests specified shall be conducted once per six months. The permittee shall conduct the following toxicity tests using the test organisms, procedures, and quality assurance requirements specified in this section of the permit and in accordance with "Methods for Measuring the Acute Toxicity of Effluents and Receiving Waters to Freshwater and Marine Organisms," fifth edition (EPA-821-R-02-012) or its most recent update:

1) Acute 24-hour static toxicity test using the water flea (*Daphnia pulex* or *Ceriodaphnia dubia*). A minimum of five replicates with eight organisms per replicate shall be used in the control and each dilution.

2) Acute 24-hour static toxicity test using the fathead minnow (*Pimephales promelas*). A minimum of five replicates with eight organisms per replicate shall be used in the control and each dilution.

The permittee must perform and report a valid test for each test species during the prescribed reporting period. An invalid test must be repeated during the same reporting period. An invalid test is defined as any test failing to satisfy the test acceptability criteria, procedures, and quality assurance requirements specified in the test methods and permit. All test results, valid or invalid, must be submitted as described below.

c. In addition to an appropriate control, a 100% effluent concentration shall be used in the toxicity tests. The control and dilution water shall consist of standard, synthetic, moderately hard, reconstituted water.

d. This permit may be amended to require a WET limit, a best management practice, a chemical-specific limit, or other appropriate actions to address toxicity. The permittee may be required to conduct a toxicity reduction evaluation (TRE) after multiple toxic events.

e. As the dilution series specified in the Chronic Biomonitoring Requirements includes a 100% effluent concentration, the results from those tests may fulfill the requirements of this section; any tests performed in the proper time interval may be substituted. Compliance will be evaluated as specified in Part 1.a. The 50% survival in 100% effluent for a 24-hour period standard applies to all tests utilizing a 100% effluent dilution, regardless of whether the results are submitted to comply with the minimum testing frequency.

2. Required Toxicity Testing Conditions

a. Test Acceptance – The permittee shall repeat any toxicity test, including the control, if

the control fails to meet a mean survival equal to or greater than 90%.

b. Dilution Water - In accordance with Part 1.c., the control and dilution water shall consist of standard, synthetic, moderately hard, reconstituted water.

c. Samples and Composites

1) The permittee shall collect one composite sample from Outfall 001.

2) The permittee shall collect the composite sample such that the sample is representative of any periodic episode of chlorination, biocide usage, or other potentially toxic substance discharged on an intermittent basis.

3) The permittee shall initiate the toxicity tests within 36 hours after collection of the last portion of the composite sample. Samples shall be maintained at a temperature of 0-6 degrees Centigrade during collection, shipping, and storage.

4) If Outfall 001 ceases discharging during the collection of the effluent composite sample, the requirements for the minimum number of effluent portions are waived. However, the permittee must have collected a composite sample volume sufficient for completion of the required test. The abbreviated sample collection, duration, and methodology must be documented in the full report.

3. Reporting

All reports, tables, plans, summaries, and related correspondence required in this section shall be submitted to the attention of the Standards Implementation Team (MC 150) of the Water Quality Division.

a. The permittee shall prepare a full report of the results of all tests conducted pursuant to this permit in accordance with the manual referenced in Part 1.b. for every valid and invalid toxicity test initiated.

b. The permittee shall routinely report the results of each biomonitoring test on the Table 2 forms provided with this permit.

1) Semiannual biomonitoring test results are due on or before July 20th and January 20th for biomonitoring conducted during the previous 6-month period.

2) Quarterly biomonitoring test results are due on or before April 20th, July 20th, and October 20th, and January 20th for biomonitoring conducted during the previous calendar quarter.

c. Enter the following codes for the appropriate parameters for valid tests only:

1) For the water flea, Parameter TIE3D, enter a “0” if the mean survival at 24 hours is greater than 50% in the 100% effluent dilution; if the mean survival is less than or equal to 50%, enter “1.”

2) For the fathead minnow, Parameter TIE6C, enter a “0” if the mean survival at 24 hours is greater than 50% in the 100% effluent dilution; if the mean survival is less than or equal to 50%, enter “1.”

d. Enter the following codes for retests only:

1) For retest number 1, Parameter 22415, enter a "0" if the mean survival at 24 hours is greater than 50% in the 100% effluent dilution; if the mean survival is less than or equal to 50%, enter "1."

2) For retest number 2, Parameter 22416, enter a "0" if the mean survival at 24 hours is greater than 50% in the 100% effluent dilution; if the mean survival is less than or equal to 50%, enter "1."

4. Persistent Mortality

The requirements of this part apply when a toxicity test demonstrates significant lethality, which is defined as a mean mortality of 50% or greater to organisms exposed to the 100% effluent concentration for 24 hours.

a. The permittee shall conduct 2 additional tests (retests) for each species that demonstrates significant lethality. The two retests shall be conducted once per week for 2 weeks. Five effluent dilution concentrations in addition to an appropriate control shall be used in the retests. These effluent concentrations are 6%, 13%, 25%, 50%, and 100% effluent. The first retest shall be conducted within 15 days of the laboratory determination of significant lethality. All test results shall be submitted within 20 days of test completion of the second retest. Test completion is defined as the 24th hour.

b. If one or both of the two retests specified in Part 4.a. demonstrates significant lethality, the permittee shall initiate the TRE requirements as specified in Part 5.

5. Toxicity Reduction Evaluation

a. Within 45 days of the retest that demonstrates significant lethality, the permittee shall submit a general outline for initiating a TRE. The outline shall include, but not be limited to, a description of project personnel, a schedule for obtaining consultants (if needed), a discussion of influent and effluent data available for review, a sampling and analytical schedule, and a proposed TRE initiation date.

b. Within 90 days of the retest that demonstrates significant lethality, the permittee shall submit a TRE action plan and schedule for conducting a TRE. The plan shall specify the approach and methodology to be used in performing the TRE. A TRE is a step-wise investigation combining toxicity testing with physical and chemical analyses to determine actions necessary to eliminate or reduce effluent toxicity to a level not effecting significant lethality at the critical dilution. The TRE action plan shall lead to the successful elimination of significant lethality for both test species defined in item 1.b. As a minimum, the TRE action plan shall include the following:

1) Specific Activities - The TRE action plan shall specify the approach the permittee intends to utilize in conducting the TRE, including toxicity characterizations, identifications, confirmations, source evaluations, treatability studies, and alternative approaches. When conducting characterization analyses, the permittee shall perform multiple characterizations and follow the procedures specified in the document entitled "Methods for Aquatic Toxicity Identification Evaluations: Phase I Toxicity Characterization Procedures" (EPA/600/6-91/003) or alternate procedures. The permittee shall perform multiple identifications and follow the methods specified in the documents

entitled “Methods for Aquatic Toxicity Identification Evaluations: Phase II Toxicity Identification Procedures for Samples Exhibiting Acute and Chronic Toxicity” (EPA/600/R-92/080) and “Methods for Aquatic Toxicity Identification Evaluations: Phase III Toxicity Confirmation Procedures for Samples Exhibiting Acute and Chronic Toxicity” (EPA/600/R-92/081). All characterization, identification, and confirmation tests shall be conducted in an orderly and logical progression;

2) Sampling Plan - The TRE action plan should describe sampling locations, methods, holding times, chain of custody, and preservation techniques. The effluent sample volume collected for all tests shall be adequate to perform the toxicity characterization/identification/confirmation procedures and chemical-specific analyses when the toxicity tests show significant lethality. Where the permittee has identified or suspects a specific pollutant and source of effluent toxicity, the permittee shall conduct, concurrent with toxicity testing, chemical-specific analyses for the identified and suspected pollutant and source of effluent toxicity;

3) Quality Assurance Plan - The TRE action plan should address record keeping and data evaluation, calibration and standardization, baseline tests, system blanks, controls, duplicates, spikes, toxicity persistence in the samples, randomization, reference toxicant control charts, and mechanisms to detect artifactual toxicity; and

4) Project Organization - The TRE action plan should describe the project staff, manager, consulting engineering services (where applicable), consulting analytical and toxicological services, etc.

c. Within 30 days of submittal of the TRE action plan and schedule, the permittee shall implement the TRE.

d. The permittee shall submit quarterly TRE activities reports concerning the progress of the TRE. The quarterly TRE activities reports are due on or before April 20th, July 20th, October 20th, and January 20th. The report shall detail information regarding the TRE activities including:

1) results and interpretation of any chemical-specific analyses for the identified and suspected pollutant performed during the quarter;

2) results and interpretation of any characterization, identification, and confirmation tests performed during the quarter;

3) any data and substantiating documentation that identifies the pollutant(s) and source of effluent toxicity;

4) results of any studies/evaluations concerning the treatability of the facility’s effluent toxicity;

5) any data that identifies effluent toxicity control mechanisms that will reduce effluent toxicity to the level necessary to eliminate significant lethality; and

6) any changes to the initial TRE Plan and Schedule that are believed necessary as a result of the TRE findings.

e. During the TRE, the permittee shall perform, at a minimum, quarterly testing using the more sensitive species. Testing for the less sensitive species shall continue at the frequency specified in Part 1.b.

f. If the effluent ceases to effect significant lethality, i.e., there is a cessation of lethality, the permittee may end the TRE. A cessation of lethality is defined as no significant lethality for a period of 12 consecutive weeks with at least weekly testing. At the end of the 12 weeks, the permittee shall submit a statement of intent to cease the TRE and may then resume the testing frequency specified in Part 1.b.

This provision accommodates situations where operational errors and upsets, spills, or sampling errors triggered the TRE, in contrast to a situation where a single toxicant or group of toxicants cause lethality. This provision does not apply as a result of corrective actions taken by the permittee. Corrective actions are herein defined as proactive efforts that eliminate or reduce effluent toxicity. These include, but are not limited to, source reduction or elimination, improved housekeeping, changes in chemical usage, and modifications of influent streams and effluent treatment.

The permittee may only apply this cessation of lethality provision once. If the effluent again demonstrates significant lethality to the same species, the permit will be amended to add a WET limit with a compliance period, if appropriate. However, prior to the effective date of the WET limit, the permittee may apply for a permit amendment removing and replacing the WET limit with an alternate toxicity control measure by identifying and confirming the toxicant and an appropriate control measure.

g. The permittee shall complete the TRE and submit a final report on the TRE activities no later than 18 months from the last test day of the retest that demonstrates significant lethality. The permittee may petition the Executive Director (in writing) for an extension of the 18-month limit. However, to warrant an extension the permittee must have demonstrated due diligence in its pursuit of the toxicity identification evaluation/TRE and must prove that circumstances beyond its control stalled the toxicity identification evaluation/TRE. The report shall specify the control mechanism that will, when implemented, reduce effluent toxicity as specified in item 5.h. The report shall also specify a corrective action schedule for implementing the selected control mechanism.

h. Within 3 years of the last day of the test confirming toxicity, the permittee shall comply with 30 TAC § 307.6(e)(2)(B), which requires greater than 50% survival of the test organism in 100% effluent at the end of 24-hours. The permittee may petition the Executive Director (in writing) for an extension of the 3-year limit. However, to warrant an extension the permittee must have demonstrated due diligence in its pursuit of the toxicity identification evaluation/TRE and must prove that circumstances beyond its control stalled the toxicity identification evaluation/TRE.

The permittee may be exempted from complying with 30 TAC § 307.6(e)(2)(B) upon proving that toxicity is caused by an excess, imbalance, or deficiency of dissolved salts. This exemption excludes instances where individually toxic components (e.g., metals) form a salt compound. Following the exemption, this permit may be amended to include an ion-adjustment protocol, alternate species testing, or single species testing.

i. Based upon the results of the TRE and proposed corrective actions, this permit may be amended to modify the biomonitoring requirements where necessary, require a

compliance schedule for implementation of corrective actions, specify a WET limit, specify a best management practice, and specify a chemical specific limit.

j. Copies of any and all required TRE plans and reports shall also be submitted to the U.S. EPA Region 6 office, 6WQ-PO.

TABLE 2 (SHEET 1 OF 2)

WATER FLEA SURVIVAL

GENERAL INFORMATION

	Time	Date
Composite Sample Collected		
Test Initiated		

PERCENT SURVIVAL

Time	Rep	Percent effluent					
		0%	6%	13%	25%	50%	100%
24h	A						
	B						
	C						
	D						
	E						
	MEAN*						

Enter percent effluent corresponding to the LC50 below:

24 hour LC50 = _____% effluent

TABLE 2 (SHEET 2 OF 2)

FATHEAD MINNOW SURVIVAL

GENERAL INFORMATION

	Time	Date
Composite Sample Collected		
Test Initiated		

PERCENT SURVIVAL

Time	Rep	Percent effluent					
		0%	6%	13%	25%	50%	100%
24h	A						
	B						
	C						
	D						
	E						
	MEAN						

Enter percent effluent corresponding to the LC50 below:

24 hour LC50 = _____% effluent

FACT SHEET AND EXECUTIVE DIRECTOR'S PRELIMINARY DECISION

For draft Texas Pollutant Discharge Elimination System (TPDES) Permit No. WQ0001923000, U.S. Environmental Protection Agency (EPA) ID No. TX0001848, to discharge to water in the state

Issuing Office:	Texas Commission on Environmental Quality (TCEQ) P.O. Box 13087 Austin, Texas 78711-3087
Applicant:	City of Garland 13835 County Road 489 Nevada, Texas 75173
Prepared By:	Alexander Owens Wastewater Permitting Section Water Quality Division (512) 239-6707
Date:	[Fill in when mailout occurs]
Permit Action:	Major Amendment with Renewal to authorize the consolidation of Internal Outfall 101 with External Outfall 001 in the draft permit to consolidate sampling frequencies for wastewater discharged via Outfall 001, and authorize the disposal of metal cleaning wastes via Evaporation Ponds 2 and 4.

I. EXECUTIVE DIRECTOR RECOMMENDATION

The Executive Director has made a preliminary decision that this permit, if issued, meets all statutory and regulatory requirements. The draft permit will expire at midnight, three years from the date of permit issuance according to the requirements of 30 Texas Administrative Code (TAC) §305.127(1)(C)(i).

II. APPLICANT ACTIVITY

The applicant currently operates Garland Municipal Power - Ray Olinger Power Plant, a natural gas-fired steam electric power generating facility.

III. DISCHARGE LOCATION

As described in the application, the facility is located at 13835 County Road 489, near the City of Nevada, Collin County, Texas 75173. Discharge is directly to Lavon Lake in Segment No. 0821 of the Trinity River Basin.

IV. RECEIVING STREAM USES

The designated uses for Segment No. 0821 are primary contact recreation, public water supply, and high aquatic life use.

V. STREAM STANDARDS

The general criteria and numerical criteria that make up the stream standards are provided in 30 TAC §§ 307.1 - 307.10.

VI. DISCHARGE DESCRIPTION

The following is a quantitative description of the discharge described in the monthly effluent report data for the period of February 2020 through January 2025. The "average of daily average" values presented in the following table are the average of all daily average values for the reporting period for each pollutant. The "maximum of daily maximum" values presented in the following table are the individual maximum values for the reporting period for each pollutant. Flows are expressed in million gallons per day (MGD). All pH values are expressed in standard units (SU).

A. Flow

Outfall	Frequency	Average of Daily Average, MGD	Maximum of Daily Maximum, MGD
001	Continuous	139.43	316.80
101	Intermittent	0.006	0.070

B. Temperature

Outfall	Average of Daily Average, °F	Maximum of Daily Maximum, °F
001	69.17	108.19

C. Effluent Characteristics

Outfall	Pollutant	Average of Daily Average		Maximum of Daily Maximum	
		lbs/day	mg/L	lbs/day	mg/L
001	Free Available Chlorine	5.64	0.06	112.06	0.6
	Total Residual Chlorine	N/A	N/A	29.88	0.29
	Total Aluminum	N/A	0.18	N/A	0.26
	pH, SU	5.28 SU, minimum		9.4 SU, maximum	
101	Total Dissolved Solids	N/A	418.40	N/A	1060
	pH, SU	4.5 SU, minimum		8.8 SU, maximum	

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

D. Effluent Limitation Violations

Outfall	Pollutant (units)	Month/ Year	Daily Average		Daily Maximum	
			Limit	Reported	Limit	Reported
001	Free Available Chlorine (mg/L)	Dec. 21	0.20	0.24	0.50	0.6
	Total Residual Chlorine (mg/L)	Aug. 21	N/A	N/A	0.2	0.24
	Total Residual Chlorine (mg/L)	Sep. 24	N/A	N/A	0.2	0.29
	Pollutant (units)	Month/ Year	Daily Minimum		Daily Maximum	
			Limit	Reported	Limit	Reported
	pH (SU)	Mar. 21	6.0	7.45	9.0	9.4
	pH (SU)	Jun. 21	6.0	5.85	9.0	9.24
	pH (SU)	Jul. 21	6.0	5.44	9.0	9.22
	pH (SU)	May 22	6.0	7.38	9.0	9.33
	pH (SU)	Jun. 22	6.0	8.2	9.0	9.4

Outfall	Pollutant (units)	Month/ Year	Daily Minimum		Daily Maximum	
			Limit	Reported	Limit	Reported
001	pH (SU)	Mar. 24	6.0	5.28	9.0	8.33
	pH (SU)	Apr. 24	6.0	5.3	9.0	7.9
101	pH (SU)	Apr. 24	6.0	4.5	9.0	8.0

The causes of the violations above, as provided by the permittee, are due to employee error, algal growth, and leaks in the chlorine induction system. These issues have since been addressed by the permittee to prevent these violations from occurring again in the future. The draft permit was not changed to address these effluent limit violations because the causes have been remedied and preventative action has been taken by the permittee.

VII. DRAFT EFFLUENT LIMITATIONS

Effluent limitations are established in the draft permit as follows:

Outfall	Pollutant	Daily Average		Daily Maximum	
		lbs/day	mg/L	lbs/day	mg/L
001	Flow (MGD)	404 MGD		404 MGD	
	Temperature (°F)	105 °F		110 °F	
	Free Available Chlorine	46	0.2	114	0.5
	Total Residual Chlorine	N/A	N/A	137	0.2
	Total Aluminum	N/A	Report	N/A	Report
	Total Dissolved Solids	N/A	Report	N/A	Report
	Total Mercury	N/A	Report	N/A	Report
	Total Thallium	N/A	Report	N/A	Report
	pH (SU)	6.0 SU, minimum		9.0 SU, maximum	

OUTFALL LOCATIONS

Outfall	Latitude	Longitude
001	33.068508 N	96.454209 W

VIII. SUMMARY OF CHANGES FROM APPLICATION

The following changes have been made from the application which make the permit more stringent.

1. Daily average and daily maximum monitoring and reporting for total mercury and total thallium have been added to page 2 of the draft permit at Outfall 001 as a result of the screening for water quality-based effluent limitations. The effluent data provided with the application exceeded the human health water quality-based effluent limitations for these parameters and were implemented in accordance with the Procedures to Implement the Texas Surface Water Quality Standards (*IPs*).

IX. SUMMARY OF CHANGES FROM EXISTING PERMIT

The permittee requested the following amendments that the Executive Director recommends granting:

1. Merging Internal Outfall 101 with External Outfall 001 to provide a combined monitoring point for discharge monitoring is recommended to be granted. In accordance with federal anti-backsliding regulations in 40 CFR 122.44(l)(2)(ii) the effluent limitations previously monitored at Internal Outfall 101 have been applied to External Outfall 001.

2. Metal Cleaning wastes are being authorized for disposal in Evaporation Pond Nos. 2 and 4 at the request of the permittee. Pond No. 2 is lined with a clay liner and there is no expectation that this change will impact the groundwater beneath the site of Pond No. 2. Pond No. 4 is lined with a synthetic liner and is required to include an underdrain with a leak detection and collection system. With these controls there is no expectation that this change will impact the groundwater beneath the site of Pond No. 4. The permittee is required to adhere to the requirements set forth in Other Requirement Nos. 12 and 13.

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

1. Pages 3-13 were updated (May 2021 version).
2. The facility address has been updated on page 2 of the draft permit to reflect the proximity of the facility to Nevada, TX.
3. Existing Footnote No. 3 on page 2 of the draft permit has been removed with the removal of existing Other Requirement No. 14 as a result of updated temperature screening procedures.
4. Other Requirement No. 2, related to minimum analytical levels, has been updated to include total mercury and total thallium.
5. Other Requirement No. 10, Item b, has been updated to specify that the definition of *low volume wastes* is derived from 40 CFR Part 423.
6. Other Requirement No. 10, Item g, has been revised to exclude ion exchange water treatment system wastes from the definition of *water treatment wastes*, as this wastewater is not discharged via Outfall 001 and disposed of via Evaporation Pond Nos. 1 through 4 as a condition of this draft permit.
7. Other Requirement Nos. 11 and 12 have been updated to include the phrase "into surface waters in the state" for clarity.
8. Existing Other Requirement No. 14 has been removed to address the change in thermal evaluation procedures by the TCEQ. Since the change in TCEQ thermal limit screening procedures have been made following the submission of the thermal plume characterization study, this other requirement is unnecessary.
9. New Other Requirement No. 14 has been added to the draft permit to authorize the permittee to conduct and submit a study to seek a once-through cooling water exemption for total mercury and total thallium.

X. DRAFT PERMIT RATIONALE

The following section sets forth the statutory and regulatory requirements considered in preparing the draft permit. Also set forth are any calculations or other necessary explanations of

the derivation of specific effluent limitations and conditions, including a citation to the applicable effluent limitation guidelines and water quality standards.

A. REASON FOR PERMIT ISSUANCE

The applicant applied to the TCEQ for a major amendment to TPDES Permit No. WQ0001923000 to authorize the removal of internal Outfall 101 from the draft permit to consolidate sampling frequencies for wastewater discharged via Outfall 001; and to authorize the disposal of metal cleaning waste via Evaporation Pond Nos. 2 and 4. The existing permit authorizes the discharge of once through cooling water from Units 1, 2, and 3 commingled with steam condensate, previously monitored effluent from Internal Outfall 101 and stormwater at a daily average flow not to exceed 404,000,000 gallons per day via Outfall 001, and water treatment wastes on an intermittent and flow-variable basis via Internal Outfall 101. The draft permit authorizes the discharge of once through cooling water from Units 1, 2, and 3 commingled with steam condensate, water treatment wastes [1], and stormwater at a daily average flow not to exceed 404,000,000 gallons per day via Outfall 001.

B. WATER QUALITY SUMMARY

Discharge Route
The discharge route is directly to Lavon Lake in Segment No. 0821 of the Trinity River Basin. The designated uses for Segment No. 0821 are primary contact recreation, public water supply, and high aquatic life use. Effluent limitations and conditions established in the draft permit comply with state water quality standards and the applicable water quality management plan. The effluent limits in the draft permit will maintain and protect the existing instream uses. Additional discussion of the water quality aspects of the draft permit can be found at Section X.D. of this fact sheet.

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

Endangered Species Review
The discharge from this permit is not expected to have an effect on any federal endangered or threatened aquatic or aquatic-dependent species or proposed species or their critical habitat. This determination is based on the United States Fish and Wildlife Service's (USFWS) biological opinion on the State of Texas authorization of the TPDES Program (September 14, 1998; October 21, 1998 update). To make this determination for TPDES permits, TCEQ and EPA only considered aquatic or aquatic-dependent species

[1] The term *water treatment wastes* includes but is not limited to: cold lime water treatment wastes, filter backwash, membrane regeneration wastes, and reverse osmosis reject water. For the purposes of this permit, the definition of *water treatment wastes* does not include ion exchange water treatment system wastes.

occurring in watersheds of critical concern or high priority as listed in Appendix A of the USFWS's biological opinion. The determination is subject to reevaluation due to subsequent updates or amendments to the biological opinion. The permit does not require EPA review with respect to the presence of endangered or threatened species.

Impaired Water Bodies
Segment No. 0821 is not currently listed on the state's inventory of impaired and threatened waters, the 2022 Clean Water Act Section 303(d) list.

Completed Total Maximum Daily Loads (TMDLs)
There are no completed TMDLs for Segment No. 0821.

C. TECHNOLOGY-BASED EFFLUENT LIMITATIONS/CONDITIONS

1. GENERAL COMMENTS

Regulations in Title 40 of the Code of Federal Regulations (40 CFR) require that technology-based limitations be placed in wastewater discharge permits based on effluent limitations guidelines, where applicable, or on best professional judgment (BPJ) in the absence of guidelines.

The draft permit authorizes the discharge of once-through cooling water from Units 1, 2, and 3 commingled with steam condensate, water treatment wastes [1], and stormwater via Outfall 001 at a daily average flow not to exceed 404 MGD**.**

The discharge of once-through cooling water via Outfall 001 from this facility is subject to federal effluent limitation guidelines at 40 CFR Part 423. A new source determination was performed, and the discharge of once-through cooling water is not a new source as defined at 40 CFR §122.2. Therefore, new source performance standards (NSPS) are not required for this discharge.

The discharge of steam condensate, water treatment wastes [1], and stormwater via Outfall 001 is not subject to federal effluent limitation guidelines and any technology-based effluent limitations are based on BPJ.

The wastewater system at this facility consists of three reverse osmosis condensers that discharge water treatment wastes via Outfall 001; and consists of pre-filter and ultrafiltration stages prior to the water treatment demineralizer. Filtered water that is processed via the water treatment demineralizer is transferred to three boilers and a gas turbine in simultaneous stages. Boiler blowdown, demineralizer wastewater, and metal cleaning waste are routed to four evaporation ponds with zero discharge to surface waters in the state.

The discharge of low volume wastes and metal cleaning wastes as defined in 40 CFR Part 423 are not authorized for discharge and are solely authorized for disposal via Evaporation Pond Nos. 1 through 4. Calculations for the disposal of

[1] The term *water treatment wastes* includes but is not limited to: cold lime water treatment wastes, filter backwash, membrane regeneration wastes, and reverse osmosis reject water. For the purposes of this permit, the definition of *water treatment wastes* does not include ion exchange water treatment system wastes.

wastewaters via Evaporation Pond Nos. 1 though 4, can be found in Appendix A of the fact sheet.

The water treatment wastes [1] generated during the pre-filter, ultrafiltration, and reverse osmosis processes is routed through what is formerly known as Internal Outfall 101 to discharge via Outfall 001 directly into Lavon Lake. Exhaust steam from the boiler units is condensed in a non-contact heat exchanger using lake water as the cooling media. Once-through cooling water commingled with steam condensate, water treatment wastes [1], and stormwater which discharge via Outfall 001.

Sodium hypochlorite is used at the intake from Lavon Lake to control algae in the circulating water used for condenser cooling. Ammonium bisulfide is used for dechlorination at the outlet of the condenser to limit the total residual chlorine to less than 0.1 mg/L when the water exits the outfall into the lake. Domestic wastewater is disposed of by an on-site septic tank and is not authorized for discharge via Outfall 001.

2. CALCULATIONS

See Appendix A of this fact sheet for calculations and further discussion of technology-based effluent limitations proposed in the draft permit.

3. 316(B) COOLING WATER INTAKE STRUCTURES

a. SCREENING

Garland Power and Light operates three cooling water intake structures (CWIS) located on the Lavon Lake, in Collin County, to obtain water for cooling purposes. The facility is subject to the requirements of Section 316(b) of the CWA because the CWIS withdraws more than 2 MGD of water from waters of the United States and more than 25% of the water withdrawn (actual intake flow) is used for cooling purposes within the facility.

b. PERMIT ACTION

The CWIS provides once-through cooling water to three electrical generating units. Each electrical generating unit has an annual average capacity utilization of less than 8% over the previous 24-month block contiguous period and is consistent with the requirements for low-capacity utilization (40 CFR 125.94(c)(12)). The operation of the electrical generating units in this manner results in an overall reduction in the operation of the CWIS, which results in a reduction in impingement and entrainment of aquatic organisms. No additional controls for impingement or entrainment are warranted based on a review of the information submitted under 40 CFR 122.21(r)(5) and the facility meets Best Technology Available (BTA) standards for impingement mortality and entrainment. The executive director will review this determination

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

D. WATER QUALITY-BASED EFFLUENT LIMITATIONS/CONDITIONS

1. GENERAL COMMENTS

The *Texas Surface Water Quality Standards* found at 30 TAC Chapter 307 state that surface waters will not be toxic to man from ingestion of water, consumption of aquatic organisms, or contact with the skin, or to terrestrial or aquatic life. The methodology outlined in the TCEQ guidance document *Procedures to Implement the Texas Surface Water Quality Standards* (IPs) is designed to ensure compliance with 30 TAC Chapter 307. Specifically, the methodology is designed to ensure that no source will be allowed to discharge any wastewater that (1) results in instream aquatic toxicity; (2) causes a violation of an applicable narrative or numerical state water quality standard; (3) results in the endangerment of a drinking water supply; or (4) results in aquatic bioaccumulation that threatens human health. Calculated water quality-based effluent limits can be found in Appendix B of this fact sheet.

TPDES permits contain technology-based effluent limits reflecting the best controls available. Where these technology-based permit limits do not protect water quality or the designated uses, additional water quality-based effluent limitations or conditions are included. State narrative and numerical water quality standards are used in conjunction with EPA criteria and other toxicity databases to determine the adequacy of technology-based permit limits and the need for additional water quality-based controls. A comparison of technology-based effluent limits and calculated water quality-based effluent limits can be found in Appendix D of this fact sheet.

2. AQUATIC LIFE CRITERIA

a. SCREENING

Water quality-based effluent limitations are calculated from freshwater aquatic life criteria found in Table 1 of the *Texas Surface Water Quality Standards* (30 TAC Chapter 307).

Acute freshwater criteria are applied at the edge of the zone of initial dilution (ZID), and chronic freshwater criteria are applied at the edge of the aquatic life mixing zone. The ZID for this discharge is defined as volume within a radius of 25 feet from the point where the discharge enters Lake Lavon. The aquatic life mixing zone for this discharge is defined as volume within a radius of 100 feet from the point where the discharge enters Lake Lavon.

TCEQ uses the EPA horizontal jet plume model to estimate dilution at the edges of the ZID and aquatic life mixing zone for discharges greater than 10 MGD into lakes or reservoirs or discharges into sections of lakes or reservoirs that are less than 200 feet wide. General assumptions used in the horizontal jet plume model are a non-buoyant discharge, a submersed pipe, and no cross flow. Based on this analysis, the following critical

effluent percentages are calculated based on the two-year maximum monthly average flow of 269 MGD:

Acute Effluent %	100%	Chronic Effluent %	100%

General Screening Procedures

Wasteload allocations (WLAs) are calculated using the above estimated effluent percentages, criteria outlined in the *Texas Surface Water Quality Standards*, and partitioning coefficients for metals (when appropriate and designated in the implementation procedures). The WLA is the end-of-pipe effluent concentration that can be discharged when, after mixing in the receiving stream, the instream numerical criteria will not be exceeded.

From the WLA, a long-term average (LTA) is calculated using a lognormal probability distribution, a given coefficient of variation (0.6), and a 99th percentile confidence level. The LTA is the long-term average effluent concentration for which the WLA will never be exceeded using a selected percentile confidence level.

The lower of the two LTAs (acute and chronic) is used to calculate a daily average and daily maximum effluent limitation for the protection of aquatic life using the same statistical considerations with the 99th percentile confidence level and a standard number of monthly effluent samples collected (12).

Assumptions used in deriving the effluent limitations include segment-specific values for TSS, pH, hardness, and chloride according to the *IPs*. The segment values are 6.4 mg/L for TSS, 7.8 standard units for pH, 114 mg/L for hardness (as calcium carbonate, $CaCO_3$), and 10 mg/L for chloride. For additional details on the calculation of water quality-based effluent limitations, refer to the *IPs*.

TCEQ practice for determining significant potential is to compare the reported analytical data against percentages of the calculated daily average water quality-based effluent limitation. Permit limitations are required when analytical data reported in the application equals or exceeds 85 percent of the calculated daily average water quality-based effluent limitation. Monitoring and reporting is required when analytical data reported in the application equals or exceeds 70 percent of the calculated daily average water quality-based effluent limitation.

b. PERMIT ACTION

The provisions of this section apply to Outfall 001.

Analytical data reported in the application was screened against calculated water quality-based effluent limitations for the protection of aquatic life. Reported analytical data does not exceed 70 percent of the calculated daily average water quality-based effluent limitation for aquatic life protection. No limits or monitoring and reporting requirements have been added to the draft permit with regards to aquatic life.

On January 9, 2002, the facility received a once-through cooling water discharge exemption for total aluminum at Outfall 001, as established in Other Requirement No. 4. Therefore, water quality-based effluent limitations for total aluminum are not applicable, and screening of this parameter was not conducted. In accordance with anti-backsliding regulations established in 40 CFR 122.44(l)(2)(ii) the monitoring requirements for total aluminum are continued in the draft permit.

3. WHOLE EFFLUENT TOXICITY (BIOMONITORING) CRITERIA (7-DAY CHRONIC)

a. SCREENING AND REASONABLE POTENTIAL ANALYSIS

The existing permit includes chronic freshwater biomonitoring requirements at Outfall 001.

In the past three years, the permittee performed twenty-four chronic tests, with no demonstration of significant toxicity (i.e., zero failure) by either species.

A reasonable potential determination was performed in accordance with 40 CFR §122.44(d)(1)(ii) to determine whether the discharge will reasonably be expected to cause or contribute to an exceedance of a state water quality standard or criterion within that standard. Each test species is evaluated separately. The RP determination is based on representative data from the previous three years of chronic WET testing. This determination was performed in accordance with the methodology outlined in the TCEQ letter to the EPA dated December 28, 2015, and approved by the EPA in a letter dated December 28, 2015.

With zero failures, a determination of no RP was made. WET limits are not required, and the permittee may be eligible for the testing frequency reduction after one year of quarterly testing occurs.

All test data results were used for this determination.

b. PERMIT ACTION

The provisions of this section apply to Outfall 001.

Based on information contained in the permit application, the TCEQ has determined that there may be pollutants present in the effluent(s) that may have the potential to cause toxic conditions in the receiving stream.

Whole effluent toxicity testing (biomonitoring) is the most direct measure of potential toxicity, which incorporates the effects of synergism of effluent components and receiving stream water quality characteristics. Biomonitoring of the effluent is, therefore, required as a condition of this permit to assess potential toxicity. The biomonitoring procedures stipulated as a condition of this permit are as follows:

i) Chronic static renewal survival and reproduction test using the water flea (*Ceriodaphnia dubia*). The frequency of the testing shall be once per quarter.

ii) Chronic static renewal 7-day larval survival and growth test using the fathead minnow (*Pimephales promelas*). The frequency of testing shall be once per quarter.

Toxicity tests shall be performed in accordance with protocols described in *Short-Term Methods for Estimating the Chronic Toxicity of Effluents and Receiving Waters to Freshwater Organisms,* Fourth Edition (EPA-821-R-02-013) or the latest revision. The stipulated test species are appropriate to measure the toxicity of the effluent consistent with the requirements of the state water quality standards. The biomonitoring frequency has been established to reflect the likelihood of ambient toxicity and to provide data representative of the toxic potential of the facility's discharge.

This permit may be reopened to require effluent limits, additional testing, or other appropriate actions to address toxicity if biomonitoring data show actual or potential ambient toxicity to be the result of the permittee's discharge to the receiving stream or water body.

If none of the first four consecutive quarterly tests demonstrates significant lethal or sublethal effects, the permittee may submit this information in writing and, upon approval, reduce the testing frequency to once per six months for the invertebrate test species and once per year for the vertebrate test species. If one or more of the first four consecutive quarterly tests demonstrates significant sublethal effects, the permittee is required by the permit to continue quarterly testing for that species until four consecutive quarterly tests demonstrate no significant sublethal effects. At that time, the permittee may apply for the appropriate testing frequency reduction for that species. If one or more of the first four consecutive quarterly tests demonstrates significant lethal effects, the permittee is required by the permit to continue quarterly testing for that species until the permit is reissued.

c. DILUTION SERIES

The permit requires five (5) dilutions in addition to the control (0% effluent) to be used in the toxicity tests. These additional effluent concentrations shall be 32%, 42%, 56%, 75%, and 100%. The low-flow effluent concentration (critical dilution) is defined as 100% effluent.

The dilution series outlined above was calculated using a 0.75 factor applied to the critical dilution. The critical dilution is the estimated effluent dilution at the edge of the aquatic life mixing zone, which is discussed in Section X.D.2.a. of this fact sheet.

4. AQUATIC ORGANISM TOXICITY CRITERIA (24-HOUR ACUTE)

a. SCREENING

The existing permit includes 24-hour acute freshwater biomonitoring requirements for Outfall 001. In the past three years, the permittee has performed twelve 24-hour acute tests, with no demonstrations of significant mortality (i.e., zero failures). Minimum 24-hour acute freshwater biomonitoring requirements are proposed in the draft permit as outlined below.

b. PERMIT ACTION

The provisions of this section apply to Outfall 001.

Twenty-four-hour 100% acute biomonitoring tests are required at Outfall 001 at a frequency of once per six months for the life of the permit. The biomonitoring procedures stipulated as a condition of this permit are as follows:

i) Acute 24-hour static toxicity test using the water flea (*Ceriodaphnia dubia* or *Daphnia pulex*). A minimum of five (5) replicates with eight (8) organisms per replicate shall be used for this test.

ii) Acute 24-hour static toxicity test using the fathead minnow (*Pimephales promelas*). A minimum of five (5) replicates with eight (8) organisms per replicate shall be used for this test.

Toxicity tests shall be performed in accordance with protocols described in *Methods for Measuring the Acute Toxicity of Effluents and Receiving Waters to Freshwater and Marine Organisms*, Fifth Edition (EPA-821-R-02-012) or the latest revision.

5. AQUATIC ORGANISM BIOACCUMULATION CRITERIA

a. SCREENING

Water quality-based effluent limitations for the protection of human health are calculated using criteria for the consumption of fish tissue found in Table 2 of the *Texas Surface Water Quality Standards* (30 TAC Chapter 307).

Fish tissue bioaccumulation criteria are applied at the edge of the human health mixing zone for discharges into lakes and reservoirs. The human health mixing zone for this discharge is defined as a volume within a radius of 200 feet from the point where the discharge enters Lake Lavon. TCEQ uses the EPA horizontal jet plume model to estimate dilution at the edge of the human health mixing zone for discharges greater than 10 MGD into lakes or reservoirs or discharges into sections of lakes or reservoirs that are less than 200 feet wide. General assumptions used in the horizontal jet plume model are a non-buoyant discharge, a submersed

pipe, and no cross flow. Based on this analysis, the following critical effluent percentage is calculated based on the two-year average monthly average flow of 160 MGD:

Human health Effluent %: 100%

Water quality-based effluent limitations for human health protection against the consumption of fish tissue are calculated using the same procedure as outlined for calculation of water quality-based effluent limitations for aquatic life protection. A 99th percentile confidence level in the long-term average calculation is used, with only one long-term average value being calculated.

Significant potential is again determined by comparing reported analytical data against 70 percent and 85 percent of the calculated daily average water quality-based effluent limitation.

b. PERMIT ACTION

The provisions of this section apply to Outfall 001.

Analytical data reported in the application was screened against calculated water quality-based effluent limitations for the protection of human health. Reported analytical data for total mercury and total thallium exceed 85 percent of the calculated daily average water quality-based effluent limitation for human health protection.

The permittee has requested the opportunity to conduct a once-through cooling water exemption study in accordance with 30 TAC § 307.8(d), to determine if the discharge of once-through cooling water via Outfall 001 measurably alters the concentration of total mercury and total thallium in the waters withdrawn from Lavon Lake. Other Requirement No. 15 has been added to the draft permit, which specifies the requirements of this study. In accordance with *IPs* the permit term has been limited to three years to allow time for the permittee to perform a statistical study and source evaluation. The once-through cooling water exemption will be approved or denied based upon the findings of the statistical analysis and the source investigation.

6. DRINKING WATER SUPPLY PROTECTION

a. SCREENING

Segment No. 0821, which receives the discharge from this facility, is designated as a public water supply source. The screening procedure used to calculate water quality-based effluent limitations and determine the need for effluent limitations or monitoring requirements is identical to the procedure outlined in Section X.D.5.a of this fact sheet. Criteria in the "Water and Fish" section of Table 2 are based on either the drinking water standard or the combined effects of ingestion of drinking water and fish tissue. Effluent limitations or monitoring requirements to protect the drinking water supply (and other human health effects) were previously calculated and outlined in section X.D.5.b of this fact sheet.

b. PERMIT ACTION

Criteria in the "Water and Fish" section of Table 2 do not distinguish if the criteria are based on drinking water standard or the combined effects of ingestion of drinking water and fish tissue. Effluent limitations or monitoring requirements to protect the drinking water supply (and other human health effects) were previously calculated and outlined in section X.D.5.b of this fact sheet.

7. TOTAL DISSOLVED SOLIDS, CHLORIDE, AND SULFATE STANDARDS PROTECTION

a. SCREENING

Average concentrations of TDS, chloride, and sulfate reported in the application are all less than the respective criteria for Segment No. 0821; therefore, no further screening is necessary.

b. PERMIT ACTION

The monitoring requirement for TDS at Internal Outfall 101 has been applied at Outfall 001 in accordance with federal anti-backsliding regulations in 40 CFR 122.44(l)(2)(ii).

8. PROTECTION OF pH STANDARDS

a. SCREENING

The existing permit includes pH limits of 6.0 – 9.0 SU at Outfall 001, which discharges directly into Lavon Lake, Segment No. 0821. The effluent pH was not screened due to its characteristics as predominantly once-through-cooling water in which any deviation in pH is attributed to the source water. Due to the nature of the discharge, requiring the discharge to meet pH limits of 6.0 – 9.0 standard units reasonably ensures instream compliance with *Texas Surface Water Quality Standards* pH criteria.

b. PERMIT ACTION

The existing effluent limits of 6.0 – 9.0 SU at Outfall 001 are adequate to ensure that the discharge will not violate the pH criteria in Lavon Lake and are continued in the draft permit.

9. THERMAL STANDARDS PROTECTION

a. SCREENING

The values submitted with the application for temperature at Outfall 001 were screened against the segment criteria. The average temperature of 85.2°F in the application is significantly lower than segment temperature criterion (93°F). No further temperature screening is needed, and the existing limit is protective.

b. PERMIT ACTION

The existing daily average effluent temperature limitation of 105 °F is protective of the temperature criteria in the receiving segment and is continued in the draft permit.

XI. PRETREATMENT REQUIREMENTS

This facility is not defined as a publicly owned treatment works. Pretreatment requirements are not proposed in the draft permit.

XII. VARIANCE REQUESTS

No variance requests have been received.

XIII. PROCEDURES FOR FINAL DECISION

When an application is declared administratively complete, the Chief Clerk sends a letter to the applicant advising the applicant to publish the Notice of Receipt of Application and Intent to Obtain Permit in the newspaper. In addition, the Chief Clerk instructs the applicant to place a copy of the application in a public place for reviewing and copying in the county where the facility is or will be located. This application will be in a public place throughout the comment period. The Chief Clerk also mails this notice to any interested persons and, if required, to landowners identified in the permit application. This notice informs the public about the application and provides that an interested person may file comments on the application or request a contested case hearing or a public meeting.

Once a draft permit is completed, it is sent, along with the Executive Director's preliminary decision, as contained in the technical summary or fact sheet, to the Chief Clerk. At that time, the Notice of Application and Preliminary Decision will be mailed to the same people and published in the same newspaper as the prior notice. This notice sets a deadline for making public comments. The applicant must place a copy of the Executive Director's preliminary decision and draft permit in the public place with the application.

Any interested person may request a public meeting on the application until the deadline for filing public comments. A public meeting is intended for the taking of public comment and is not a contested case proceeding.

After the public comment deadline, the Executive Director prepares a response to all significant public comments on the application or the draft permit raised during the public comment period. The Chief Clerk then mails the Executive Director's response to comments and final decision to people who have filed comments, requested a contested case hearing, or requested to be on the mailing list. This notice provides that if a person is not satisfied with the Executive Director's response and decision, they can request a contested case hearing or file a request to reconsider the Executive Director's decision within 30 days after the notice is mailed.

The Executive Director will issue the permit unless a written hearing request or request for reconsideration is filed within 30 days after the Executive Director's response to comments and final decision is mailed. If a hearing request or request for reconsideration is filed, the Executive Director will not issue the permit and will forward the application and request to the TCEQ commissioners for their consideration at a scheduled commission meeting. If a contested case hearing is held, it will be a legal proceeding similar to a civil trial in state district court.

If the Executive Director calls a public meeting or the commission grants a contested case hearing as described above, the commission will give notice of the date, time, and place of the meeting or hearing. If a hearing request or request for reconsideration is made, the commission will consider all public comments in making its decision and shall either adopt the Executive Director's response to public comments or prepare its own response.

For additional information about this application, contact Alexander Owens at (512) 239-6707.

XIV. ADMINISTRATIVE RECORD

The following section is a list of the fact sheet citations to applicable statutory or regulatory provisions and appropriate supporting references.

A. PERMIT(S)

TPDES Permit No. WQ0001923000 issued on February 5, 2020.

B. APPLICATION

TPDES wastewater permit application received on August 8, 2024 and additional information received on April 30, 2025.

C. 40 CFR CITATION(S)

40 CFR Part 423 (BPT, BAT).

D. LETTERS/MEMORANDA/RECORDS OF COMMUNICATION

Letter dated April 29, 2014, from L'Oreal W. Stepney, P.E., Deputy Director, Office of Water, TCEQ, to Bill Honker, Director, Water Quality Protection Division, EPA (TCEQ proposed development strategy for thermal evaluation procedures).

Letter dated May 12, 2014, from William K. Honker, P.E., Director, Water Quality Protection Division, EPA, to L'Oreal W. Stepney, P.E., Deputy Director, Office of Water, TCEQ (Approval of TCEQ proposed development strategy for thermal evaluation procedures).

Letter dated May 28, 2014, from L'Oreal W. Stepney, P.E., Deputy Director, Office of Water, TCEQ, to Bill Honker, Director, Water Quality Protection Division, EPA (TCEQ proposed development strategy for pH evaluation procedures).

Letter dated June 2, 2014, from William K. Honker, P.E., Director, Water Quality Protection Division, EPA, to L'Oreal W. Stepney, P.E., Deputy Director, Office of Water, TCEQ (Approval of TCEQ proposed development strategy for pH evaluation procedures).

Letter dated December 28, 2015, from L'Oreal Stepney, P.E., Deputy Director, Office of Water, TCEQ, to Bill Honker, Director, Water Quality Protection Division, EPA (TCEQ proposed development strategy for procedures to determine reasonable potential for whole effluent toxicity limitations).

Letter dated December 28, 2015, from William K. Honker, P.E., Director, Water Quality Protection Division, EPA, to L'Oreal W. Stepney, P.E., Deputy Director, Office of Water, TCEQ (Approval of TCEQ proposed development strategy for procedures to determine reasonable potential for whole effluent toxicity limitations).

TCEQ Interoffice Memorandum dated September 19, 2024, from M. A. Wallace, PhD of the Standards Implementation Team, Water Quality Assessment Section, to the Industrial Permits Team, Wastewater Permitting Section (Standards Memo).

TCEQ Interoffice Memorandum dated September 30, 2024, from Sarah Musgrove of the Water Quality Assessment Team, Water Quality Assessment Section, to the Industrial Permits Team, Wastewater Permitting Section (Critical Conditions Memo).

TCEQ Interoffice Memorandum dated October 2, 2024, from James E. Michalk of the Water Quality Assessment Team, Water Quality Assessment Section, to the Industrial Permits Team, Wastewater Permitting Section (Modeling Memo).

TCEQ Interoffice Memorandum dated October 11, 2024, from Jenna R. Lueg of the Standards Implementation Team, Water Quality Assessment Section, to the Industrial Permits Team, Wastewater Permitting Section (Biomonitoring Memo).

Electronic mail dated April 30, 2025, from Michael Burr, Garland Power & Light, Electric Plant Support Manager, RE: Notice of Deficiency for Permit Application No. WQ0001923000, to Alexander Owens of the Industrial Permits Team, Wastewater Permitting Section.

E. MISCELLANEOUS

The *State of Texas 2022 Integrated Report* – Texas 303(d) List (Category 5), TCEQ, July 7, 2022.

Texas Surface Water Quality Standards, 30 TAC §§307.1 - 307.10, TCEQ, effective March 1, 2018, as approved by EPA Region 6.

Texas Surface Water Quality Standards, 30 TAC §§307.1 - 307.10, TCEQ, effective March 6, 2014, as approved by EPA Region 6, for portions of the 2018 standards not approved by EPA Region 6.

Texas Surface Water Quality Standards, 30 TAC §§307.1 - 307.10, TCEQ, effective July 22, 2010, as approved by EPA Region 6, for portions of the 2014 standards not yet approved by EPA Region 6.

Texas Surface Water Quality Standards, 30 TAC §§307.1 - 307.10, TCEQ, effective August 17, 2000, and Appendix E, effective February 27, 2002, for portions of the 2010 standards not yet approved by EPA Region 6.

Short-Term Methods for Estimating the Chronic Toxicity of Effluents and Receiving Waters to Freshwater Organisms, Fourth Edition (EPA-821-R-02-013).

Methods for Measuring the Acute Toxicity of Effluents and Receiving Waters to Freshwater and Marine Organisms, Fifth Edition (EPA-821-R-02-012).

Procedures to Implement the Texas Surface Water Quality Standards, TCEQ, June 2010, as approved by EPA Region 6.

Procedures to Implement the Texas Surface Water Quality Standards, TCEQ, January 2003, for portions of the 2010 IPs not approved by EPA Region 6.

Guidance Document for Establishing Monitoring Frequencies for Domestic and Industrial Wastewater Discharge Permits, TCEQ Document No. 98-001.000-OWR-WQ, May 1998.

Appendix A
Calculated Technology-Based Effluent Limits

Outfall 001 (once-through cooling water from Units 1, 2, and 3 commingled with steam condensate and stormwater) Best Practicable Control Technology (BPT) and Best Available Technology Economically Achievable (BAT) effluent limitations apply to the discharge of once-through cooling water.

a. BPT Free Available Chlorine effluent limitations according to 40 CFR §423.12(b)(6)

Free Available Chlorine

Daily Average = 0.2 mg/L
Daily Maximum = 0.5 mg/L

The mass loading effluent limitations for Free Available Chlorine were calculated using the permitted daily average flow (404 MGD).

Loading
lbs/day = [(limit, mg/L) × (flow, MGD) × (8.345) × (2 hour chlorination/24 hour period)]

Daily Average = [(0.2 mg/L) × (404 MGD) × (8.345)/12] = 56.19 lbs/day
Daily Maximum = [(0.5 mg/L × (404 MGD) × (8.345)/12] = 140.47 lbs/day

b. BAT limitations for Total Residual Chlorine apply to discharge of once-through cooling water according to 40 CFR §423.13(b)(1):

Total Residual Chlorine

Daily Average = N/A
Daily Maximum = 0.2 mg/L

The mass loading effluent limitations for Total Residual Chlorine were calculated using the permitted daily average flow (404 MGD).

Loading
lbs/day = [(limit, mg/L) × (flow, MGD) × (8.345) × (2hrs/24hrs)] × (no. of generating units)

Daily Average = N/A
Daily Maximum = [(0.2 mg/L) × (404 MGD) × (8.345)/12] × 3 units = 168.6 lbs/day

c. According to BPT at 40 CFR §423.12(b)(1), the pH of all discharges, except once-through cooling water, shall be within the range of 6.0 – 9.0 standard units. The discharge via Outfall 001 is once-through cooling water; therefore, pH effluent limitations do not apply. However, pH effluent limits were applied in the existing permit and are continued in the draft permit based on antibacksliding 40 CFR §122.44(l)(1).

d. The discharge of steam condensate and stormwater via Outfall 001 are not subject to federal effluent limitations guidelines and no allocations were included in the calculations above.

e. The discharge of water treatment wastes via Outfall 001 are not subject to effluent limitation guidelines. The existing effluent limits for pH and monitoring requirements for total dissolved solids were established at Internal Outfall 101 based on BPJ and are continued at Outfall 001 based on antibacksliding 40 CFR §122.44(l)(1).

Appendix A
Evaporation Pond Evaluation

30 Texas Administrative Code (TAC), Chapter 309, Subchapter C outlines procedures used to determine appropriate design for irrigation systems at domestic wastewater treatment plants. Appropriate evaporation pond sizing is determined based upon these procedures using best professional judgement (BPJ). These procedures consist of two evaluations: critical condition evaluation and average condition evaluation.

Critical Condition Evaluation

The critical condition evaluation is designed to evaluate the storage capacity of the pond(s) under a "worst-case scenario." The worst-case scenario is defined as the 25-year lowest net evaporation* assuming daily flow to the pond at the permitted rate. The pond's storage capacity is considered adequate when the Total Storage Necessary is less than or equal to the Pond Storage Volume (the pond could contain all wastewater discharged when evaporation is lowest).

The following is a summary of calculations performed in determining the Total Storage Necessary:

Effluent Flow **	0.0156	MGD
Pond Surface Acres ***	6.42	acres
Pond Storage Volume ****	35.02	acre-feet

Month	# of Days	Flow to Ponds (acre-feet)	Evap Rate (feet)	Evap from Ponds (acre-feet)	Storage Requirements (acre-feet)
January	31	1.48	0.01	0.04	1.44
February	28	1.34	0.01	0.06	1.29
March	31	1.48	0.01	0.08	1.41
April	30	1.44	0.02	0.12	1.32
May	31	1.48	0.02	0.10	1.39
June	30	1.44	0.03	0.17	1.26
July	31	1.48	0.03	0.18	1.31
August	31	1.48	0.03	0.22	1.26
September	30	1.44	0.01	0.08	1.36
October	31	1.48	0.01	0.09	1.39
November	30	1.44	0.01	0.06	1.38
December	31	1.48	0.01	0.04	1.44
				Total Storage Necessary	16.24

Flow to Pond = (Effluent Flow (MGD)) * (# of Days)* (3.0684)
Evaporation from Pond = (Pond Surface Acres) * (Evaporation Rate)
Evaporation Rate = 25-year lowest net evaporation distributed by month
Storage Requirement = (Flow to Pond) - (Evaporation from Pond)
Total Storage Necessary = SUM (Storage Requirement)

*Texas Water Development Board Lake Evaporation and Precipitation data for Quadrangle x for the period of record 1954 through 2021.

** Represents the sum of all wastewater diverted to evaporation ponds 1 though 4.

*** Represents the sum of the surface acreage of evaporation ponds 1 through 4.

**** Represents the sum of the storage volumes of evaporation ponds 1 though 4.

Appendix A
Evaporation Pond Evaluation

Average Condition Evaluation

The pond(s) must have enough surface area to evaporate all the flow to the pond(s) under average rainfall conditions. The pond is considered adequately sized when the Total Storage Necessary is less than or equal to zero. If this value is greater than zero, the pond's surface must be increased or the effluent flow reduced to ensure that no accumulation occurs during average conditions

The following is a summary of calculations performed in determining the Total Storage Necessary:

Effluent Flow	0.0156	MGD
Pond Surface Acres	6.42	acres
Pond Storage Volume	35.02	acre-feet

Month	# of Days	Flow to Ponds (acre-feet)	Evap Rate (feet)	Evap from Ponds (acre-feet)	Storage Requirements (acre-feet)
January	31	1.48	0.09	0.61	0.88
February	28	1.34	0.12	0.80	0.54
March	31	1.48	0.17	1.11	0.38
April	30	1.44	0.27	1.74	-0.30
May	31	1.48	0.22	1.42	0.06
June	30	1.44	0.39	2.51	-1.07
July	31	1.48	0.40	2.57	-1.08
August	31	1.48	0.50	3.22	-1.74
September	30	1.44	0.18	1.17	0.27
October	31	1.48	0.20	1.31	0.18
November	30	1.44	0.13	0.84	0.60
December	31	1.48	0.10	0.61	0.87
				Total Storage Necessary	-0.42

Flow to Pond = (Effluent Flow (MGD)) * (# of Days) * (3.0684)
Evaporation from Pond = (Pond Surface Acres) * (Evaporation Rate)
Evaporation Rate = 25-year average monthly net evaporation*
Storage Requirement = (Flow to Pond) - (Evaporation from Pond)
Total Storage Necessary = SUM (Storage Requirement)

Conclusions: The permittee routes boiler blowdown, ion exchange water treatment system wastes, low volume wastes, and metal cleaning wastes to four evaporation ponds with zero discharge to surface waters in the state. Based on a review of the above data and calculations, under average and critical conditions, the four evaporation ponds have sufficient storage capacity and surface area to contain and evaporate a daily average flow of 0.0156 MGD.

Appendix B
Calculated Water Quality-Based Effluent Limits

TEXTOX MENU #4 - LAKE OR RESERVOIR

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

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

PERMIT INFORMATION

Permittee Name:	City of Garland
TPDES Permit No:	WQ0001923000
Outfall No:	001
Prepared by:	Alexander Owens
Date:	03/03/2024

DISCHARGE INFORMATION

Receiving Waterbody:	Lake Lavon
Segment No.:	0821
TSS (mg/L):	6.4
pH (Standard Units):	7.8
Hardness (mg/L as $CaCO_3$):	114
Chloride (mg/L):	10
Effluent Flow for Aquatic Life (MGD):	269
% Effluent for Chronic Aquatic Life (Mixing Zone):	100
% Effluent for Acute Aquatic Life (ZID):	100
Effluent Flow for Human Health (MGD):	160
% Effluent for Human Health:	100
Human Health Criterion (select: PWS, FISH, or INC)	**PWS**

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

Lake/Reservoir Metal	*Intercept (b)*	*Slope (m)*	*Partition Coefficient (Kp)*	*Dissolved Fraction (Cd/Ct)*	*Source*	*Water Effect Ratio (WER)*	*Source*
Aluminum	N/A	N/A	N/A	1.00	Assumed	1.00	Assumed
Arsenic	5.68	-0.73	123449.30	0.559		1.00	Assumed
Cadmium	6.55	-0.92	643153.18	0.195		1.00	Assumed
Chromium (total)	6.34	-0.27	1325352.52	0.105		1.00	Assumed
Chromium (trivalent)	6.34	-0.27	1325352.52	0.105		1.00	Assumed
Chromium (hexavalent)	N/A	N/A	N/A	1.00	Assumed	1.00	Assumed
Copper	6.45	-0.90	530197.92	0.228		1.00	Assumed
Lead	6.31	-0.53	763351.59	0.170		1.00	Assumed
Mercury	N/A	N/A	N/A	1.00	Assumed	1.00	Assumed
Nickel	6.34	-0.76	533707.39	0.226		1.00	Assumed
Selenium	N/A	N/A	N/A	1.00	Assumed	1.00	Assumed
Silver	6.38	-1.03	354515.01	0.306		1.00	Assumed
Zinc	6.52	-0.68	937125.20	0.143		1.00	Assumed

AQUATIC LIFE

CALCULATE DAILY AVERAGE AND DAILY MAXIMUM EFFLUENT LIMITATIONS:

Parameter	*FW Acute Criterion (µg/L)*	*FW Chronic Criterion (µg/L)*	*WLAa (µg/L)*	*WLAc (µg/L)*	*LTAa (µg/L)*	*LTAc (µg/L)*	*Daily Avg. (µg/L)*	*Daily Max. (µg/L)*
Aldrin	3.0	N/A	3.00	N/A	0.960	N/A	1.41	2.98
Aluminum	991	N/A	991	N/A	317	N/A	466	986
Arsenic	340	150	609	269	195	164	240	509
Cadmium	9.75	0.269	49.9	1.38	16.0	0.841	1.23	2.61
Carbaryl	2.0	N/A	2.00	N/A	0.640	N/A	0.940	1.99
Chlordane	2.4	0.004	2.40	0.00400	0.768	0.00244	0.00358	0.00758
Chlorpyrifos	0.083	0.041	0.0830	0.0410	0.0266	0.0250	0.0367	0.0777
Chromium (trivalent)	634	82.5	6015	782	1925	477	701	1484
Chromium (hexavalent)	15.7	10.6	15.7	10.6	5.02	6.47	7.38	15.6
Copper	16.07	10.59	70.6	46.5	22.6	28.4	33.2	70.2
Cyanide (free)	45.8	10.7	45.8	10.7	14.7	6.53	9.59	20.2
4,4'-DDT	1.1	0.001	1.10	0.00100	0.352	0.000610	0.000896	0.00189
Demeton	N/A	0.1	N/A	0.100	N/A	0.0610	0.0896	0.189
Diazinon	0.17	0.17	0.170	0.170	0.0544	0.104	0.0799	0.169
Dicofol [Kelthane]	59.3	19.8	59.3	19.8	19.0	12.1	17.7	37.5
Dieldrin	0.24	0.002	0.240	0.00200	0.0768	0.00122	0.00179	0.00379
Diuron	210	70	210	70.0	67.2	42.7	62.7	132
Endosulfan I (*alpha*)	0.22	0.056	0.220	0.0560	0.0704	0.0342	0.0502	0.106
Endosulfan II (*beta*)	0.22	0.056	0.220	0.0560	0.0704	0.0342	0.0502	0.106
Endosulfan sulfate	0.22	0.056	0.220	0.0560	0.0704	0.0342	0.0502	0.106
Endrin	0.086	0.002	0.0860	0.00200	0.0275	0.00122	0.00179	0.00379
Guthion [Azinphos Methyl]	N/A	0.01	N/A	0.0100	N/A	0.00610	0.00896	0.0189
Heptachlor	0.52	0.004	0.520	0.00400	0.166	0.00244	0.00358	0.00758
Hexachlorocyclohexane (*gamma*) [Lindane]	1.126	0.08	1.13	0.0800	0.360	0.0488	0.0717	0.151
Lead	74.5	2.90	438	17.1	140	10.4	15.3	32.3
Malathion	N/A	0.01	N/A	0.0100	N/A	0.00610	0.00896	0.0189
Mercury	2.4	1.3	2.40	1.30	0.768	0.793	1.12	2.38
Methoxychlor	N/A	0.03	N/A	0.0300	N/A	0.0183	0.0269	0.0569
Mirex	N/A	0.001	N/A	0.00100	N/A	0.000610	0.000896	0.00189
Nickel	523	58.1	2310	257	739	157	230	486
Nonylphenol	28	6.6	28.0	6.60	8.96	4.03	5.91	12.5
Parathion (ethyl)	0.065	0.013	0.0650	0.0130	0.0208	0.00793	0.0116	0.0246
Pentachlorophenol	19.5	14.95	19.5	15.0	6.24	9.12	9.16	19.3
Phenanthrene	30	30	30.0	30.0	9.60	18.3	14.1	29.8
Polychlorinated Biphenyls [PCBs]	2.0	0.014	2.00	0.0140	0.640	0.00854	0.0125	0.0265
Selenium	20	5	20.0	5.00	6.40	3.05	4.48	9.48
Silver	0.8	N/A	4.03	N/A	1.29	N/A	1.89	4.00
Toxaphene	0.78	0.0002	0.780	0.000200	0.250	0.000122	0.000179	0.000379
Tributyltin [TBT]	0.13	0.024	0.130	0.0240	0.0416	0.0146	0.0215	0.0455
2,4,5 Trichlorophenol	136	64	136	64.0	43.5	39.0	57.3	121

HUMAN HEALTH - CALCULATE DAILY AVERAGE AND DAILY MAXIMUM EFFLUENT LIMITATIONS:

Parameter	*Water and Fish Criterion (µg/L)*	*Fish Only Criterion (µg/L)*	*Incidental Fish Criterion (µg/L)*	*WLAh (µg/L)*	*LTAh (µg/L)*	*Daily Avg. (µg/L)*	*Daily Max. (µg/L)*
Acrylonitrile	1.0	115	1150	1.00	0.930	1.36	2.89
Aldrin	1.146E-05	1.147E-05	1.147E-04	0.0000115	0.0000107	0.0000156	0.0000331
Anthracene	1109	1317	13170	1109	1031	1516	3207
Antimony	6	1071	10710	6.00	5.58	8.20	17.3
Arsenic	10	N/A	N/A	17.9	16.6	24.4	51.7
Barium	2000	N/A	N/A	2000	1860	2734	5784
Benzene	5	581	5810	5.00	4.65	6.83	14.4
Benzidine	0.0015	0.107	1.07	0.00150	0.00140	0.00205	0.00433
Benzo(*a*)anthracene	0.024	0.025	0.25	0.0240	0.0223	0.0328	0.0694
Benzo(*a*)pyrene	0.0025	0.0025	0.025	0.00250	0.00233	0.00341	0.00723
Bis(chloromethyl)ether	0.0024	0.2745	2.745	0.00240	0.00223	0.00328	0.00694
Bis(2-chloroethyl)ether	0.60	42.83	428.3	0.600	0.558	0.820	1.73
Bis(2-ethylhexyl) phthalate [Di(2-ethylhexyl) phthalate]	6	7.55	75.5	6.00	5.58	8.20	17.3
Bromodichloromethane [Dichlorobromomethane]	10.2	275	2750	10.2	9.49	13.9	29.5
Bromoform [Tribromomethane]	66.9	1060	10600	66.9	62.2	91.4	193
Cadmium	5	N/A	N/A	25.6	23.8	34.9	73.9
Carbon Tetrachloride	4.5	46	460	4.50	4.19	6.15	13.0
Chlordane	0.0025	0.0025	0.025	0.00250	0.00233	0.00341	0.00723
Chlorobenzene	100	2737	27370	100	93.0	136	289
Chlorodibromomethane [Dibromochloromethane]	7.5	183	1830	7.50	6.98	10.2	21.6
Chloroform [Trichloromethane]	70	7697	76970	70.0	65.1	95.6	202
Chromium (hexavalent)	62	502	5020	62.0	57.7	84.7	179
Chrysene	2.45	2.52	25.2	2.45	2.28	3.34	7.08
Cresols [Methylphenols]	1041	9301	93010	1041	968	1423	3010
Cyanide (free)	200	N/A	N/A	200	186	273	578
4,4'-DDD	0.002	0.002	0.02	0.00200	0.00186	0.00273	0.00578
4,4'-DDE	0.00013	0.00013	0.0013	0.000130	0.000121	0.000177	0.000375
4,4'-DDT	0.0004	0.0004	0.004	0.000400	0.000372	0.000546	0.00115
2,4'-D	70	N/A	N/A	70.0	65.1	95.6	202
Danitol [Fenpropathrin]	262	473	4730	262	244	358	757
1,2-Dibromoethane [Ethylene Dibromide]	0.17	4.24	42.4	0.170	0.158	0.232	0.491
m-Dichlorobenzene [1,3-Dichlorobenzene]	322	595	5950	322	299	440	931
o-Dichlorobenzene [1,2-Dichlorobenzene]	600	3299	32990	600	558	820	1735
p-Dichlorobenzene [1,4-Dichlorobenzene]	75	N/A	N/A	75.0	69.8	102	216
3,3'-Dichlorobenzidine	0.79	2.24	22.4	0.790	0.735	1.08	2.28
1,2-Dichloroethane	5	364	3640	5.00	4.65	6.83	14.4
1,1-Dichloroethylene [1,1-Dichloroethene]	7	55114	551140	7.00	6.51	9.56	20.2
Dichloromethane [Methylene Chloride]	5	13333	133330	5.00	4.65	6.83	14.4
1,2-Dichloropropane	5	259	2590	5.00	4.65	6.83	14.4
1,3-Dichloropropene [1,3-Dichloropropylene]	2.8	119	1190	2.80	2.60	3.82	8.09
Dicofol [Kelthane]	0.30	0.30	3	0.300	0.279	0.410	0.867
Dieldrin	2.0E-05	2.0E-05	2.0E-04	0.0000200	0.0000186	0.0000273	0.0000578
2,4-Dimethylphenol	444	8436	84360	444	413	606	1284
Di-*n*-Butyl Phthalate	88.9	92.4	924	88.9	82.7	121	257

Dioxins/Furans [TCDD Equivalents]	7.80E-08	7.97E-08	7.97E-07	7.80E-08	7.25E-08	1.06E-07	2.25E-07
Endrin	0.02	0.02	0.2	0.0200	0.0186	0.0273	0.0578
Epichlorohydrin	53.5	2013	20130	53.5	49.8	73.1	154
Ethylbenzene	700	1867	18670	700	651	956	2024
Ethylene Glycol	46744	1.68E+07	1.68E+08	46744	43472	63903	135197
Fluoride	4000	N/A	N/A	4000	3720	5468	11569
Heptachlor	8.0E-05	0.0001	0.001	0.0000800	0.0000744	0.000109	0.000231
Heptachlor Epoxide	0.00029	0.00029	0.0029	0.000290	0.000270	0.000396	0.000838
Hexachlorobenzene	0.00068	0.00068	0.0068	0.000680	0.000632	0.000929	0.00196
Hexachlorobutadiene	0.21	0.22	2.2	0.210	0.195	0.287	0.607
Hexachlorocyclohexane (*alpha*)	0.0078	0.0084	0.084	0.00780	0.00725	0.0106	0.0225
Hexachlorocyclohexane (*beta*)	0.15	0.26	2.6	0.150	0.140	0.205	0.433
Hexachlorocyclohexane (*gamma*) [Lindane]	0.2	0.341	3.41	0.200	0.186	0.273	0.578
Hexachlorocyclopentadiene	10.7	11.6	116	10.7	9.95	14.6	30.9
Hexachloroethane	1.84	2.33	23.3	1.84	1.71	2.51	5.32
Hexachlorophene	2.05	2.90	29	2.05	1.91	2.80	5.92
4,4'-Isopropylidenediphenol [Bisphenol A]	1092	15982	159820	1092	1016	1492	3158
Lead	1.15	3.83	38.3	6.77	6.29	9.25	19.5
Mercury	0.0122	0.0122	0.122	0.0122	0.0113	0.0166	0.0352
Methoxychlor	2.92	3.0	30	2.92	2.72	3.99	8.44
Methyl Ethyl Ketone	13865	9.92E+05	9.92E+06	13865	12894	18954	40101
Methyl *tert*-butyl ether [MTBE]	15	10482	104820	15.0	14.0	20.5	43.3
Nickel	332	1140	11400	1466	1363	2004	4240
Nitrate-Nitrogen (as Total Nitrogen)	10000	N/A	N/A	10000	9300	13671	28923
Nitrobenzene	45.7	1873	18730	45.7	42.5	62.4	132
N-Nitrosodiethylamine	0.0037	2.1	21	0.00370	0.00344	0.00505	0.0107
N-Nitroso-di-*n*-Butylamine	0.119	4.2	42	0.119	0.111	0.162	0.344
Pentachlorobenzene	0.348	0.355	3.55	0.348	0.324	0.475	1.00
Pentachlorophenol	0.22	0.29	2.9	0.220	0.205	0.300	0.636
Polychlorinated Biphenyls [PCBs]	6.4E-04	6.4E-04	6.40E-03	0.000640	0.000595	0.000874	0.00185
Pyridine	23	947	9470	23.0	21.4	31.4	66.5
Selenium	50	N/A	N/A	50.0	46.5	68.3	144
1,2,4,5-Tetrachlorobenzene	0.23	0.24	2.4	0.230	0.214	0.314	0.665
1,1,2,2-Tetrachloroethane	1.64	26.35	263.5	1.64	1.53	2.24	4.74
Tetrachloroethylene [Tetrachloroethylene]	5	280	2800	5.00	4.65	6.83	14.4
Thallium	0.12	0.23	2.3	0.120	0.112	0.164	0.347
Toluene	1000	N/A	N/A	1000	930	1367	2892
Toxaphene	0.011	0.011	0.11	0.0110	0.0102	0.0150	0.0318
2,4,5-TP [Silvex]	50	369	3690	50.0	46.5	68.3	144
1,1,1-Trichloroethane	200	784354	7843540	200	186	273	578
1,1,2-Trichloroethane	5	166	1660	5.00	4.65	6.83	14.4
Trichloroethylene [Trichloroethene]	5	71.9	719	5.00	4.65	6.83	14.4
2,4,5-Trichlorophenol	1039	1867	18670	1039	966	1420	3005
TTHM [Sum of Total Trihalomethanes]	80	N/A	N/A	80.0	74.4	109	231
Vinyl Chloride	0.23	16.5	165	0.230	0.214	0.314	0.665

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

Aquatic Life	***70% of Daily Avg.***	***85% of Daily Avg.***	***Average of Samples***	***Sample 1***	***Sample 2***	***Sample 3***
Parameter	***(µg/L)***	***(µg/L)***	***(µg/L)***	***(µg/L)***	***(µg/L)***	***(µg/L)***
Aldrin	0.987	1.19	-			
Aluminum	326	396	126.8	98.4	115	167
Arsenic	168	204	5.08666667	4.8	5.18	5.28
Cadmium	0.865	1.05	0	0	0	0
Carbaryl	0.658	0.799	-			
Chlordane	0.00251	0.00304	-			
Chlorpyrifos	0.0257	0.0312	-			
Chromium (trivalent)	491	596	3	3	3	3
Chromium (hexavalent)	5.16	6.27	0	0	0	0
Copper	23.2	28.2	4.94666667	6.18	6.09	2.57
Cyanide (free)	6.71	8.15	0	0	0	0
4,4'-DDT	0.000627	0.000762	-			
Demeton	0.0627	0.0762	-			
Diazinon	0.0559	0.0679	-			
Dicofol [Kelthane]	12.4	15.0	-			
Dieldrin	0.00125	0.00152	-			
Diuron	43.9	53.3	-			
Endosulfan I (*alpha*)	0.0351	0.0426	-			
Endosulfan II (*beta*)	0.0351	0.0426	-			
Endosulfan sulfate	0.0351	0.0426	-			
Endrin	0.00125	0.00152	-			
Guthion [Azinphos Methyl]	0.00627	0.00762	-			
Heptachlor	0.00251	0.00304	-			
Hexachlorocyclohexane (*gamma*) [Lindane]	0.0502	0.0609	-			
Lead	10.7	13.0	0	0	0	0
Malathion	0.00627	0.00762	-			
Mercury	0.790	0.959	0.04116667	0.078	0.0005	0.045
Methoxychlor	0.0188	0.0228	-			
Mirex	0.000627	0.000762	-			
Nickel	161	195	0	0	0	0
Nonylphenol	4.14	5.03	-			
Parathion (ethyl)	0.00815	0.00990	-			
Pentachlorophenol	6.41	7.79	-			
Phenanthrene	9.87	11.9	-			
Polychlorinated Biphenyls [PCBs]	0.00878	0.0106	-			
Selenium	3.13	3.81	0	0	0	0
Silver	1.32	1.60	0	0	0	0
Toxaphene	0.000125	0.000152	-			
Tributyltin [TBT]	0.0150	0.0182	-			
2,4,5 Trichlorophenol	40.1	48.7	-			
Zinc	301	366	3.67	6.02	2.5	2.5

Human Health	***70% of Daily Avg.***	***85% of Daily Avg.***	***Average of Samples***	***Sample 1***	***Sample 2***	***Sample 3***
Parameter	***(µg/L)***	***(µg/L)***	***(µg/L)***	***(µg/L)***	***(µg/L)***	***(µg/L)***
Acrylonitrile	0.956	1.16	-			
Aldrin	0.0000109	0.0000133	-			
Anthracene	1061	1288	-			
Antimony	5.74	6.97	0	0	0	0
Arsenic	17.1	20.8	5.08666667	4.8	5.18	5.28
Barium	1913	2324	46.4333333	39.3	65.9	34.1
Benzene	4.78	5.81	-			
Benzidine	0.00143	0.00174	-			
Benzo(*a*)anthracene	0.0229	0.0278	-			
Benzo(*a*)pyrene	0.00239	0.00290	-			
Bis(chloromethyl)ether	0.00229	0.00278	-			

Bis(2-chloroethyl)ether	0.574	0.697	-			
Bis(2-ethylhexyl) phthalate [Di(2-ethylhexyl) phthalate]	5.74	6.97	-			
Bromodichloromethane [Dichlorobromomethane]	9.76	11.8	-			
Bromoform [Tribromomethane]	64.0	77.7	-			
Cadmium	24.4	29.7	0	0	0	0
Carbon Tetrachloride	4.30	5.22	-			
Chlordane	0.00239	0.00290	-			
Chlorobenzene	95.6	116	-			
Chlorodibromomethane [Dibromochloromethane]	7.17	8.71	-			
Chloroform [Trichloromethane]	66.9	81.3	-			
Chromium (hexavalent)	59.3	72.0	-			
Chrysene	2.34	2.84	-			
Cresols [Methylphenols]	996	1209	-			
Cyanide (free)	191	232	0	0	0	0
4,4'-DDD	0.00191	0.00232	-			
4,4'-DDE	0.000124	0.000151	-			
4,4'-DDT	0.000382	0.000464	-			
2,4'-D	66.9	81.3	-			
Danitol [Fenpropathrin]	250	304	-			
1,2-Dibromoethane [Ethylene Dibromide]	0.162	0.197	-			
m-Dichlorobenzene [1,3-Dichlorobenzene]	308	374	-			
o-Dichlorobenzene [1,2-Dichlorobenzene]	574	697	-			
p-Dichlorobenzene [1,4-Dichlorobenzene]	71.7	87.1	-			
3,3'-Dichlorobenzidine	0.756	0.918	-			
1,2-Dichloroethane	4.78	5.81	-			
1,1-Dichloroethylene [1,1-Dichloroethene]	6.69	8.13	-			
Dichloromethane [Methylene Chloride]	4.78	5.81	-			
1,2-Dichloropropane	4.78	5.81	-			
1,3-Dichloropropene [1,3-Dichloropropylene]	2.67	3.25	-			
Dicofol [Kelthane]	0.287	0.348	-			
Dieldrin	0.0000191	0.0000232	-			
2,4-Dimethylphenol	424	515	-			
Di-*n*-Butyl Phthalate	85.0	103	-			
Dioxins/Furans [TCDD Equivalents]	7.46E-08	9.06E-08	-			
Endrin	0.0191	0.0232	-			
Epichlorohydrin	51.1	62.1	-			
Ethylbenzene	669	813	-			
Ethylene Glycol	44732	54318	-			
Fluoride	3827	4648	-			
Heptachlor	0.0000765	0.0000929	-			
Heptachlor Epoxide	0.000277	0.000336	-			
Hexachlorobenzene	0.000650	0.000790	-			
Hexachlorobutadiene	0.200	0.244	-			
Hexachlorocyclohexane (*alpha*)	0.00746	0.00906	-			
Hexachlorocyclohexane (*beta*)	0.143	0.174	-			
Hexachlorocyclohexane (*gamma*) [Lindane]	0.191	0.232	-			
Hexachlorocyclopentadiene	10.2	12.4	-			
Hexachloroethane	1.76	2.13	-			
Hexachlorophene	1.96	2.38	-			
4,4'-Isopropylidenediphenol [Bisphenol A]	1045	1268	-			
Lead	6.47	7.86	0	0	0	0
Mercury	0.0116	0.0141	0.0411	0.078	0.00025	0.045
Methoxychlor	2.79	3.39	-			
Methyl Ethyl Ketone	13268	16111	-			
Methyl *tert*-butyl ether [MTBE]	14.3	17.4	-			
Nickel	1402	1703	0	0	0	0
Nitrate-Nitrogen (as Total Nitrogen)	9569	11620	102	48	48	210
Nitrobenzene	43.7	53.1	-			
N-Nitrosodiethylamine	0.00354	0.00429	-			
N-Nitroso-di-*n*-Butylamine	0.113	0.138	-			
Pentachlorobenzene	0.333	0.404	-			

Pentachlorophenol	0.210	0.255	-			
Polychlorinated Biphenyls [PCBs]	0.000612	0.000743	-			
Pyridine	22.0	26.7	-			
Selenium	47.8	58.1	0	0	0	0
1,2,4,5-Tetrachlorobenzene	0.220	0.267	-			
1,1,2,2-Tetrachloroethane	1.56	1.90	-			
Tetrachloroethylene [Tetrachloroethylene]	4.78	5.81	-			
Thallium	0.114	0.139	0.465	0.25	0.25	0.894
Toluene	956	1162	-			
Toxaphene	0.0105	0.0127	-			
2,4,5-TP [Silvex]	47.8	58.1	-			
1,1,1-Trichloroethane	191	232	-			
1,1,2-Trichloroethane	4.78	5.81	-			
Trichloroethylene [Trichloroethene]	4.78	5.81	-			
2,4,5-Trichlorophenol	994	1207	-			
TTHM [Sum of Total Trihalomethanes]	76.5	92.9	-			
Vinyl Chloride	0.220	0.267	-			

Appendix C
Comparison of Effluent Limits

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

Outfall	*Pollutant*	*Technology-Based*				*Water Quality-Based*				*Existing Permit*			
		Daily Avg		*Daily Max*		*Daily Avg*		*Daily Max*		*Daily Avg*		*Daily Max*	
		lbs/day	*mg/L*	*lbs/day*	*mg/L*	*lbs/day*	*mg/L*	*lbs/day*	*mg/L*	*lbs/day*	*mg/L*	*lbs/day*	*mg/L*
001	Flow	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	**404 MGD**		**404 MGD**	
	Temperature	N/A	N/A	N/A	N/A	93 °F		N/A	N/A		**105 °F**	**110 °F**	
	Free Available Chlorine	56	0.2	140	0.5	N/A	N/A	N/A	N/A	**46**	**0.2**	**114**	**0.5**
	Total Residual Chlorine	N/A	N/A	169	0.2	N/A	N/A	N/A	N/A	N/A	N/A	**137**	**0.2**
	Total Aluminum	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	**Report**	N/A	**Report**
	Total Dissolved Solids	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	**Report**	N/A	**Report**
	Total Mercury	N/A	N/A	N/A	N/A	N/A	**Report**	N/A	**Report**	N/A	N/A	N/A	N/A
	Total Thallium	N/A	N/A	N/A	N/A	N/A	**Report**	N/A	**Report**	N/A	N/A	N/A	N/A
	pH	N/A		N/A		6.0 SU (Min)		9.0 SU (Max)		**6.0 SU (Min)**		**9.0 SU (Max)**	

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August 26, 2024

Abesha Michael
Water Quality Division (MC-148)
Texas Commission on Environmental Quality
P.O. Box 13087
Austin, TX 78711-3087

Re: Response to TCEQ Notice of Deficiency
Application to Amend/Renew Wastewater Permit No. WQ0001923000 (RN100219203)
City of Garland (CN600328694)

Dear Ms. Michael:

The City of Garland and Freese and Nichols, Inc. (FNI) received a letter from the Texas Commission on Environmental Quality (TCEQ) dated August 17, 2024 that requested a written response to address the deficiency associated with the application to renew Wastewater Permit No. WQ0001923000. On behalf of the applicant, City of Garland, FNI offers the following responses to the TCEQ NOD.

1. ***Section I, item 2 on page 1 of the Core Data Form (CDF): Thank you for addressing the CN number, However the CN600130140 is incorrect. Per the existing permit, our records and the PLS provided, the correct CN is CN600328694. Please update and submit the revised page.***

   An updated Core Data Form with the updated information is included with this correspondence.

2. ***Section II, item 6 on page 1 of the Core Data Form (CDF): Thank you for addressing the customer's legal name. However, the legal name provided is incorrect. Per the existing permit, our records and pages 1 & 2 of the application the correct legal name is City of Garland. Please update and submit a revised page 1 of CDF and SPIF item 1 on page 1/3.***
   An updated Core Data Form, SPIF, Pages 1 and 2 of the application have been updated and included in this correspondence.

3. ***Section V, Authorized Signature on page 3 of the Core Data Form (CDF): the CDF is not singed. Please submit a signed CDF.***
   An updated Core Data Form with the updated information is included with this correspondence.

4. ***Item 1F on page 2 of the administrative report: Item1E checked for major amendment with renewal. However, the amendment or modification description indicated as NA. Please complete and submit a revised page.***
   A revised Administrative Report is included with this correspondence.

5. ***Item 1G on page 3 of the administrative report: The application indicates that the application fee for $1,250.00 is paid, which we are unable to location the proof of payment. AND as per our***

records and EPA Classification, this permit is a major facility and the fee for major facility to process major amendment with renewal is $2,050. Please pay $2,050 to TCEQ revenue section and email the copy of any proof of payment with the response to this letter.
The facility has historically been classified as a minor facility subject to EPA categorical effluent guidelines. The facility falls under 40 CFR Part 423. Please provide documentation that indicates a change in classification.

A payment of $1,250 was paid via [redacted], 2024. The payment information is included in this correspondence.

6. ***Item 1, Affected Landowner Information on page 12 of the administrative report: Thank you for submitting the affected landowner's map. However, the map submitted is insufficient, if the discharge is to a lake or bay estuary, or affected by tides, the property boundaries of the landowners ½ mils up & downstream and those property owner across the lake along the shoreline that fall within a ½ mile radius of the point of discharge has to be delineated, this does not include all the landowners far from the shoreline. And the property owners surrounding the applicant's property boundaries has to be delineated. Please update the landowners map, the cross-referenced mailing list and the mailing labels accordingly (please email the labels in a Microsoft word format).***
Updated Affected Landowner Maps are included in this correspondence.

7. ***Item 11H on page 9 of the administrative report: The name of all the counties located within 100 statute miles downstream of the point(s) of discharge have to be identified for a daily average discharge of 5 MGD or more. As per the existing permit and our records the daily average flow for this permit 404 million gallons per day (MGD). Please update with the name of the counties and submit a revised page 9.***
A revised Administrative Report is included with this correspondence.

8. ***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.***

APPLICATION. City of Garland, 13835 County Road 489, Nevada, Texas 75173, which owns a natural gas steam electric generating facility, has applied to the Texas Commission on Environmental Quality (TCEQ) to amend Texas Pollutant Discharge Elimination System (TPDES) Permit No. WQ0001923000 (EPA I.D. No. TX0001848) to authorize adding metal cleaning wastes to the evaporation pond Other Requirement No. 12 and removing internal Outfall ~~001~~ 101. The facility is located at 13835 County Road 489, near the city of Nevada, in Collin County, Texas 75173. The discharge route is from the plant site ~~to~~ directly to Lavon Lake. TCEQ received this application on August 8, 2024. The permit application will be available for viewing and copying at Wylie Municipal Complex, Office of City Secretary, 300 Country Club Road, Building 100, Wylie, 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=-96.4525,33.068055&level=18

Further information may also be obtained from City of Garland at the address stated above or by calling Mr. David Bernard, Production ~~Manager~~ Director, Garland Power & Light, at 972-205-3831.

9. ***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 translated NORI is included with this correspondence.

Additionally, the last set of lab results was received and has been added to the application. An updated version of the application has been uploaded to the TCEQ FTPS. Please feel free to contact me if you have any questions or require additional information.

Sincerely,

Cassandra Villarreal, M.S.
Freese and Nichols, Inc.

cc: Mr. Micheal Burr, Garland Power and Light
File GPL24350

Attachments

MEMORANDUM

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TO: Applications Review and Processing Team (MC 148)

FROM: Cassie Villarreal, FNI

SUBJECT: Garland Power and Light TPDES Application WQ0001923000

DATE: 8/9/2024

PROJECT: GPL24350

The TCEQ Applications Review and Processing Team contacted the permittee about an application submitted via STEERS on August 8, 2024. Although the application in STEERS is listed as a "new permit," it is a renewal/major amendment for an existing facility (WQ0001923000). TCEQ staff discussed that they would work on making this change internally but suggested we submit a PDF copy to the TCEQ FTP Server with a memo of what was discussed. If needed, we can follow up with hard copies of the application.

Please let me know if you have any questions regarding the application.

Thank you,

Sincerely,

Cassandra Villarreal, M.S.
Freese and Nichols, Inc.
cassandra.villarreal@freese.com
817-735-7294

TEXAS COMMISSION ON ENVIRONMENTAL QUALITY

Protecting Texas by Reducing and Preventing Pollution

August 8, 2024

Dear Applicant:

Re: Confirmation of Submission of the New Industrial Wastewater Individual Permit Application

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

ER Account Number: ER083325
Application Reference Number: 660831
Authorization Number: WQ0005464000
Site Name: Garland Municipal Power - Ray Olinger Plant
Regulated Entity: RN100219203 - GARLAND MUNICIPAL POWER - RAY OLINGER PLANT
Customer(s): CN600328694 - City of Garland

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

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

Sincerely,
Applications Review and Processing Team
Water Quality Division

TEXAS COMMISSION ON ENVIRONMENTAL QUALITY

INDUSTRIAL WASTEWATER PERMIT APPLICATION CHECKLIST

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

APPLICANT NAME: City of Garland

PERMIT NUMBER (If new, leave blank): WQ00 01923000

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

	Y	N		Y	N
Administrative Report 1.0	☒	☐	Worksheet 8.0	☐	☒
Administrative Report 1.1	☐	☒	Worksheet 9.0	☐	☒
SPIF	☒	☐	Worksheet 10.0	☐	☒
Core Data Form	☒	☐	Worksheet 11.0	☒	☐
Public Involvement Plan Form	☒	☐	Worksheet 11.1	☒	☐
Plain Language Summary	☒	☐	Worksheet 11.2	☒	☐
Technical Report 1.0	☒	☐	Worksheet 11.3	☒	☐
Worksheet 1.0	☒	☐	Original USGS Map	☒	☐
Worksheet 2.0	☒	☐	Affected Landowners Map	☒	☐
Worksheet 3.0	☐	☒	Landowner Disk or Labels	☒	☐
Worksheet 3.1	☐	☒	Flow Diagram	☒	☐
Worksheet 3.2	☐	☒	Site Drawing	☐	☒
Worksheet 3.3	☐	☒	Original Photographs	☒	☐
Worksheet 4.0	☒	☐	Design Calculations	☐	☒
Worksheet 4.1	☐	☒	Solids Management Plan	☐	☒
Worksheet 5.0	☐	☒	Water Balance	☒	☐
Worksheet 6.0	☒	☐			
Worksheet 7.0	☒	☐			

For TCEQ Use Only

Segment Number _____County _____
Expiration Date _____Region _____
Permit Number _____

TEXAS COMMISSION ON ENVIRONMENTAL QUALITY

INDUSTRIAL WASTEWATER PERMIT APPLICATION ADMINISTRATIVE REPORT 1.0

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

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

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

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

Applicant Name: City of Garland

Permit No.: WQ0001923000

EPA ID No.: TX0001848

Expiration Date: February 5, 2025

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

☒ Industrial Wastewater (wastewater and stormwater)

☐ Industrial Stormwater (stormwater only)

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

☒ Active ☐ Inactive

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

☒ TPDES Permit ☐ TLAP ☐ TPDES with TLAP component

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

☐ New

☐ Renewal with changes ☐ Renewal without changes

☒ Major amendment with renewal ☐ Major amendment without renewal

☐ Minor amendment without renewal

☐ Minor modification without renewal

f. If applying for an amendment or modification, describe the request: Removal of internal Outfall 101.

For TCEQ Use Only

Segment Number _____County _____
Expiration Date _____Region _____

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

g. Application Fee

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

h. Payment Information

Mailed

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

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

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

Epay

Voucher number: 716366/716367

Copy of voucher attachment: AR-7

Item 2. Applicant Information (Instructions, Pages 26)

a. Customer Number, if applicant is an existing customer: CN600328694

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

b. Legal name of the entity (applicant) applying for this permit: City of Garland

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

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

Prefix: Mr. Full Name (Last/First Name): Cline, Darrell

Title: General Manager & CEO Credential: N/A

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

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

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

☒ Yes ☐ No

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

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

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

a. Legal name of the entity (co-applicant) applying for this permit: N/A

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

b. Customer Number (if applicant is an existing customer): CNN/A

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

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

Prefix: N/A Full Name (Last/First Name): N/A

Title: N/A Credential: N/A

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

☐ Yes ☐ No

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

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

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

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

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

a. ☒ Administrative Contact ☒ Technical Contact

Prefix: Mr. Full Name (Last/First Name): Burr, Michael

Title: Environmental Manager Credential: N/A

Organization Name: Garland Power & Light

Mailing Address: 13835 County Road 489 City/State/Zip: Nevada, Texas, 75173

Phone No: 972-485-6453 Email: mburr@gpltexas.org

b. ☒ Administrative Contact ☒ Technical Contact

Prefix: Mrs. Full Name (Last/First Name): Leatherwood, Katie

Title: Environmental Scientist Credential: P.G.

Organization Name: Freese and Nichols, Inc

Mailing Address: 801 Cherry Street, Suite 2800 City/State/Zip: Fort Worth, TX 76102

Phone No: 817-735-7503 Email: katie.leatherwood@freese.com

Attachment: N/A

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

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

a. Prefix: Mr. Full Name (Last/First Name): Bernard, David

Title: Production Director Credential: N/A

Organization Name: Garland Power & Light

Mailing Address: 13835 Country Road 489 City/State/Zip: Nevada, TX 75173

Phone No: 972-205-3831 Email: dbernard@gpltexas.org

b. Prefix: Mr. Full Name (Last/First Name): Burr, Michael

Title: Environmental Manager Credential: N/A

Organization Name: Garland Power & Light

Mailing Address: 13835 Country Road 489 City/State/Zip: Nevada, TX 75173

Phone No: 972-485-6458 Email: mburr@gpltexas.org

Attachment: N/A

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

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

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

Prefix: Mr. Full Name (Last/First Name): Bernard, David

Title: Production Director Credential: N/A

Organization Name: Garland Power & Light

Mailing Address: 13835 Country Road 489 City/State/Zip: Nevada, TX 75173

Phone No: 972-205-3831 Email: dbernard@gpltexas.org

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

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

Prefix: Mr. Full Name (Last/First Name): Bernard, David

Title: Production Director Credential: N/A

Organization Name: Garland Power & Light

Mailing Address: 13835 Country Road 489 City/State/Zip: Nevada, TX 75173

Phone No: 972-205-3831 Email: dbernard@gpltexas.org

Item 9. Notice Information (Instructions, Pages 28)

a. Individual Publishing the Notices

Prefix: Mr. Full Name (Last/First Name): Bernard, David

Title: Production Director Credential: N/A

Organization Name: Garland Power & Light

Mailing Address: 13835 Country Road 489 City/State/Zip: Nevada, TX 75173

Phone No: 972-205-3831 Email: dbernard@gpltexas.org

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

☒ E-mail: mburr@gpltexas.org; dbernard@gpltexas.org; katie.leatherwood@freese.com;

☐ Fax: Click to enter text.

☐ Regular Mail (USPS)

Mailing Address: Click to enter text.

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

c. Contact in the Notice

Prefix: Mr. Full Name (Last/First Name): Bernard, David

Title: Production Director Credential: N/A

Organization Name: Garland Power & Light

Phone No: 972-205-3831 Email: dbernard@gpltexas.org

d. Public Viewing Location Information

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

Public building name: Wylie Municipal Complex Location within the building: Office of City Secretary

Physical Address of Building: 300 Country Club Road, Building 100

City: Wylie County: Collin

e. Bilingual Notice Requirements

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

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

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

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

☒ Yes ☐ No

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

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

   ☒ Yes ☐ No

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

   ☐ Yes ☒ No

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

   ☐ Yes ☐ No ☒ N/A

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

f. Plain Language Summary Template – Complete the Plain Language Summary (TCEQ Form 20972) and include as an attachment. Attachment: AR-2

g. Complete one Public Involvement Plan (PIP) Form (TCEQ Form 20960) for each application for a new permit or major amendment and include as an attachment. Attachment: AR-3

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

a. TCEQ issued Regulated Entity Number (RN), if available: RN100219203

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

b. Name of project or site (the name known by the community where located): Garland Municipal Power – Ray Olinger Plant

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

☒ Yes ☐ No ☐ N/A (new permit)

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

d. Owner of treatment facility:

Prefix: N/A Full Name (Last/First Name): N/A

or Organization Name: City of Garland

Mailing Address: 13835 Country Road 489 City/State/Zip: Nevada, TX 75173

Phone No: 972-205-2650 Email: Click to enter text.

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

f. Owner of land where treatment facility is or will be: N/A

Prefix: N/A Full Name (Last/First Name): N/A

or Organization Name: City of Garland

Mailing Address: 13835 Country Road 489 City/State/Zip: Nevada, TX 75173

Phone No: 972-205-2650 Email: dbernard@gpltexas.org

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

g. Owner of effluent TLAP disposal site (if applicable): N/A

Prefix: N/A Full Name (Last/First Name): N/A

or Organization Name: N/A

Mailing Address: N/A City/State/Zip: N/A

Phone No: N/A Email: N/A

Note: If not the same as the facility owner, attach a long-term lease agreement in effect for at least six years. Attachment: N/A

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

Prefix: N/A Full Name (Last/First Name): N/A

or Organization Name: N/A

Mailing Address: N/A City/State/Zip: N/A

Phone No: N/A Email: N/A

Note: If not the same as the facility owner, attach a long-term lease agreement in effect for at least six years. Attachment: N/A

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

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

☐ Yes ☒ No

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

☒ One-mile radius

☒ Applicant's property boundaries

☒ Labeled point(s) of discharge

☐ Effluent disposal site boundaries

☐ Sewage sludge disposal site

☒ Three-miles downstream information

☒ Treatment facility boundaries

☒ Highlighted discharge route(s)

☒ All wastewater ponds

☐ New and future construction

Attachment: AR-4

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

☐ Yes ☐ No or New Permit N/A

If no, or a new application, provide an accurate location description: N/A

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

☒ Yes ☐ No or New Permit

If no, or a new application, provide an accurate location description: N/A

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

☒ Yes ☐ No or New Permit

If no, or a new permit, provide an accurate description of the discharge route: N/A

f. City nearest the outfall(s): Nevada

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

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

☐ Yes ☒ No

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

For new and amendment applications, attach copies of letters that show proof of contact and provide the approval letter upon receipt. Attachment: N/A

For all applications involving an average daily discharge of 5 MGD or more, provide the names of all counties located within 100 statute miles downstream of the point(s) of discharge: Collin, Dallas, Rockwall, Kaufman, Ellis

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

☐ Yes No or New Permit ☐ N/A

If no, or a new application, provide an accurate location description: N/A

j. City nearest the disposal site: N/A

k. County in which the disposal site is located: N/A

l. For TLAPs, describe how effluent is/will be routed from the treatment facility to the disposal site: N/A

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

Item 12. Miscellaneous Information (Instructions, Page 33)

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

☐ Yes ☒ No

If yes, list each person: N/A

b. Do you owe any fees to the TCEQ?

☐ Yes ☒ No

If yes, provide the following information:

Account no.: N/A

Total amount due: N/A

c. Do you owe any penalties to the TCEQ?

☐ Yes ☒ No

If yes, provide the following information:

Enforcement order no.: N/A

Amount due: N/A

INDUSTRIAL WASTEWATER PERMIT APPLICATION ADMINISTRATIVE REPORT 1.1

The following information is required for new and amendment applications.

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

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

☒ The applicant's property boundaries.

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

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

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

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

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

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

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

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

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

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

Attachment: AR-5

b. Check the box next to the format of the landowners list:

☐ Readable/Writeable CD ☒ Four sets of labels

Attachment: AR-5

d. Provide the source of the landowners' names and mailing addresses: Collin County CAD

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

☐ Yes ☒ No

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

Item 2. Original Photographs (Instructions, Page 37)

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

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

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

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

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

Attachment: AR-6

INDUSTRIAL WASTEWATER PERMIT APPLICATION

SUPPLEMENTAL PERMIT INFORMATION FORM (SPIF)

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

Attachment: SPIF-1 (SPIF Form), SPIF-2 (SPIF Topo Map)

INDUSTRIAL WASTEWATER PERMIT APPLICATION CHECKLIST OF COMMON DEFICIENCIES

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

☒ Core Data Form (TCEQ Form No. 10400)
(Required for all applications types. Must be completed in its entirety and signed. Note: Form may be signed by applicant representative.)

☒ Correct and Current Industrial Wastewater Permit Application Forms
(TCEQ Form Nos. 10055 and 10411. Version dated 5/10/2019 or later.)

☒ Water Quality Permit Payment Submittal Form (Page 14) EPAY
(Original payment sent to TCEQ Revenue Section. See instructions for mailing address.)

☒ 7.5 Minute USGS Quadrangle Topographic Map Attached
(Full-size map if seeking "New" permit. 8 ½ x 11 acceptable for Renewals and Amendments.)

☒ N/A ☐ Current/Non-Expired, Executed Lease Agreement or Easement Attached

☐ N/A ☒ Landowners Map
(See instructions for landowner requirements.)

Things to Know:

- All the items shown on the map must be labeled.
- The applicant's complete property boundaries must be delineated which includes boundaries of contiguous property owned by the applicant.
- The applicant cannot be its own adjacent landowner. You must identify the landowners immediately adjacent to their property, regardless of how far they are from the actual facility.
- If the applicant's property is adjacent to a road, creek, or stream, the landowners on the opposite side must be identified. Although the properties are not adjacent to applicant's property boundary, they are considered potentially affected landowners. If the adjacent road is a divided highway as identified on the USGS topographic map, the applicant does not have to identify the landowners on the opposite side of the highway.

☐ N/A ☒ Landowners Cross Reference List
(See instructions for landowner requirements.)

☐ N/A ☒ Landowners Labels or CD-RW attached
(See instructions for landowner requirements.)

☒ Original signature per 30 TAC § 305.44 – Blue Ink Preferred
(If signature page is not signed by an elected official or principle executive officer, a copy of signature authority/delegation letter must be attached.)

☒ Plain Language Summary

4TEXAS COMMISSION ON ENVIRONMENTAL QUALITY

INDUSTRIAL WASTEWATER PERMIT APPLICATION TECHNICAL REPORT 1.0

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

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

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

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

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

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

Steam Electric Power Plant (SIC Code 4911 – Electric Services)

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

The Ray Olinger Plant burns natural gas to produce steam used to drive turbine generators producing electric power. It also has one combustion gas turbine for power peaking. Exhaust steam is condensed in non-contact heat exchangers using lake water as the cooling media. Boiler blowdown and demineralized wastewater goes to evaporation ponds with zero discharge.

[1] 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
Natural Gas	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: TR-1

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: FEMA Floodplain Map No. 48085C0430J

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.

Sodium hyperchlorate is used at the intake to control algae in the circulating water used for condenser cooling. Ammonium bisulfate is used for dichlorination at the outlet of the condenser to limit the total residual chlorine to less than 0.1 mg/L when the water exits the outfall into the lake.

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: TR-2

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)	E	E	E	E
Associated Outfall Number				
Liner Type (C) (I) (S) or (A)	C	C	C	S
Alt. Liner Attachment Reference				
Leak Detection System, Y/N				
Groundwater Monitoring Wells, Y/N				
Groundwater Monitoring Data Attachment				
Pond Bottom Located Above The Seasonal High-Water Table, Y/N				
Length (ft)	200	100	384	400
Width (ft)	184	90	274	321
Max Depth From Water Surface (ft), Not Including Freeboard	3	3	3	6
Freeboard (ft)	2	2	2	2
Surface Area (acres)	0.85	0.20	2.42	2.95
Storage Capacity (gallons)	1,376,416	336,623	3,935,352	5,762,992
40 CFR Part 257, Subpart D, Y/N				
Date of Construction				

Attachment: N/A

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/0r numbered accordingly (i.e., page 6a, 6b, etc.) may be used to provide information on the additional outfalls.

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

Outfall Longitude and Latitude

Outfall No.	Latitude (Decimal Degrees)	Longitude (Decimal Degrees)
001	33.068508	-96.454209

Outfall Location Description

Outfall No.	Location Description
001	Lake Lavon
Internal 101	Near water treatment units (to be removed)
Internal 102	Surrounding and near ROP1,2, and 3

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

Outfall No.	Description of sampling point
001	Outfall location (33.068508, -96.454209

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	404	404			
Internal 101	Report	Report			

Outfall Discharge – Method and Measurement

Outfall No.	Pumped Discharge? Y/N	Gravity Discharge? Y/N	Type of Flow Measurement Device Used
001	Y	N	Meter
Internal 101	Y	N	Est.
Internal 102	N	Y	Est.

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	N	Y	N	24	31	12
Internal 101	Y	N	N	Variable	Variable	Variable

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)
Internal 102	Y	N	N	Variable	Variable	Variable

Outfall Wastestream Contributions

Outfall No. 001

Contributing Wastestream	Volume (MGD)	Percent (%) of Total Flow
ROP3 Condenser and Plant Service Water	86.903	59
ROP1 & ROP2 Condensers and Plant Service Water	61.198	41
Internal Outfall 101 – Filter Backwash and RO Reject	0.052	0
Internal Outfall 102 – Stormwater Run-off (gravity, seasonal)	0.014	0
Total	**148.167**	**100**

Outfall No. Internal 101 (to be removed)

Contributing Wastestream	Volume (MGD)	Percent (%) of Total Flow
Prefilter Backwash	0.03	0
RO Reject	0.022	0

Outfall No. Internal 102

Contributing Wastestream	Volume (MGD)	Percent (%) of Total Flow
Stormwater	0.014	0

Attachment: N/A

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: TR-3

c. Cooling Towers and Boilers

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

Cooling Towers and Boilers

Type of Unit	Number of Units	Daily Avg Blowdown (gallons/day)	Daily Max Blowdown (gallons/day)
Cooling Towers			
Boilers	3	34,022	48,916

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: The ROPP facility has a current MSGP authorization (TXR05AX97). The exposed materials include diesel and gasoline storage, used oil, and sodium hypochlorite associated with the industrial process.

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.**
AAA Septic Tank Service, Inc	TCEQ 24027
Nortex Septic Service	TCEQ 25282

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:** N/A

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

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

☐ Yes ☒ No

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

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

b. Attach the following information to the application:

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

Attachment: 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)
N/A	

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

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

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

CWIS ID	Unit 1	Unit 2	Unit 3	
Owner	GP&L	GP&L	GP&L	
Operator	GP&L	GP&L	GP&L	

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. 0430044

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: Click to enter text.

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

   ☒ Yes ☐ No

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

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

   ☐ Yes ☒ No

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

   ☐ Track I – Fixed facility

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

   ☐ Track I – Not a fixed facility

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

   ☐ Track II – Fixed facility

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

   Attachment: Click to enter text.

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

This item is only applicable to existing permitted facilities.

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

☒ Yes ☐ No

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

GP&L is requesting to remove internal Outfall 101 from the permit to eliminate separate sampling frequency from Outfall 001.

Other Requirement No. 12 (Evaporation Ponds) of the current permit lists that Pond No. 1 and No.3 can accept Meatal Cleaning Waste (MCW). However, the Draft Permit Rationale, Technology-Based Effluent Limitations/Conditions, states, "boiler blowdown, demineralized wastewater, and metal cleaning waste are routed to four evaporation ponds with zero discharge." GP&L would like to inquire about listing all four evaporation ponds to accept MCW.

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

☐ Yes ☒ No

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

N/A - renewal

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

☐ Yes ☒ No

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

N/A - renewal

INDUSTRIAL WASTEWATER PERMIT APPLICATION WORKSHEET 1.0: EPA CATEGORICAL EFFLUENT GUIDELINES

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

Item 1. Categorical Industries (Instructions, Page 53)

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

☒ Yes ☐ No

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

40 CFR Effluent Guideline

Industry	40 CFR Part
Steam Electric Power Generating	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
Once-through cooling water	404 Max (varies daily)	404	MGD

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.

Process: Once-through cooling water and low-volume waste

Non-Process: Stormwater runoff from the site

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
Once-through cooling water	423	12	1975
Low volume waste	423	12	2011

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): 7/8/24 – 7/24/24

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:** TR-4

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

Attach correspondence from TCEQ approving submittal of less than the required number of samples, if applicable. **Attachment:** N/A

TABLE 1 and TABLE 2 (Instructions, Page 58)

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

Table 1 for Outfall No.: 001 **Samples are (check one):** ☐ **Composite** ☒ **Grab**

Pollutant	**Sample 1 (mg/L) 7/6/24**	**Sample 2 (mg/L) 7/8/24**	**Sample 3 (mg/L) 7/16/24**	**Sample 4 (mg/L) 7/24/24**
BOD (5-day)	1.67	1.39	2.53	2.34
CBOD (5-day)	1.75	1.44	2.52	1.48
Chemical oxygen demand	25.4	19.0	22.2	22.2
Total organic carbon	11.5	11.2	5.34	4.99
Dissolved oxygen	8.77	10.2	7.77	9.72
Ammonia nitrogen	<0.0280	<0.0280	<0.0280	0.0292
Total suspended solids	5.93	6.20	<2.65	7.83
Nitrate nitrogen	<0.0480	<0.0480	<0.0480	4.86
Total organic nitrogen	1.03	0.343	0.478	0.721
Total phosphorus	0.101	0.0443	0.0442	0.0348
Oil and grease	0.780	<0.35	<0.35	0.490

Pollutant	Sample 1 (mg/L) 7/6/24	Sample 2 (mg/L) 7/8/24	Sample 3 (mg/L) 7/16/24	Sample 4 (mg/L) 7/24/24
Total residual chlorine	0.033	0.108	0.0420	0.0390
Total dissolved solids	184	159	219	213
Sulfate	27.1	23.3	27.3	25.0
Chloride	15.4	14.4	16.1	15.4
Fluoride	0.177	0.172	0.243	0.376
Total alkalinity (mg/L as CaCO3)	110	120	110	108
Temperature (˚F)	86.45	83.9	86.05	4.3
pH (standard units)	8.21	7.83	8.35	8.40

Table 2 for Outfall No.: 001 **Samples are (check one): ☐ Composite ☒ Grab**

Pollutant	Sample 1 (µg/L)	Sample 2 (µg/L)	Sample 3 (µg/L)	Sample 4 (µg/L)	MAL (µg/L)
Aluminum, total	98.4	115	167	72.8	2.5
Antimony, total	<5	<5	<5	<5	5
Arsenic, total	4.8	5.18	5.28	5.21	0.5
Barium, total	39.3	65.9	34.1	38.5	3
Beryllium, total	<0.5	<0.5	<0.5	<0.5	0.5
Cadmium, total	<1	<1	<1	<1	1
Chromium, total	<3	<3	<3	<3	3
Chromium, hexavalent	<3	<3	<3	<3	3
Chromium, trivalent	<3	<3	<3	<3	N/A
Copper, total	6.18	6.09	2.57	2.03	2
Cyanide, available	<2	<2	<2	<2	2/10
Lead, total	<0.5	<0.5	<0.5	<0.5	0.5
Mercury, total	0.078	<0.0005	0.045	<0.0005	0.005/0.0005
Nickel, total	<2	<2	<2	<2	2
Selenium, total	<5	<5	<5	<5	5
Silver, total	<0.5	<0.5	<0.5	<0.5	0.5
Thallium, total	<0.5	<0.5	0.894	<0.5	0.5
Zinc, total	6.02	<5.0	<5.0	<5.0	5.0

TABLE 3 (Instructions, Page 58)

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

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

Table 3 for Outfall No.: 001 **Samples are (check one): ☐ Composite ☒ Grab**

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

Pollutant	Sample 1 (µg/L)*	Sample 2 (µg/L)*	Sample 3 (µg/L)*	Sample 4 (µg/L)*	MAL (µg/L)*
1,1-Dichloroethene [1,1-Dichloroethylene]	<10	<10	<10	<10	10
Dichloromethane [Methylene chloride]	<20	<20	<20	<20	20
1,2-Dichloropropane	<10	<10	<10	<10	10
1,3-Dichloropropene [1,3-Dichloropropylene]	<10	<10	<10	<10	10
2,4-Dimethylphenol	<10	<10	<10	<10	10
Di-n-Butyl phthalate	<10	<10	<10	<10	10
Ethylbenzene	<10	<10	<10	<10	10
Fluoride	<500	<500	<500	<500	500
Hexachlorobenzene	<5	<5	<5	<5	5
Hexachlorobutadiene	<10	<10	<10	<10	10
Hexachlorocyclopentadiene	<10	<10	<10	<10	10
Hexachloroethane	<20	<20	<20	<20	20
Methyl ethyl ketone	<50	<50	<50	<50	50
Nitrobenzene	<10	<10	<10	<10	10
N-Nitrosodiethylamine	<20	<20	<20	<20	20
N-Nitroso-di-n-butylamine	<20	<20	<20	<20	20
Nonylphenol	<333	<333	<333	<333	333
Pentachlorobenzene	<20	<20	<20	<20	20
Pentachlorophenol	<5	<5	<5	<5	5
Phenanthrene	<10	<10	<10	<10	10
Polychlorinated biphenyls (PCBs) (**)	<0.2	<0.2	<0.2	<0.2	0.2
Pyridine	<20	<20	<20	<20	20
1,2,4,5-Tetrachlorobenzene	<20	<20	<20	<20	20
1,1,2,2-Tetrachloroethane	<10	<10	<10	<10	10
Tetrachloroethene [Tetrachloroethylene]	<10	<10	<10	<10	10
Toluene	<10	<10	<10	<10	10
1,1,1-Trichloroethane	<10	<10	<10	<10	10
1,1,2-Trichloroethane	<10	<10	<10	<10	10
Trichloroethene [Trichloroethylene]	<10	<10	<10	<10	10

Pollutant	Sample 1 (µg/L)*	Sample 2 (µg/L)*	Sample 3 (µg/L)*	Sample 4 (µg/L)*	MAL (µg/L)*
2,4,5-Trichlorophenol	<50	<50	<50	<50	50
TTHM (Total trihalomethanes)	<10	<10	<10	<10	10
Vinyl chloride	<10	<10	<10	<10	10

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

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

TABLE 4 (Instructions, Pages 58-59)

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

a. **Tributyltin**

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

☐ Yes ☒ No

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

☐ Manufacturers and formulators of tributyltin or related compounds.

☐ Painting of ships, boats and marine structures.

☐ Ship and boat building and repairing.

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

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

☐ Facilities engaged in wood preserving.

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

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

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

☐ Yes ☒ No

Domestic wastewater is/will be discharged.

☐ Yes ☒ No

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

c. E. coli (discharge to freshwater)

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

☐ Yes ☒ No

Domestic wastewater is/will be discharged.

☐ Yes ☒ No

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

Table 4 for Outfall No.: 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
E. coli (cfu or MPN/100 mL)					N/A

TABLE 5 (Instructions, Page 59)

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

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

☒ N/A

Table 5 for Outfall No.: 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
Diuron					0.090

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

* Indicate units if different from µg/L.

TABLE 6 (Instructions, Page 59)

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

Table 6 for Outfall No.: 001 **Samples are (check one): ☐ Composite ☒ Grab**

Pollutants	Believed Present	Believed Absent	Sample 1 (mg/L)	Sample 2 (mg/L)	Sample 3 (mg/L)	Sample 4 (mg/L)	MAL (µg/L)*
Bromide	☒	☐	0.914	<400	0.116	5.16	400
Color (PCU)	☐	☒	20.0	20.0	20.0	20.0	—
Nitrate-Nitrite (as N)	☒	☐	<0.048	<0.048	0.21	4.86	—
Sulfide (as S)	☐	☒	<0.023	<0.023	<0.023	<0.023	—
Sulfite (as SO3)	☐	☒	<1.19	<1.19	<1.19	<1.19	—
Surfactants	☐	☒	<0.36	<0.36	<0.36	<0.36	—
Boron, total	☐	☒	0.0707	0.0759	0.0702	0.0785	20
Cobalt, total	☐	☒	0.00021	0.000199	0.00305	0.0000126	0.3
Iron, total	☒	☐	0.0935	0.119	0.0153	0.0741	7
Magnesium, total	☒	☐	3.62	3.78	3.92	3.90	20
Manganese, total	☒	☐	0.0324	0.135	0.0439	0.0309	0.5
Molybdenum, total	☐	☒	0.000963	0.00103	0.00174	0.000743	1
Tin, total	☐	☒	<5	<5	<5	<5	5
Titanium, total	☐	☒	<30	<30	<30	<30	30

TABLE 7 (Instructions, Page 60)

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

☐ N/A

Table 7 for Applicable Industrial Categories

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

* Test if believed present.

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

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

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

Table 8 for Outfall No.: 001 **Samples are (check one): ☐ Composite ☒ Grab**

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

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

* Indicate units if different from µg/L.

Table 9 for Outfall No.: 001 **Samples are (check one): ☐ Composite ☒ Grab**

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

* Indicate units if different from µg/L.

Table 10 for Outfall No.: 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
Benzo(k)fluoranthene					5
Bis(2-chloroethoxy)methane					10

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

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

* Indicate units if different from µg/L.

Table 11 for Outfall No.: 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
PCB 1232					0.2
PCB 1248					0.2

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

* Indicate units if different from µg/L.

Attachment: 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 (Ronnel) CASRN 299-84-3
- ☐ 2,4,5-trichlorophenol (TCP) CASRN 95-95-4
- ☐ hexachlorophene (HCP) CASRN 70-30-4
- ☐ None of the above

Description: 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: Click to enter text.

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

Table 12 for Outfall No.: Click to enter text. **Samples are (check one):** ☐ **Composite** ☐ **Grab**

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

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

TABLE 13 (HAZARDOUS SUBSTANCES)

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

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

☐ Yes ☒ No

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

☐ Yes ☒ No

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

Table 13 for Outfall No.: 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

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: North Texas Municipal Water District

2. The distance and direction from the outfall to the drinking water supply intake: 2.86 miles southwest

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: N/A 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: Click to enter text.

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

☐ Yes ☐ No

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

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

Date and time of observation: Click to enter text.

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

☐ Yes ☐ No

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

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

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

☐ oil field activities
☒ urban runoff
☐ agricultural runoff
☐ septic tanks
☒ upstream discharges
☐ other, specify: Click to enter text.

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

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

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

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

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

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

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

INDUSTRIAL WASTEWATER PERMIT APPLICATION WORKSHEET 6.0: INDUSTRIAL WASTE CONTRIBUTION

The following information **is required** for all applications for publicly-owned treatment works (POTWs).

For an explanation of the terms used in this worksheet, refer to the General Definitions on pages 4-12 and the Definitions Relating to Pretreatment on pages 13-14 of the Instructions.

Item 1. All POTWs (Instructions, Page 86)

a. Complete the following table with the number of each type of industrial users (IUs) that discharge to the POTW and the daily average flows from each.

Industrial User Information

Type of Industrial User	Number of Industrial Users	Daily Average Flow (gallons per day)
CIU	0 (zero)	0
SIU – Non-categorical	0 (zero)	0
Other IU	0 (zero)	0

b. In the past three years, has the POTW experienced treatment plant interference?

☐ Yes ☒ No

If **yes**, identify the date(s), duration, nature of interference, and probable cause(s) and possible source(s) of each interference event. Include the names of the IU(s) that may have caused the interference: N/A

c. In the past three years, has the POTW experienced pass-through?

☐ Yes ☒ No

If **yes**, identify the date(s), duration, pollutants passing through the treatment plant, and probable cause(s) and possible source(s) of each pass-through event. Include the names of the IU(s) that may have caused the pass-through: N/A

d. Does the POTW have, or is it required to develop, an approved pretreatment program?

☐ Yes ☒ No

If **yes**, answer all questions in Item 2 and skip Item 3.

If **no**, skip Item 2 and answer all questions in Item 3 for each SIU and CIU.

Item 2. POTWs With Approved Pretreatment Programs or Those Required To Develop A Pretreatment Program (Instructions, Page 86)

a. Have there been any substantial modifications to the POTW's approved pretreatment program that have not been submitted to the Approval Authority (TCEQ) for approval according to *40 CFR § 403.18*?

☐ Yes ☐ No

If **yes**, include an attachment which identifies all substantial modifications that have not been submitted to the TCEQ and the purpose of the modifications.

Attachment: N/A

b. Have there been any non-substantial modifications to the POTW's approved pretreatment program that have not been submitted to the Approval Authority (TCEQ)?

☐ Yes ☐ No

If **yes**, include an attachment which identifies all non-substantial modifications that have not been submitted to the TCEQ and the purpose of the modification.

Attachment: N/A

c. List all parameters measured above the MAL in the POTW's effluent monitoring during the last three years:

Effluent Parameters Measured Above the MAL

Pollutant	Concentration	MAL	Units	Date

Attachment: N/A

d. Has any SIU, CIU, or other IU caused or contributed to any other problems (excluding interference or pass-through) at the POTW in the past three years?

☐ Yes ☐ No

If **yes**, provide a description of each episode, including date(s), duration, description of problems, and probable pollutants. Include the name(s) of the SIU(s)/CIU(s)/other IU(s) that may have caused or contributed to any of the problems: Click to enter text.

Item 3. Significant Industrial User and Categorical Industrial User Information (Instructions, Pages 88-87)

POTWs that **do not** have an approved pretreatment program **are required** to provide the following information for each SIU and CIU:

a. Mr. or Ms.: N/A First/Last Name: N/A

Organization Name: N/A SIC Code: N/A

Phone number: N/A Email address: N/A

Physical Address: N/A City/State/ZIP Code: N/A

Attachment: N/A

b. Describe the industrial processes or other activities that affect or contribute to the SIU(s) or CIU(s) discharge (e.g., process and non-process wastewater): N/A

c. Provide a description of the principal products(s) or service(s) performed: N/A

d. Flow rate information

Flow Rate Information

Effluent Type	Discharge Day (gallons per day)	Discharge Frequency (Continuous, batch, or intermittent)
Process Wastewater		
Non-process Wastewater		

e. Pretreatment Standards

1. Is the SIU or CIU subject to technology-based local limits as defined in the application instructions?

   ☐ Yes ☐ No

2. Is the SIU subject to categorical pretreatment standards?

   ☐ Yes ☐ No

   If **yes**, provide the category and subcategory or subcategories in the SIUs Subject To Categorical Pretreatment Standards table.

SIUs Subject to Categorical Pretreatment Standards

Category in 40 CFR	Subcategory in 40 CFR	Subcategory in 40 CFR	Subcategory in 40 CFR	Subcategory in 40 CFR

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

   ☐ Yes ☐ No

   If **yes**, provide a description of each episode, including dates, duration, description of problems, and probable pollutants, and include the name(s) of the SIU(s)/CIU(s) that may have caused or contributed to the problem(s): N/A

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

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

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

Item 1. Applicability (Instructions, Page 89)

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

☐ Yes ☒ No

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

Item 2. Stormwater Coverage (Instructions, Page 89)

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

Authorization Coverage

Outfall	Authorization under MSGP	Authorized Under Individual Permit
	☐	☐
	☐	☐
	☐	☐
	☐	☐
	☐	☐
	☐	☐
	☐	☐
	☐	☐

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

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

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

Item 3. Site Map (Instructions, Page 90)

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

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

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

Attachment: N/A

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

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

Impervious Surfaces

Outfall	Area of Impervious Surface (include units)	Total Area Drained (include units)

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

Wettest month: N/A

Average rainfall for wettest month (total inches): N/A

25-year, 24-hour rainfall (inches): N/A

Source: N/A

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

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

e. Describe any BMPs and controls the facility uses/proposes to prevent or effectively reduce pollution in stormwater discharges from the facility: N/A

Item 5. Pollutant Analysis (Instructions, Page 91)

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

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

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

Table 17 for Outfall No.: N/A

Pollutant	Grab Sample* Maximum (mg/L)	Composite Sample** Maximum (mg/L)	Grab Sample* Average (mg/L)	Composite Sample** Average (mg/L)	Number of Storm Events Sampled	MAL (mg/L)
pH (standard units)	(max)	—	(min)	—		—
Total suspended solids						—
Chemical oxygen demand						—
Total organic carbon						—
Oil and grease						—
Arsenic, total						0.0005
Barium, total						0.003
Cadmium, total						0.001
Chromium, total						0.003
Chromium, trivalent						—
Chromium, hexavalent						0.003
Copper, total						0.002

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

* Taken during first 30 minutes of storm event

** Flow-weighted composite sample

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

Table 18 for Outfall No.: N/A

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

* Taken during first 30 minutes of storm event

** Flow-weighted composite sample

Attachment: N/A

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

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

Date of storm event: N/A

Duration of storm event (minutes): N/A

Total rainfall during storm event (inches): N/A

Number of hours the between beginning of the storm measured and the end of the previous measurable storm event (hours): N/A

Maximum flow rate during rain event (gallons/minute): N/A

Total stormwater flow from rain event (gallons): N/A

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

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	357 MGD
Total AIF	147.13 MGD
Intake Flow Use(s) (%)	
Contact cooling	0.01
Non-contact cooling	99.9
Process Wastewater	0
Other	0

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: TR-5

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	**Primary (Once-through)**	**Make-up (none)**		
DIF (include units)	357 MGD	N/A		
AIF (include units)	148.1722	N/A		
Intake Flow Use(s) (%)				
Contact cooling	0.01	N/A		
Non-contact cooling	99.9	N/A		
Process Wastewater	0	N/A		
Other	0	N/A		
Latitude (decimal degrees)	33.065381	N/A		
Longitude (decimal degrees)	96.453139	N/A		

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: TR-6

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	**Primary (Once-through)**			
Source Waterbody	Lake Lavon			
Mean Annual Flow	Surface area: 20,559 acres Storage capacity:			

CWIS ID	Primary (Once-through)			
Source Waterbody	Lake Lavon			
	409,360 acre-feet Watershed size: 770 square miles			
Source	Texas Water Development Board			

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: TR-7

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: TR-8

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: N/A

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: Primary

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: N/A

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				

- 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				

- 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: TR-5 (Table 4)

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: TR-5 (Item 6)

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: TR-8

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: Lake Lavon

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: TR-9

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: N/A

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: Primary

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: TR-10

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

a. Attach an entrainment characterization study, as described at *40 CFR § 122.21(r)(9)*: N/A

b. Attach a comprehensive feasibility study, as described as *40 CFR § 122.21(r)(10)*: N/A

c. Attach a benefits valuation study, as described as *40 CFR § 122.21(r)(11)*: N/A

d. Attach a non-water quality environmental and other impacts study, as described as *40 CFR § 122.21(r)(12)*: N/A

e. Attach a peer review analysis, as described as *40 CFR § 122.21(r)(13)*: N/A

ATTACHMENT AR-1

Core Data Form

TCEQ Use Only

TCEQ Core Data Form

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

SECTION I: General Information

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

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

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

2. Customer Reference Number *(if issued)*	Follow this link to search for CN or RN numbers in Central Registry**	3. Regulated Entity Reference Number *(if issued)*
CN 600328694		RN 100219203

SECTION II: Customer Information

4. General Customer Information | **5. Effective Date for Customer Information Updates** (mm/dd/yyyy) 7/31/2024

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

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

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

City of Garland

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

11. Type of Customer:
☐ Corporation ☐ Individual Partnership: ☐ General ☐ Limited
Government: ☒ City ☐ County ☐ Federal ☐ Local ☐ State ☐ Other ☐ Sole Proprietorship ☐ Other:

12. Number of Employees
☐ 0-20 ☐ 21-100 ☐ 101-250 ☒ 251-500 ☐ 501 and higher

13. Independently Owned and Operated?
☒ **Yes** ☐ **No**

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

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

15. Mailing Address: 13835 County Rd. 489

City	Nevada	State	TX	ZIP	75173	ZIP + 4	

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

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

(972) 205-2650		( ) -

SECTION III: Regulated Entity Information

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

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

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

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

Garland Municipal Power - Ray Olinger Plant

23. Street Address of the Regulated Entity: ***(No PO Boxes)***	13835 County Rd. 489							
	City	Nevada	**State**	TX	**ZIP**	75173	**ZIP + 4**	
24. County	Collin							

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

25. Description to Physical Location:					
26. Nearest City			**State**		**Nearest ZIP Code**
Nevada			TX		75173

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

27. Latitude (N) In Decimal:	33.068056		**28. Longitude (W) In Decimal:**	-96.452500	
Degrees	Minutes	Seconds	Degrees	Minutes	Seconds
33	04	05	-96	27	09

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

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

Electric Power Plant

34. Mailing Address:	**13835 County Rd.**							
	City	**Nevada**	**State**	**TX**	**ZIP**	**75173**	**ZIP + 4**	
35. E-Mail Address:	**MBurr@gpltexas.org**							

36. Telephone Number	**37. Extension or Code**	**38. Fax Number** *(if applicable)*
(972) 205-2650		( ) -

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

☐ Dam Safety	☐ Districts	☐ Edwards Aquifer	☒ Emissions Inventory Air	☒ Industrial Hazardous Waste
			CP0026M	TXP490355593
☐ Municipal Solid Waste	☒ New Source Review Air	☐ OSSF	☒ Petroleum Storage Tank	☐ PWS
	PSDTX935		59661	
☐ Sludge	☒ Storm Water	☐ Title V Air	☐ Tires	☐ Used Oil
	TXR05AX97			
☐ Voluntary Cleanup	☒ Wastewater	☐ Wastewater Agriculture	☐ Water Rights	☐ Other:
	WQ0001923000			

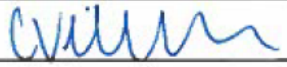
SECTION IV: Preparer Information

40. Name:	Cassandra Villarreal	41. Title:	Environmental Scientist

42. Telephone Number	43. Ext./Code	44. Fax Number	45. E-Mail Address
(817) 735-7294		(817) 735-7492	cassandra.villarreal@freese.com

SECTION V: Authorized Signature

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

Company:	Freese and Nichols, Inc.	Job Title:	Environmental Scientist
Name *(In Print)*:	Cassandra Villarreal	Phone:	(817) 735- 7294
Signature:		Date:	8/21/2024

ATTACHMENT AR-2

Plain Language Summary

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.

The City of Garland (CN600328694), operates the Garland Municipal Power - Ray Olinger Power Plant (RN100219203), a natural gas steam electric generating facility. The facility is located at 13835 County Road 489, in Nevada, Collin County, Texas 75173.

This application is for a renewal and amendment to discharge of once-through cooling water from Units 1, 2, and 3 and stormwater at a daily average flow not to exceed 404,000,000 gallons per day via Outfall 001. This amendment is to remove Internal Outfall 101.

Discharges from the facility are expected to contain chlorine. Additional pollutants are included in Worksheet 2.0 of the permit application package. Industrial wastewater is treated by using sodium hyperchlorate at the intake for algae control, and the circulating water is used for condenser cooling. Ammonia bisulfate is used for dechlorination at the condenser outlet to limit the chlorine residual.

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.

La ciudad de Garland (CN600328694) opera la planta eléctrica Garland Municipal Power - Ray Olinger (RN100219203), una instalación de generación de electricidad a vapor con gas natural. La instalación está ubicada en 13835 County Road 489, en Nevada, Condado de Collin, Texas 75173.

Esta solicitud es para una renovación y enmienda a la descarga de agua de enfriamiento de un solo paso de las Unidades 1, 2 y 3 y aguas pluviales con un flujo promedio diario que no exceda los 404,000,000 galones por día a través del Emisario 001. Esta enmienda es para eliminar el Emisario Interno 101.

Se espera que las descargas de la instalación contengan cloro. Se incluyen contaminantes adicionales en la Hoja de trabajo 2.0 del paquete de solicitud de permiso. Las aguas residuales industriales se tratan utilizando hiperclorato de sodio en la entrada para controlar las algas y el agua en circulación se utiliza para enfriar el condensador. El bisulfato de amoníaco se utiliza para la dicloración en la salida del condensador para limitar el cloro residual.

INSTRUCTIONS

1. Enter the name of applicant in this section. The applicant name should match the name associated with the customer number.
2. Enter the Customer Number in this section. Each Individual or Organization is issued a unique 11-digit identification number called a CN (e.g. CN123456789).
3. Choose “operates” in this section for existing facility applications or choose “proposes to operate” for new facility applications.
4. Enter the name of the facility in this section. The facility name should match the name associated with the regulated entity number.
5. Enter the Regulated Entity number in this section. Each site location is issued a unique 11-digit identification number called an RN (e.g. RN123456789).
6. Choose the appropriate article (a or an) to complete the sentence.
7. Enter a description of the facility in this section. For example: steam electric generating facility, nitrogenous fertilizer manufacturing facility, etc.
8. Choose “is” for an existing facility or “will be” for a new facility.
9. Enter the location of the facility in this section.
10. Enter the City nearest the facility in this section.

11. Enter the County nearest the facility in this section.
12. Enter the zip code for the facility address in this section.
13. Enter a summary of the application request in this section. For example: renewal to discharge 25,000 gallons per day of treated domestic wastewater, new application to discharge process wastewater and stormwater on an intermittent and flow-variable basis, or major amendment to reduce monitoring frequency for pH, etc. If more than one outfall is included in the application, provide applicable information for each individual outfall.
14. List all pollutants expected in the discharge from this facility in this section. If applicable, refer to the pollutants from any federal numeric effluent limitations that apply to your facility.
15. Enter the discharge types from your facility in this section (e.g., stormwater, process wastewater, once through cooling water, etc.)
16. Choose the appropriate verb tense to complete the sentence.
17. Enter a description of the wastewater treatment used at your facility. Include a description of each process, starting with initial treatment and finishing with the outfall/point of disposal. Use additional lines for individual discharge types if necessary.

Questions or comments concerning this form may be directed to the Water Quality Division's Application Review and Processing Team by email at WQ-ARPTeam@tceq.texas.gov or by phone at (512) 239-4671.

ATTACHMENT AR-3

Public Involvement Plan

Texas Commission on Environmental Quality

Public Involvement Plan Form for Permit and Registration Applications

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

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

Section 1. Preliminary Screening

☐ New Permit or Registration Application

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

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

Section 2. Secondary Screening

☒ Requires public notice,

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

☒ Located within any of the following geographical locations:

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

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

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

This permit has not had significant public interest in the last permit cycles. Therefore, the remaining sections of the form are not applicable.

Section 3. Application Information

Type of Application (check all that apply):

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

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

Water Quality

☐ Texas Pollutant Discharge Elimination System (TPDES)

- ☐ Texas Land Application Permit (TLAP)
- ☐ State Only Concentrated Animal Feeding Operation (CAFO)
- ☐ Water Treatment Plant Residuals Disposal Permit

☐ Class B Biosolids Land Application Permit

☐ Domestic Septage Land Application Registration

Water Rights New Permit

☐ New Appropriation of Water

☐ New or existing reservoir

Amendment to an Existing Water Right

☐ Add a New Appropriation of Water

☐ Add a New or Existing Reservoir

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

Section 4. Plain Language Summary

Provide a brief description of planned activities.

N/A

Section 5. Community and Demographic Information

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

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

(City)

(County)

(Census Tract)
Please indicate which of these three is the level used for gathering the following information.

☐ City ☐ County ☐ Census Tract

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

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

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

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

(e) Languages commonly spoken in area by percentage

(f) Community and/or Stakeholder Groups

(g) Historic public interest or involvement

Section 6. Planned Public Outreach Activities

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

☐ Yes ☐ No

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

☐ Yes ☐ No

If Yes, please describe.

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

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

☐ Yes ☐ No

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

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

☐ Publish in alternative language newspaper

☐ Posted on Commissioner's Integrated Database Website

☐ Mailed by TCEQ's Office of the Chief Clerk

☐ Other (specify)

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

☐ Yes ☐ No

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

☐ Yes ☐ No

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

☐ TCEQ Regional Office ☐ TCEQ Central Office

☐ Public Place (specify)

Section 7. Voluntary Submittal

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

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

☐ Yes ☐ No

What types of notice will be provided?

☐ Publish in alternative language newspaper

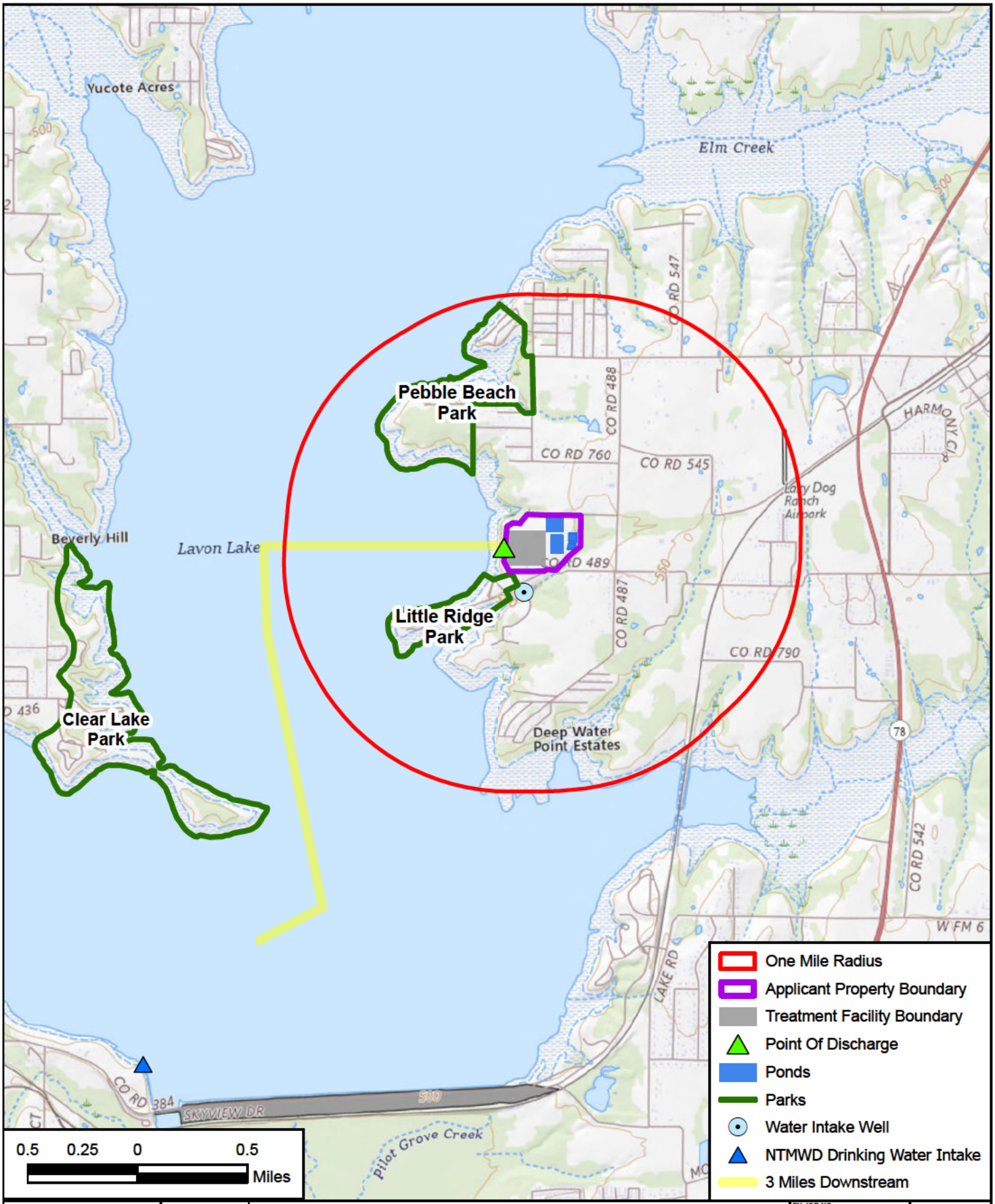
☐ Posted on Commissioner's Integrated Database Website

☐ Mailed by TCEQ's Office of the Chief Clerk

☐ Other (specify)

ATTACHMENT AR-4

USGS Topographic Map



FREESE AND NICHOLS, INC
801 Cherry Street, Suite 2800
Fort Worth, TX 76102
Phone - (817) 735 - 7300

City of Garland

Ray Olinger TPDES Permit Renewal

USGS 7.5 Minute Quadrangle

FN JOB NO	GPL24350
FILE NAME	GP&L TPDES Renewal.mxd
DATE	8/1/2024
SCALE	1:37,500
DESIGNED	CLV
DRAFTED	08245

1

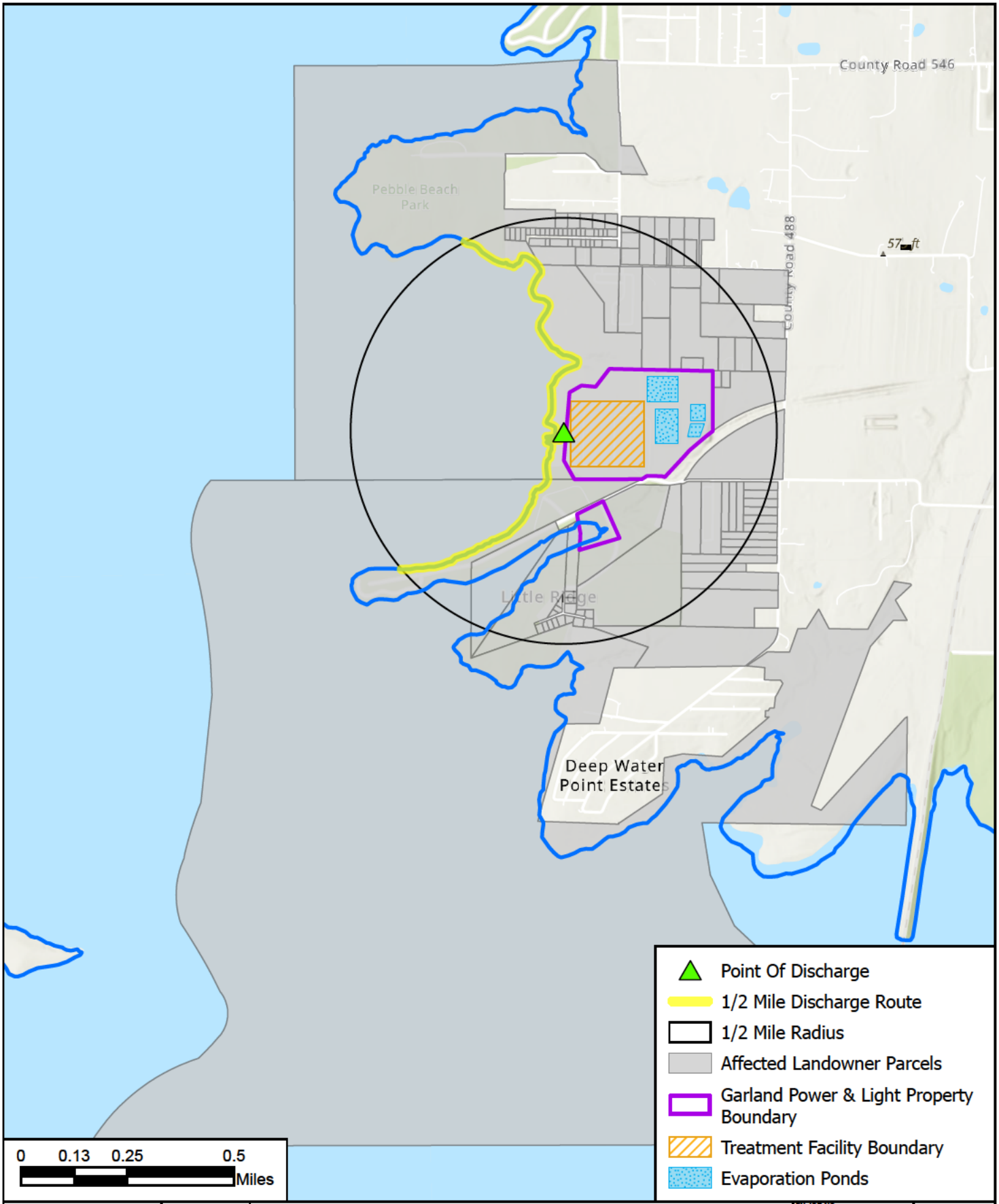
FIGURE

Path: H:\ENVIRONMENTAL\Working\GP&L TPDES Renewal\GP&L TPDES Renewal.aprx

NAD 1983 StatePlane Texas South Central FIPS 4204 Feet

ATTACHMENT AR-5

Affected Landowners



FREESE AND NICHOLS
FREESE AND NICHOLS, INC
801 Cherry Street, Suite 2800
Fort Worth, TX 76102
Phone - (817) 735 - 7300

City of Garland

Ray Olinger Power Plant

Affected Landowners

FN JOB NO	GPL24350
FILE NAME	GP&L TPDES Renewal.mxd
DATE	8/2/2024
SCALE	1:9,396
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DRAFTED	08245

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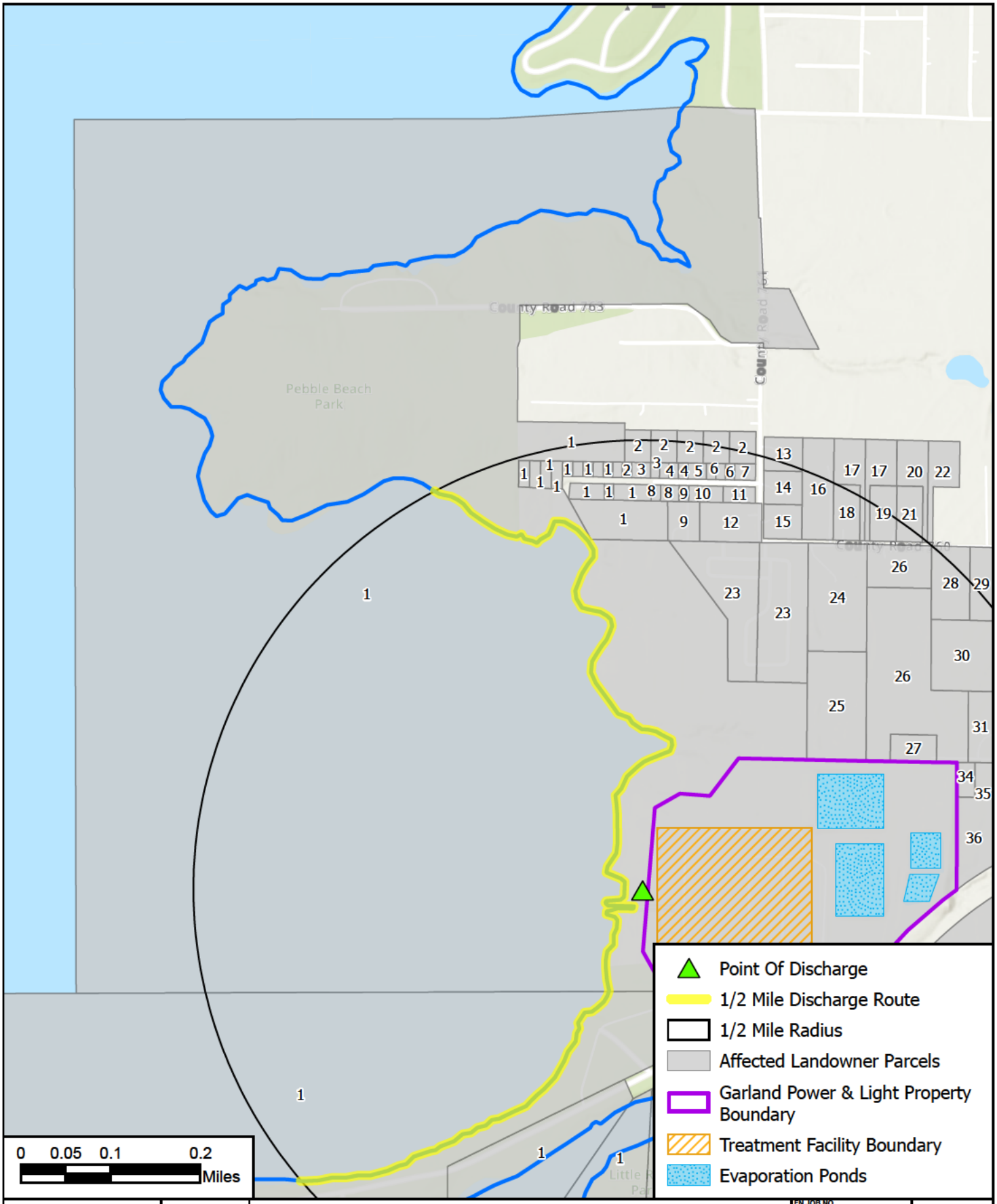

FREESE AND NICHOLS
FREESE AND NICHOLS, INC
801 Cherry Street, Suite 2800
Fort Worth, TX 76102
Phone - (817) 735 - 7300

City of Garland

Ray Olinger Power Plant

Affected Landowners

FN JOB NO	GPL24350
FILE NAME	GP&L TPDES Renewal.mxd
DATE	8/2/2024
SCALE	1:9,186
DESIGNED	CLV
DRAFTED	08245

3b

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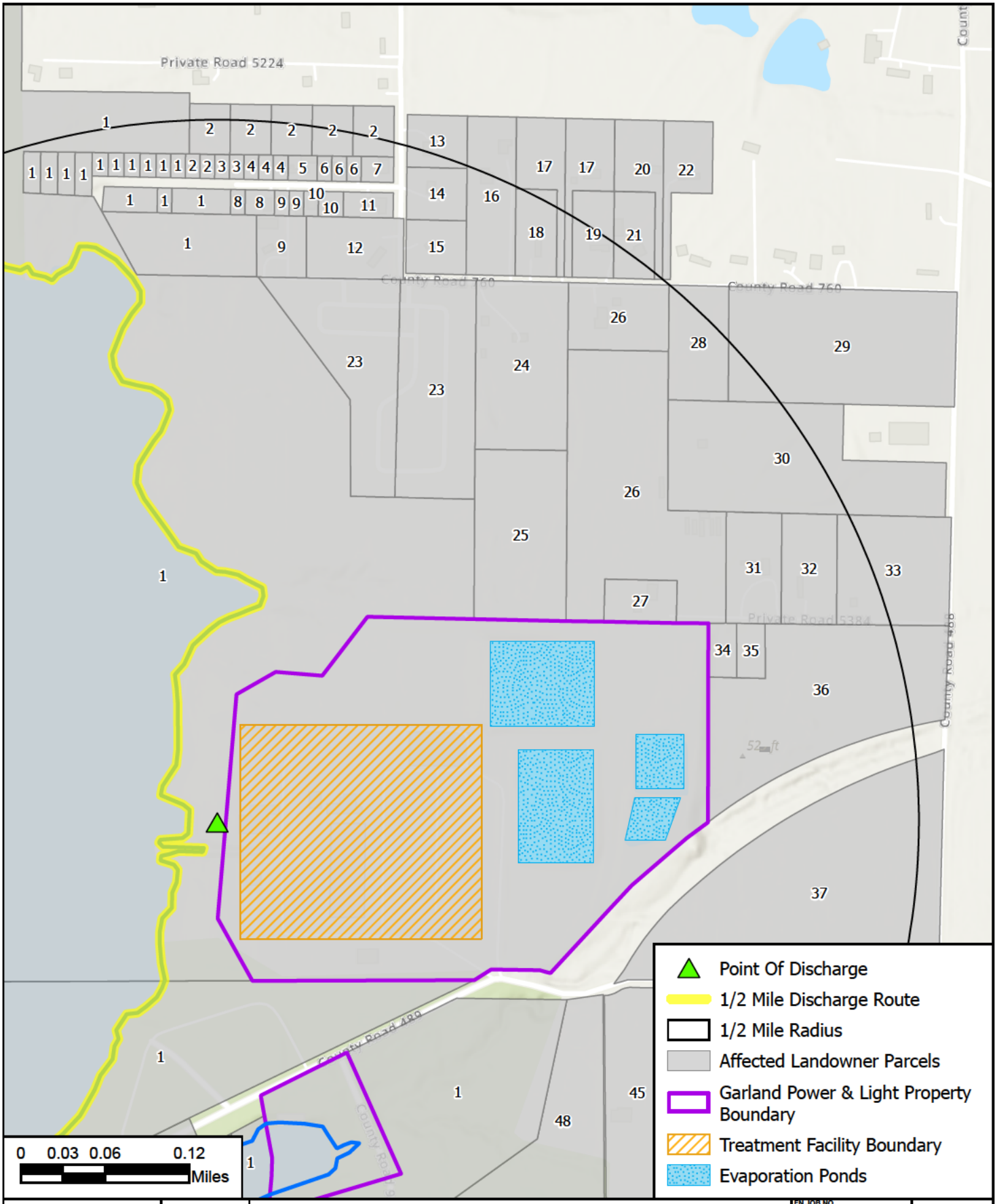

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Fort Worth, TX 76102
Phone - (817) 735 - 7300

N W E S

City of Garland

Ray Olinger Power Plant

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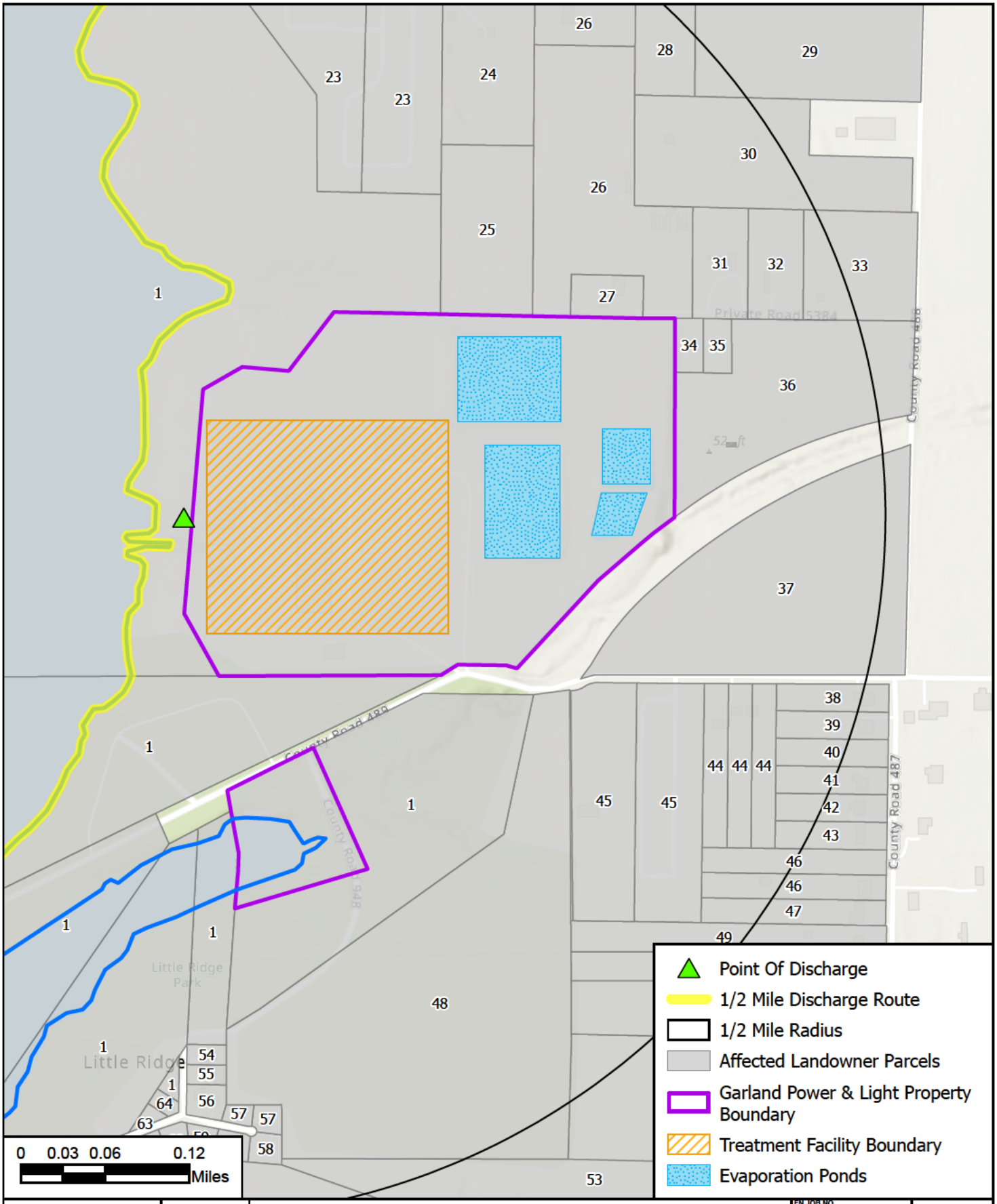

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City of Garland

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DESIGNED	CLV
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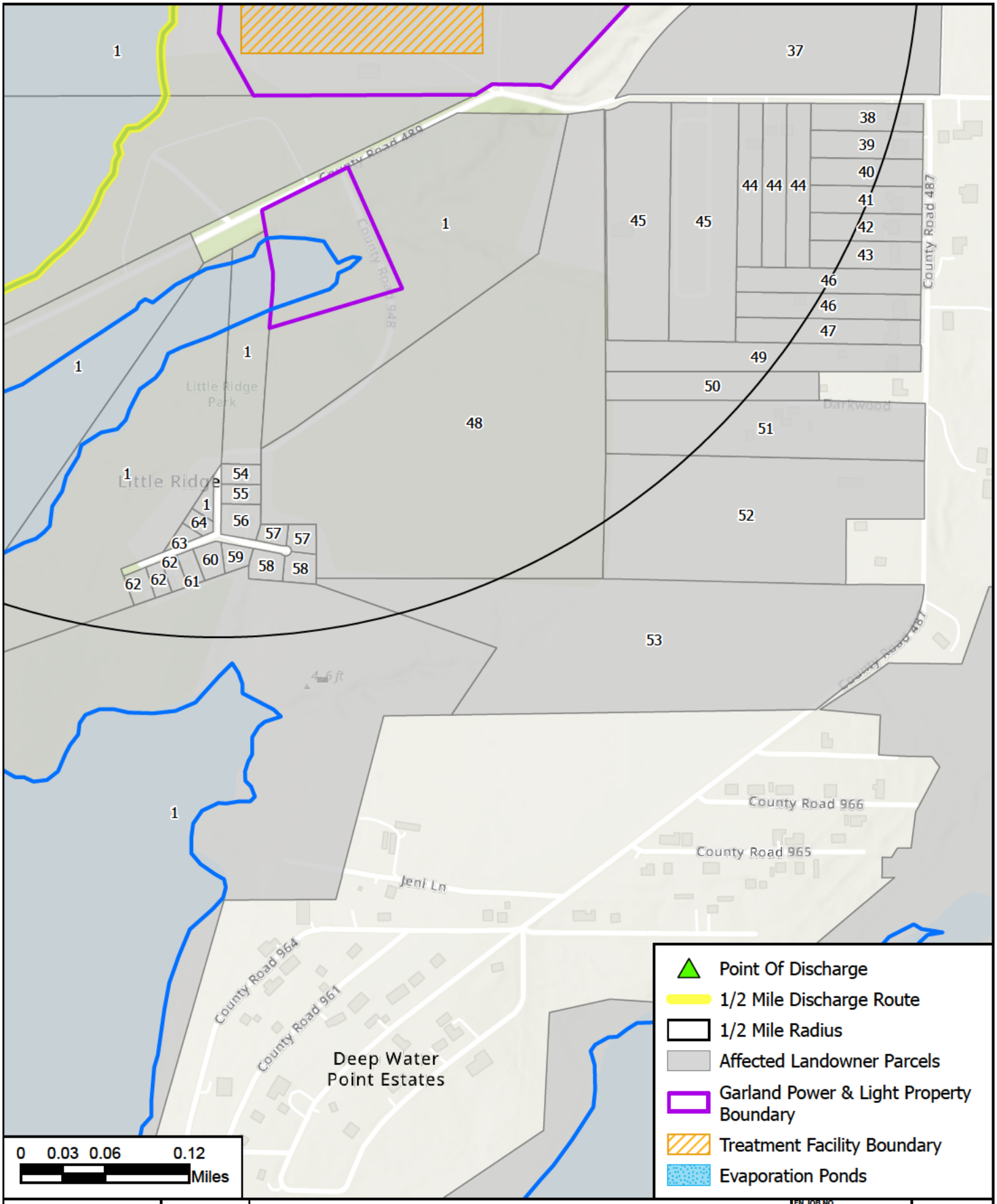

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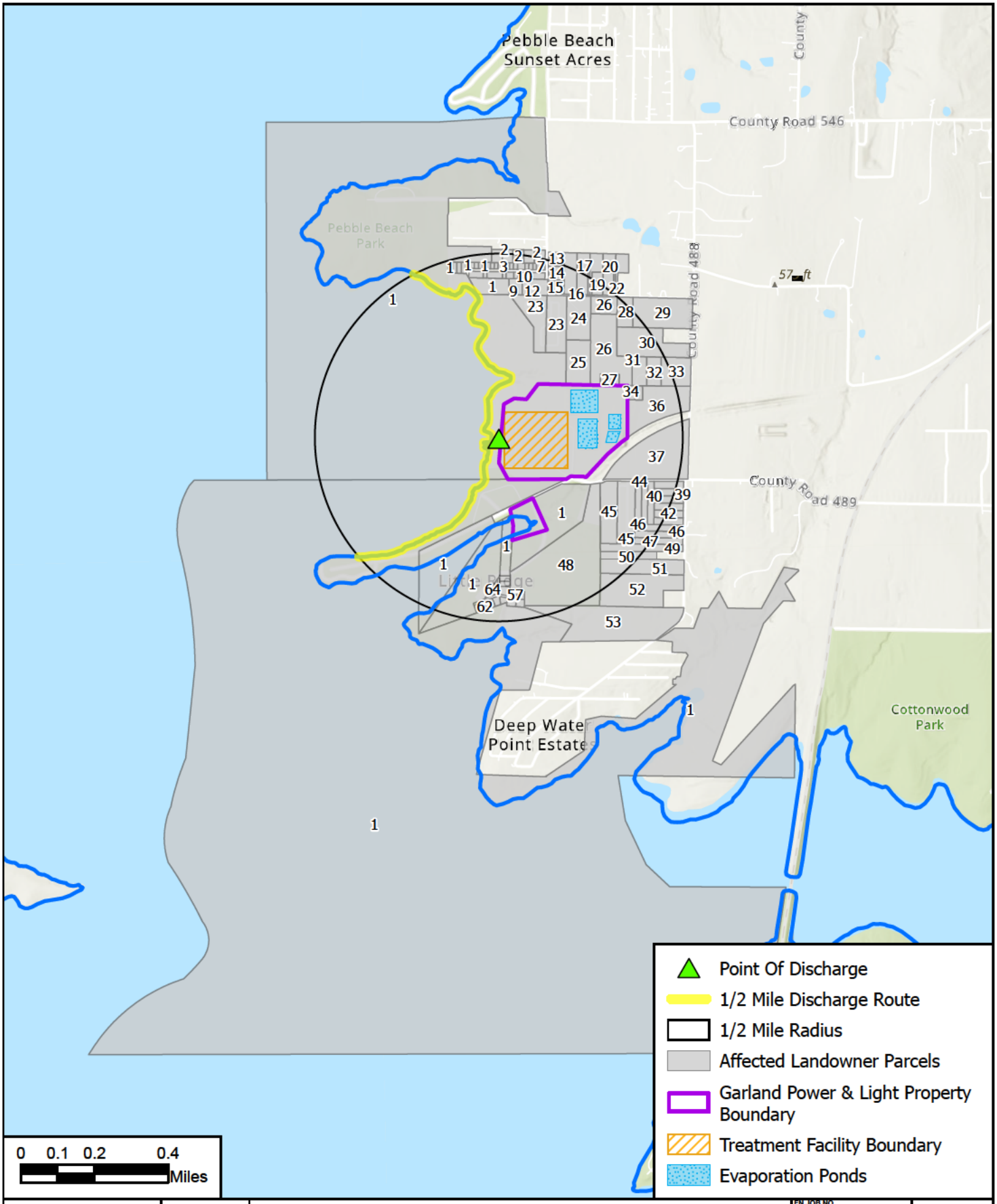

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FIGURE

Path: H:\ENVIRONMENTAL\Working\GP&L TPDES Renewal\GP&L TPDES Renewal.aprx

Affected Landowner Map
Cross Referenced List

1
USA
US Army Core of Engineers
Fort Worth District
PO Box 17300
Fort Worth, TX 76102

2
Mcintire Robin & Shannon
6172 County Road 761
Nevada, TX 75173-6116

3
888 Ma Ltd
3324 Sandy Trail Ln
Plano, TX 75023-5656

4
Escalona Jose Luis Ontiveros
630 Stoneybrook Dr
Wylie, TX 75098-4036

5
Benites Rodolfo Garcia &
Herlinda Vasquez
13521 County Road 762
Nevada, TX 75173-6121

6
Mcguire Buddy Pierce Jr & Lawanna Ann
13539 County Road 762
Nevada, TX 75173-6121

7
Riggall Marvin V Jr
13569 County Road 762
Nevada, TX 75173-6121

8
Karczmarski Christopher Marc
13510 County Road 762
Nevada, TX 75173-6120

9
Lavonland LLC
13527 County Road 760
Nevada, TX 75173-6109

10
Dauksavage-Deloach Sonja &
Billy Joe Dauksavage
13540 County Road 762
Nevada, TX 75173-6120

11
Mcintire Legacy Trust
6172 County Road 761
Nevada, TX 75173-6116

13
Riggall Marvin Vale Jr & Laura
6191 County Road 761
Nevada, TX 75173-6165

14
Dickeson Wayne & Freda
Po Box 326
Copeville, TX 75121-0326

15
Iriarte Dianne D &
Tyre Wade Allen
6285 County Road 761
Nevada, TX 75173-6119

16
Bretado Rayo Elizabeth &
Carlos Cruz Ruiz
13731 County Road 760
Nevada, TX 75173-6111

17
Rios Humberto & Maria Del Carmen Rios
13771 County Road 760
Nevada, TX 75173-6111

18
Sutton James Robert &
Sutton Jane Ann
Po Box 5
Weston, TX 75097-0005

19
Wilson Marcus G
Po Box 233
Copeville, TX 75121-0233

20
Ramirez-Macareno Agustin Jaime &
Jazmin Ramirez
13823 County Road 760
Nevada, TX 75173-6113

21
Pelham Troy V & Barbara
13809 County Road 760
Nevada, TX 75173-6113

22
Flores Lazaro & Sulema
13849 County Road 760
Nevada, TX 75173-6113

23
Fritts Enterprises Inc
1322 Briar Hollow Ln
Garland, TX 75043-1614

12 Huang Doris
3936 Dalston Ln
Plano, TX 75023-1027

25 Fritts James C Dba Crossed Palms Rv Resort
1322 Briar Hollow Ln
Garland, TX 75043-1614

26 Stone Rose Properties LLC
Po Box 92341
Southlake, TX 76092-0135

27 Proctor A O
Po Box 3
Copeville, TX 75121-0003

28 Arteaga Felix Jose Jr
13888 County Road 760
Nevada, TX 75173-6138

29 Arteaga Felix Jose & Marbella
6310 County Road 488
Nevada, TX 75173-6355

30 Turner Rocky
6364 County Road 488
Nevada, TX 75173-6355

31 Small Michael & Jessica
Po Box 226
Copeville, TX 75121-0226

32 Boughner Tamara Jean & Bruce Raymond
Po Box 212
Copeville, TX 75121-0212

33 Gonzalez Jose Lira &
Lorena Arteaga-Degonzalez
3015 Elm Grove Rd
Wylie, TX 75098-6251

34 White Wayne M
Po Box 365
Shamrock, TX 79079-0365

35 Eaker Jeanie
Po Box 44
Copeville, TX 75121-0044

36 Massengale Pat J Elliott
9623 Park Highlands Dr
Dallas, TX 75238-2959

37 Garland City Of
200 N 5Th St
Garland, TX 75040-6314

24 Emery Jody J
13700 County Road 760
Nevada, TX 75173-6110

38 Orr Rebecca Kathleen &
Michael Alan Parks
14128 County Road 489
Nevada, TX 75173-6038

39 Choctaw American Insurance Inc
10900 Ne 4Th St Ste 2300
Bellevue, WA 98004-5882

40 Munroe Patricia
6782 County Road 487
Nevada, TX 75173-6088

41 Bryant Matthew &
Lisa Bryant
6800 County Road 487
Nevada, TX 75173-6026

42 Moody Christopher &
Crystal Dawn Moody
6822 County Road 487
Nevada, TX 75173-6026

43 Aquatero John
Po Box 336
Lavon, TX 75166-0336

44 Burnett Julianna
3321 Carriage Ct
Richardson, TX 75082-3663

45 Chp Northeast LP
550 S Watters Rd Ste 127
Allen, TX 75013-5225

46 Taylor Roy Lee & Elizabeth Kern
6860 County Road 487
Nevada, TX 75173-6026

47 Ferrell Douglas
6900 County Road 487
Nevada, TX 75173-6028

48 Jewish Family Service of Dallas Inc
5402 Arapaho Rd Ste 102
Dallas, TX 75248-7098

49 Unknown

50 Barlett Bruce A & Michelle M
6932 County Road 487
Nevada, TX 75173-6028

51	Choudhary Harsh 6956 County Road 487 Nevada, TX 75173-6028
52	Nix Ronald Dean 7022 County Road 487 Nevada, TX 75173-6030
53	Wolverton William Dale 6953 Cotner Rd Nevada, TX 75173-6303
54	Wallace Kevin & Alesa 18693 Hilltop Ln Nevada, TX 75173-8165
55	Nix Marjorie Jean 7214 County Road 1207 Nevada, TX 75173-6232
56	Ramirez Miguel Lindo & Maricela Zavala 105 Glen Knoll Dr Wylie, TX 75098-5004
57	White Donald & Janice White 7294 County Road 1207 Nevada, TX 75173-6232
58	Brown Vicki 807 S China St Brady, TX 76825-5437
59	Nix Marjorie Jean - Cle & Estate of Robert L Nix 7214 County Road 1207 Nevada, TX 75173-6232
60	Lessig Kimberly 7241 County Road 1208 Nevada, TX 75173-6235
61	Lessig Kenneth Allen 7241 County Road 1208 Nevada, TX 75173-6235
62	Thompson Deborah Elaine Po Box 380 Copeville, TX 75121-0380
63	White Shawn Marie 7252 County Road 1208 Nevada, TX 75173-6234
64	Rademacher Ronald Ray 7224 County Road 1208 Nevada, TX 75173-6234

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Eaker Jeanie
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Nevada, TX 75173-6234

Rademacher Ronald Ray
7224 County Road 1208
Nevada, TX 75173-6234

ATTACHMENT AR-6

Original Photographs

Photo 1: Facing South Towards Intake Pumps

Photo 2: Facing South Towards Water Intake

Photo 3: Facing East Toward Units 1, 2, and 3

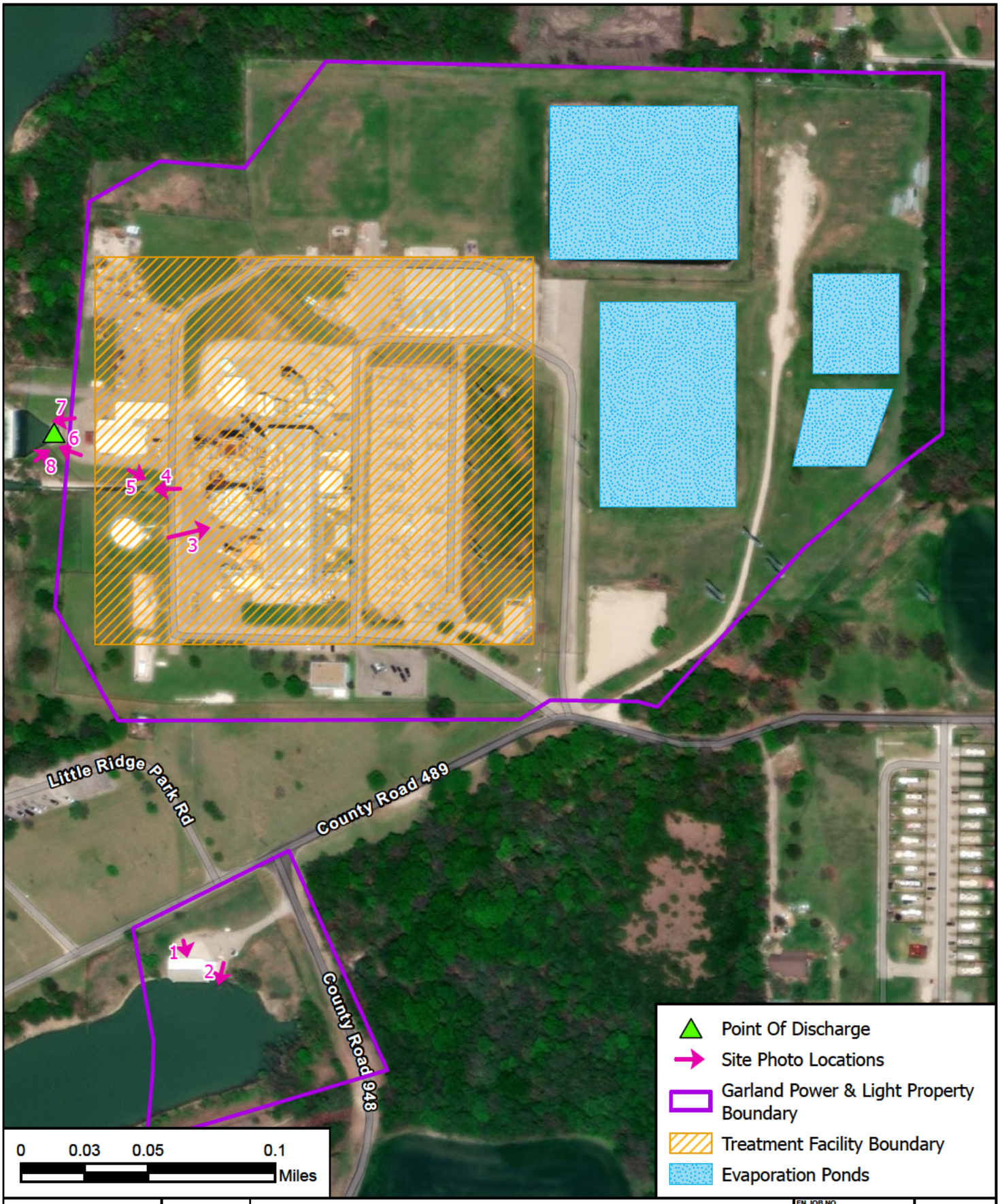
Photo 4: Outfall 001 (south) facing west towards Lake Lavon.

Photo 5: Outfall 001 (south) facing southeast towards the facility.

Photo 6: Outfall 001 (north) facing northwest towards Lake Lavon.

Photo 7: Outfall 001 (north) facing southwest towards Lake Lavon.

Photo 8: Outfall 001 (north) facing northeast towards facility.



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Fort Worth, TX 76102
Phone - (817) 735 - 7300

N W E S

City of Garland

Ray Olinger TPDES Permit Renewal

Original Site Photo Locations

FN JOB NO	GPL24350
FILE NAME	GP&L TPDES Renewal.mxd
DATE	8/2/2024
SCALE	
DESIGNED	CLV
DRAFTED	08245

4

FIGURE

Path: H:\ENVIRONMENTAL\Working\GP&L TPDES Renewal\GP&L TPDES Renewal.aprx

ATTACHMENT SPIF-1

SPIF Form

TEXAS COMMISSION ON ENVIRONMENTAL QUALITY

SUPPLEMENTAL PERMIT INFORMATION FORM (SPIF)

FOR AGENCIES REVIEWING DOMESTIC OR INDUSTRIAL TPDES WASTEWATER PERMIT APPLICATIONS

TCEQ USE ONLY:

Application type: ____Renewal ____Major Amendment ____Minor Amendment ____New

County: _____ Segment Number: _____

Admin Complete Date: _____

Agency Receiving SPIF:

_____ Texas Historical Commission _____ U.S. Fish and Wildlife

_____ Texas Parks and Wildlife Department _____ U.S. Army Corps of Engineers

This form applies to TPDES permit applications only. (Instructions, Page 53)

Complete this form as a separate document. TCEQ will mail a copy to each agency as required by our agreement with EPA. If any of the items are not completely addressed or further information is needed, we will contact you to provide the information before issuing the permit. Address each item completely.

Do not refer to your response to any item in the permit application form. Provide each attachment for this form separately from the Administrative Report of the application. The application will not be declared administratively complete without this SPIF form being completed in its entirety including all attachments. Questions or comments concerning this form may be directed to the Water Quality Division's Application Review and Processing Team by email at WQ-ARPTeam@tceq.texas.gov or by phone at (512) 239-4671.

The following applies to all applications:

1. Permittee: Ray Olinger Steam Electric Station

   Permit No. WQ00 01923000 EPA ID No. TX 0001848

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

   13835 County Rd 489, Nevada, TX 75173

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): Mr.

First and Last Name: David Bernard

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

Title: Production Manager

Mailing Address: 13835 Co Rd 489

City, State, Zip Code: Nevada, TX 75173

Phone No.: 972-205-3831 Ext.: N /A Fax No.: 972-485-6485

E-mail Address: dbernard@gpltexas.org

2. List the county in which the facility is located: Collin
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.

From the plant site through a channel to Lake Lavon in Segment No. 0821 of the Trinity River Basin.

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

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

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

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

☐ Disturbance of vegetation or wetlands

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

N/A

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

Land is currently used for steam electric plant directly adjacent to Lake Lavon.

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:

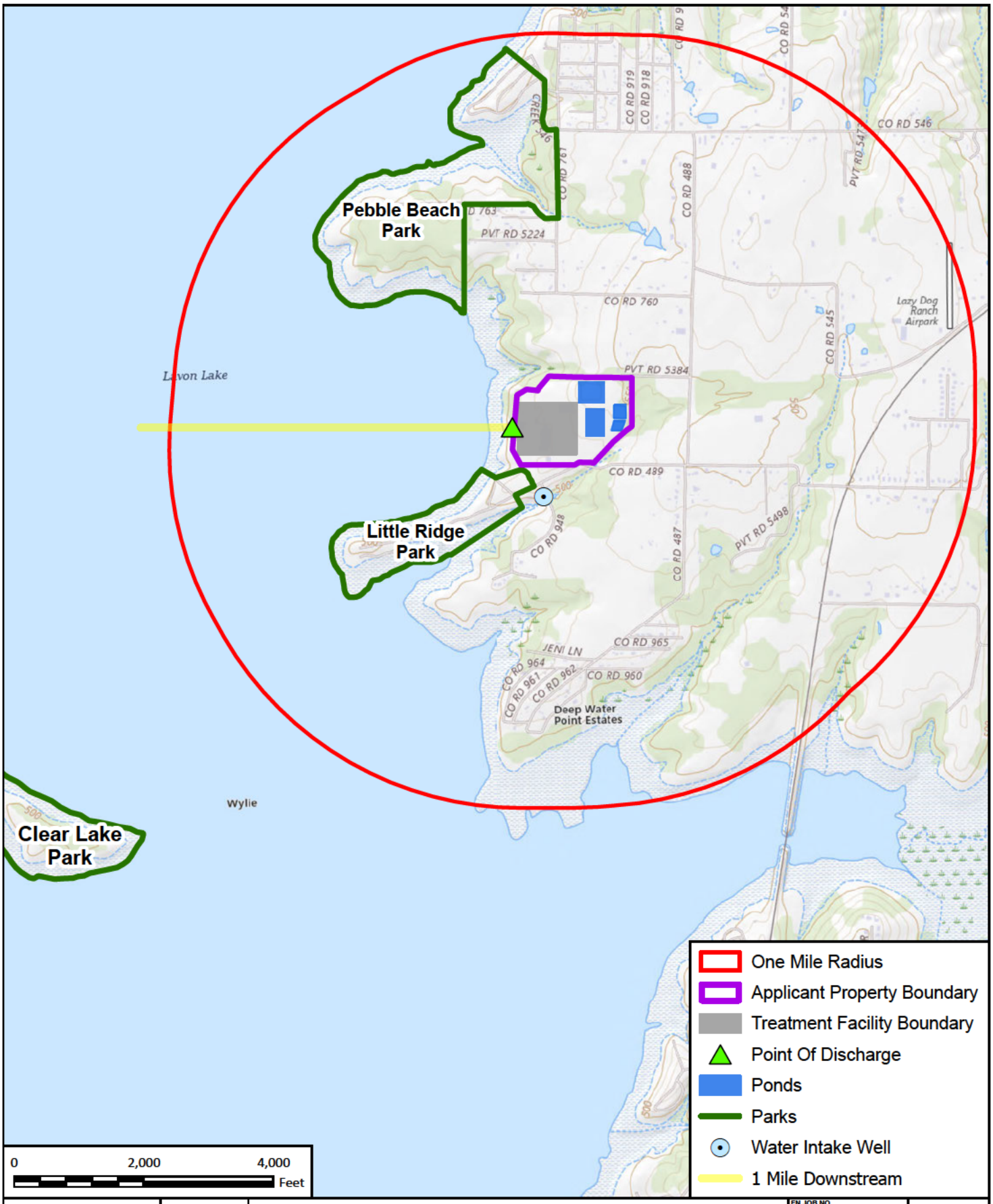
1967 - 1975

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

ROPP Unit 1 was constructed in 1967, Unit 2 in 1971, and Unit 3 in 1975.

ATTACHMENT SPIF-2

SPIF USGS Topographic Map



FREESE AND NICHOLS
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801 Cherry Street, Suite 2800
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City of Garland

Ray Olinger TPDES Permit Renewal

SPIF USGS Topographic Map

FN JOB NO	GPL24350
FILE NAME	GP&L TPDES Renewal.mxd
DATE	8/1/2024
SCALE	1:24,000
DESIGNED	CLV
DRAFTED	08245

1

FIGURE

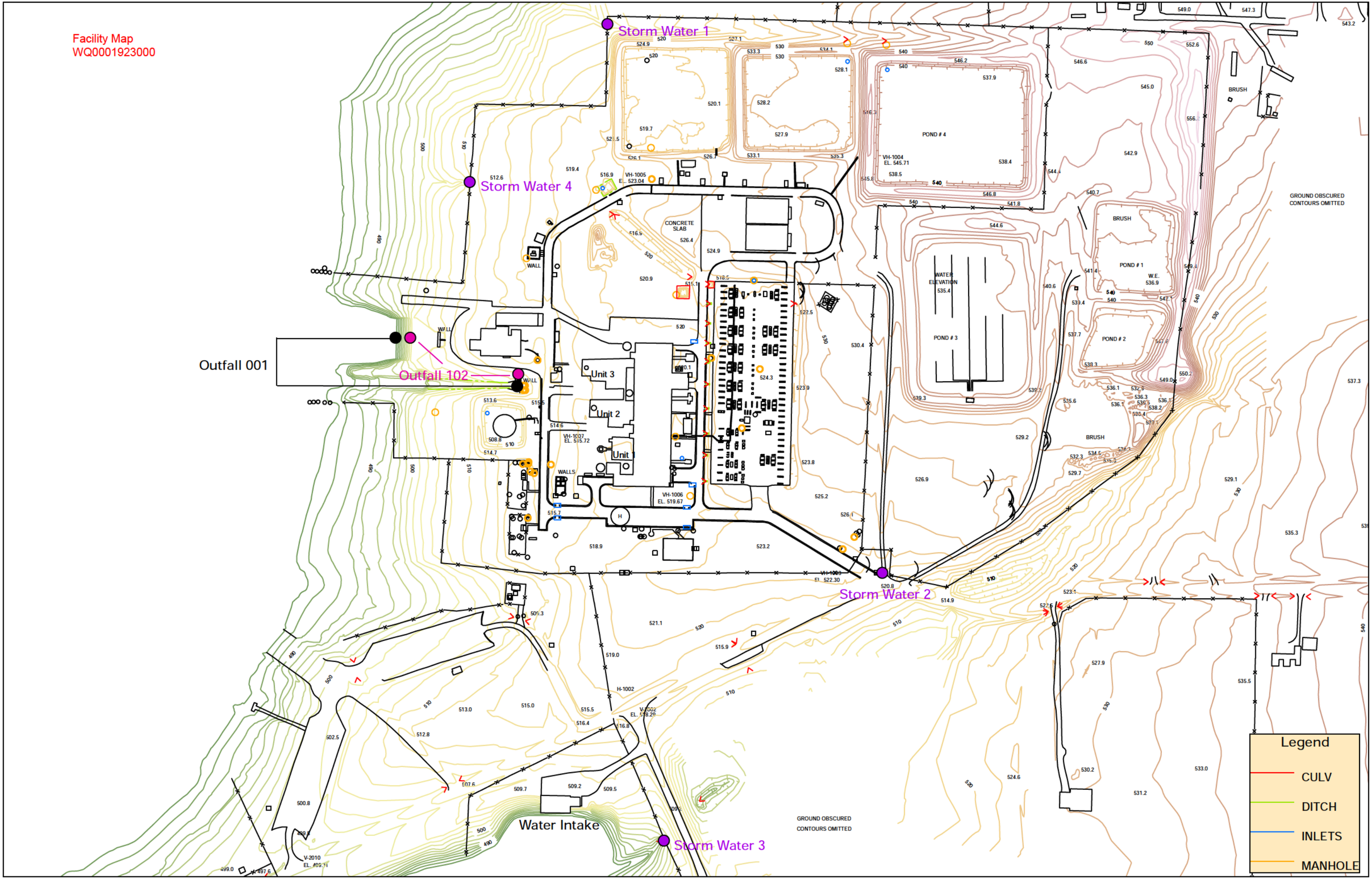
Path: H:\ENVIRONMENTAL\Working\GP&L TPDES Renewal\GP&L TPDES Renewal.aprx

NAD 1983 StatePlane Texas South Central FIPS 4204 Feet

ATTACHMENT TR-1

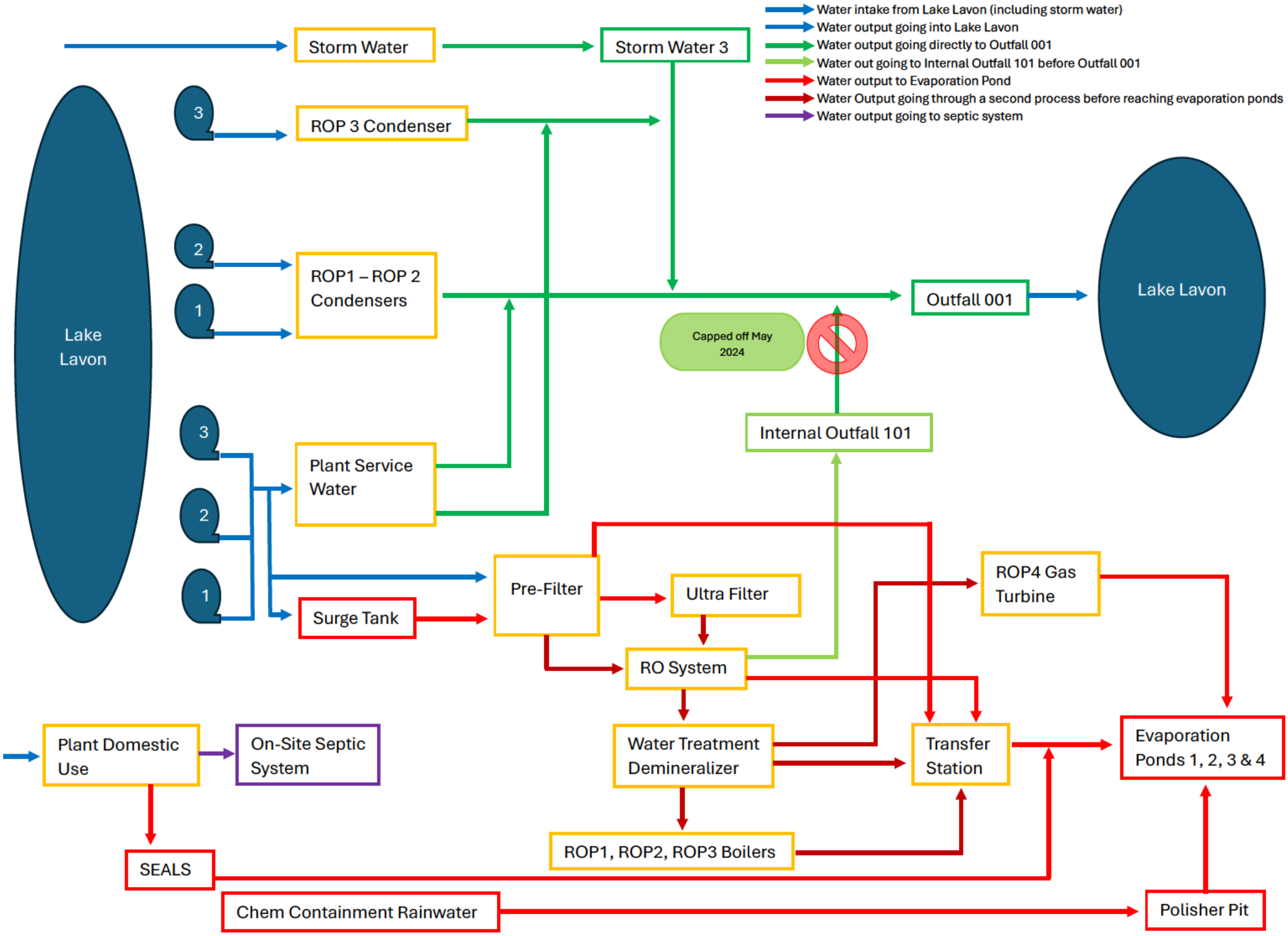
Facility Map

Facility Map
WQ0001923000



ATTACHMENT TR-2

Flow Schematic


Water intake from Lake Lavon (including storm water)
Water output going into Lake Lavon
Water output going directly to Outfall 001
Water out going to Internal Outfall 101 before Outfall 001
Water output to Evaporation Pond
Water Output going through a second process before reaching evaporation ponds
Water output going to septic system
Storm Water
Storm Water 3
3
ROP 3 Condenser
Lake Lavon
2
1
ROP1 – ROP 2 Condensers
Outfall 001
Lake Lavon
Capped off May 2024
Internal Outfall 101
3
2
1
Plant Service Water
Surge Tank
Pre-Filter
Ultra Filter
ROP4 Gas Turbine
RO System
Plant Domestic Use
On-Site Septic System
Water Treatment Demineralizer
Transfer Station
Evaporation Ponds 1, 2, 3 & 4
ROP1, ROP2, ROP3 Boilers
SEALS
Chem Containment Rainwater
Polisher Pit

ATTACHMENT TR-3

SDS

Technical Report 1.0
Industrial

Section 5.c. Blowdown and Once-Through Cooling Water Discharges

Product Identification: Disodium Phosphate Anhydrous
Product Use: pH control and corrosion inhibitor in boilers, would be found in boiler blowdown
CAS Number: 7558-79-4
Product Classification: No information available on MSDS
Product Half Life: No information available on MSDS
Frequency of Use: Twice a week
Product Toxicity to Fish or Aquatic Invertebrate Organisms: No information available on MSDS

Product Identification: Trisodium Phosphate Anhydrous
Product Use: pH control and corrosion inhibitor in boilers, would be found in boiler blowdown
CAS Number: 7601-54-9
Product Classification: No information available on MSDS
Product Half Life: No information available on MSDS
Frequency of Use: Daily
Product Toxicity to Fish or Aquatic Invertebrate Organisms: No information available on MSDS

Product Identification: Morpholine <35%
Product Use: pH control and corrosion inhibitor in boilers, would be found in boiler blowdown
CAS Number: 110-91-8
Product Classification: No information available on MSDS
Product Half Life: No information available on MSDS
Frequency of Use: Daily
Product Toxicity to Fish or Aquatic Invertebrate Organisms: No information available on MSDS

Product Identification: Hydroquinone <10%
Product Use: oxygen scavenger and corrosion inhibitor in boilers, would be found in boiler blowdown
CAS Number: 123-31-9
Product Classification: No information available on MSDS
Product Half Life: No information available on MSDS
Frequency of Use: Daily
Product Toxicity to Fish or Aquatic Invertebrate Organisms: No information available on MSDS

Product Identification: Hydrate Line >95% slaked Line, Calcium Hydroxide
Product Use: Used to elevate pH in makeup water to precipitate calcium, magnesium and other impurities for water purification. Waste would be blown down to waster pit and pumped to evaporation pond.
CAS Number: 1305-78-8
Product Classification: No information available on MSDS
Product Half Life: No information available on MSDS
Frequency of Use: Daily
Product Toxicity to Fish or Aquatic Invertebrate Organisms: No information available on MSDS

Technical Report 1.0
Industrial

Section 5.c. Blowdown and Once-Through Cooling Water Discharges

Product Identification: Bleach 10%, sodium hypochlorite
Product Use: bacterial algae control in once through condensers, reduced with ammonium bisulfate when discharged.
CAS Number: 7681-52-9
Product Classification: No information available on MSDS
Product Half Life: No information available on MSDS
Frequency of Use: Three times a week
Product Toxicity to Fish or Aquatic Invertebrate Organisms: product may be toxic to aquatic life in immediate area of accidental spill according to MSDS

Product Identification: Ammonium Bisulfite 45-70%
Product Use: Product used to reduce residual and total chlorine in once through condensers
CAS Number: 10192-30-0
Product Classification: No information available on MSDS
Product Half Life: No information available on MSDS
Frequency of Use: Three times a week
Product Toxicity to Fish or Aquatic Invertebrate Organisms: No information available on MSDS

Product Use: Product is used to regenerate cation beds of demineralizer for water purification. Waste is drained to waste pit and pumped to evaporation pond.
CAS Number: 7664-93-9
Product Classification: No information available on MSDS
Product Half Life: No information available on MSDS
Frequency of Use: Daily
Product Toxicity to Fish or Aquatic Invertebrate Organisms: No information available on MSDS

Product Identification: Sodium Hydroxide 50%
Product Use: Product used to regenerate anion beds of the demineralizer used in water purification. The waste is drained into the waste pit and pumped to the evaporation pond.
CAS Number: 1310-73-2
Product Classification: No information available on MSDS
Product Half Life: No information available on MSDS
Frequency of Use: Daily
Product Toxicity to Fish or Aquatic Invertebrate Organisms: No information available on MSDS

ATTACHMENT TR-4

Lab Reports

ANALYTICAL REPORT

July 23, 2024

Garland Power & Light

Sample Delivery Group:	L1754191
Samples Received:	07/08/2024
Project Number:	
Description:	TPDES

Report To: Jeff McClain
13835 County Rd 489
Nevada, TX 75173

Entire Report Reviewed By: Dorothy P Roberts

Dorothy P Roberts
Project Manager

Pace Analytical National
12065 Lebanon Rd Mount Juliet, TN 37122 615-758-5858 800-767-5859 mydata.pacelabs.com

TABLE OF CONTENTS

SAMPLE SUMMARY

OUTFALL 001 L1754191-01 WW

	Collected by	Collected date/time	Received date/time
		07/06/24 23:09	07/08/24 09:51

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst	Location
Calculated Results	WG2317944	1	07/12/24 19:03	07/12/24 19:03	KCM	Allen, TX
Calculated Results	WG2323027	1	07/15/24 20:10	07/15/24 20:10	EIG	Allen, TX
Gravimetric Analysis by Method 2540C	WG2320714	1	07/10/24 16:26	07/10/24 17:12	QQT	Allen, TX
Gravimetric Analysis by Method 2540D	WG2320499	1	07/10/24 13:12	07/10/24 16:33	QQT	Allen, TX
Wet Chemistry by Method 1664A	WG2319853	1	07/11/24 09:09	07/11/24 15:24	TK	Allen, TX
Wet Chemistry by Method 2120B	WG2320288	1	07/10/24 10:40	07/10/24 10:40	EIG	Allen, TX
Wet Chemistry by Method 2320B	WG2319489	1	07/09/24 09:39	07/09/24 09:39	SEN	Allen, TX
Wet Chemistry by Method 300.0	WG2320313	1	07/10/24 21:19	07/10/24 21:19	JDG	Mt. Juliet, TN
Wet Chemistry by Method 3500Cr-B	WG2322157	1	07/12/24 19:03	07/12/24 19:03	KCM	Allen, TX
Wet Chemistry by Method 351.2	WG2323027	1	07/15/24 11:10	07/15/24 20:10	EIG	Allen, TX
Wet Chemistry by Method 353.2	WG2321792	1	07/12/24 12:54	07/12/24 12:54	EIG	Allen, TX
Wet Chemistry by Method 360.1	WG2324067	1	07/16/24 14:05	07/16/24 14:05	JBS	Allen, TX
Wet Chemistry by Method 4500Cl G-2011	WG2322664	1	07/14/24 12:14	07/14/24 12:14	CAH	Mt. Juliet, TN
Wet Chemistry by Method 4500CN-E	WG2321047	1	07/11/24 11:30	07/11/24 16:58	KCM	Allen, TX
Wet Chemistry by Method 4500CN-G	WG2323646	1	07/16/24 16:14	07/16/24 16:14	KCM	Allen, TX
Wet Chemistry by Method 4500P-E	WG2319455	1	07/10/24 10:11	07/10/24 10:11	SMC	Allen, TX
Wet Chemistry by Method 4500-S2 D	WG2319662	1	07/09/24 15:00	07/09/24 15:00	EIG	Allen, TX
Wet Chemistry by Method 4500SO3 B-2011	WG2323050	1	07/15/24 11:20	07/15/24 11:20	JAR	Mt. Juliet, TN
Wet Chemistry by Method 5210 B-2016	WG2319171	1	07/08/24 15:09	07/13/24 09:39	SEN	Allen, TX
Wet Chemistry by Method 5210 B-2016	WG2319172	1	07/08/24 15:30	07/13/24 10:03	SEN	Allen, TX
Wet Chemistry by Method 5220D	WG2319514	1	07/09/24 09:59	07/09/24 12:02	JBS	Allen, TX
Wet Chemistry by Method 5310C	WG2320357	2	07/11/24 20:39	07/11/24 20:39	EIG	Allen, TX
Wet Chemistry by Method 5540C	WG2319936	1	07/09/24 18:54	07/09/24 19:02	EIG	Allen, TX
Wet Chemistry by Method SM 4500-H+B	WG2321035	1	07/11/24 09:01	07/11/24 09:01	JBS	Allen, TX
Wet Chemistry by Method SM4500NH3H	WG2321326	1	07/11/24 16:41	07/11/24 16:41	EIG	Allen, TX
Mercury by Method 245.1	WG2320254	1	07/10/24 09:46	07/10/24 16:05	TDM	Allen, TX
Metals (ICP) by Method 200.7	WG2320626	1	07/10/24 16:30	07/11/24 15:39	SKW	Allen, TX
Metals (ICPMS) by Method 200.8	WG2317944	1	07/09/24 13:25	07/10/24 21:56	NA	Allen, TX
Metals (ICPMS) by Method 200.8	WG2317944	1	07/09/24 13:25	07/11/24 17:29	NA	Allen, TX
Volatile Organic Compounds (GC/MS) by Method 624.1	WG2319924	1	07/09/24 18:02	07/09/24 18:02	NSR	Allen, TX
Polychlorinated Biphenyls (GC) by Method EPA-608.3	WG2322292	1	07/13/24 19:04	07/14/24 06:14	LJD	Mt. Juliet, TN
Semi Volatile Organic Compounds (GC/MS) by Method 625.1	WG2320434	1	07/10/24 12:55	07/13/24 15:45	XLY	Allen, TX

CASE NARRATIVE

All sample aliquots were received at the correct temperature, in the proper containers, with the appropriate preservatives, and within method specified holding times, unless qualified or notated within the report. Where applicable, all MDL (LOD) and RDL (LOQ) values reported for environmental samples have been corrected for the dilution factor used in the analysis. All Method and Batch Quality Control are within established criteria except where addressed in this case narrative, a non-conformance form or properly qualified within the sample results. By my digital signature below, I affirm to the best of my knowledge, all problems/anomalies observed by the laboratory as having the potential to affect the quality of the data have been identified by the laboratory, and no information or data have been knowingly withheld that would affect the quality of the data.

Dorothy P Roberts
Project Manager

Sample Delivery Group (SDG) Narrative

The following analysis were performed from an unpreserved, insufficiently or inadequately preserved sample.

Lab Sample ID	Project Sample ID	Method
L1754191-01	OUTFALL 001	4500-S2 D, 4500CN-E

The Laboratory is not accredited for specific analytes on the associated Sample/Method. These analytes are flagged in the Sample Results section of the report with an asterisk (*).

Lab Sample ID	Project Sample ID	Method
L1754191-01	OUTFALL 001	300.0

Analysis was filtered in the laboratory.

Lab Sample ID	Project Sample ID	Method
L1754191-01	OUTFALL 001	3500Cr-B

No extra volume received to perform Matrix Spike samples.

Lab Sample ID	Project Sample ID	Method
L1754191-01	OUTFALL 001	625.1

Calculated Results

Analyte	Result mg/l	Qualifier	MDL mg/l	RDL mg/l	Dilution	Analysis date / time	Batch
Chromium,Trivalent	0.000525	J	0.000510	0.00300	1	07/12/2024 19:03	WG2317944
Organic Nitrogen	1.03		0.0280	0.100	1	07/15/2024 20:10	WG2323027

Gravimetric Analysis by Method 2540C

Analyte	Result mg/l	Qualifier	RDL mg/l	Dilution	Analysis date / time	Batch
Total Dissolved Solids	184		25.0	1	07/10/2024 17:12	WG2320714

Gravimetric Analysis by Method 2540D

Analyte	Result mg/l	Qualifier	RDL mg/l	Dilution	Analysis date / time	Batch
Suspended Solids	5.93		2.65	1	07/10/2024 16:33	WG2320499

Wet Chemistry by Method 1664A

Analyte	Result mg/l	Qualifier	MDL mg/l	RDL mg/l	Dilution	Analysis date / time	Batch
Oil & Grease (Hexane Extr)	0.780	J	0.350	5.00	1	07/11/2024 15:24	WG2319853

Wet Chemistry by Method 2120B

Analyte	Result units	Qualifier	RDL units	Dilution	Analysis date / time	Batch
Color	20.0	T8	5.00	1	07/10/2024 10:40	WG2320288

Sample Narrative:

L1754191-01 WG2320288: 7

Wet Chemistry by Method 2320B

Analyte	Result mg/l	Qualifier	MDL mg/l	RDL mg/l	Dilution	Analysis date / time	Batch
Alkalinity	110		20.0	20.0	1	07/09/2024 09:39	WG2319489

Wet Chemistry by Method 300.0

Analyte	Result mg/l	Qualifier	MDL mg/l	RDL mg/l	Dilution	Analysis date / time	Batch
*Bromide	0.914	J	0.353	1.00	1	07/10/2024 21:19	WG2320313
Chloride	15.4		0.379	1.00	1	07/10/2024 21:19	WG2320313
Fluoride	0.177		0.0640	0.150	1	07/10/2024 21:19	WG2320313
Nitrate as (N)	U	Q	0.0480	0.100	1	07/10/2024 21:19	WG2320313
Sulfate	27.1		0.594	5.00	1	07/10/2024 21:19	WG2320313

Wet Chemistry by Method 3500Cr-B

Analyte	Result mg/l	Qualifier	MDL mg/l	RDL mg/l	Dilution	Analysis date / time	Batch
Chromium,Hexavalent	U	T8	0.00200	0.00300	1	07/12/2024 19:03	WG2322157

Wet Chemistry by Method 351.2

Analyte	Result mg/l	Qualifier	MDL mg/l	RDL mg/l	Dilution	Analysis date / time	Batch
Kjeldahl Nitrogen, TKN	1.03	J5	0.140	0.250	1	07/15/2024 20:10	WG2323027

Wet Chemistry by Method 353.2

Analyte	Result	Qualifier	MDL	RDL	Dilution	Analysis	Batch
	mg/l		mg/l	mg/l		date / time	
Nitrate-Nitrite	U		0.0300	0.0500	1	07/12/2024 12:54	WG2321792

Wet Chemistry by Method 360.1

Analyte	Result	Qualifier	RDL	Dilution	Analysis	Batch
	mg/l		mg/l		date / time	
Dissolved Oxygen	8.77	T8	1	1	07/16/2024 14:05	WG2324067

Wet Chemistry by Method 4500Cl G-2011

Analyte	Result	Qualifier	MDL	RDL	Dilution	Analysis	Batch
	mg/l		mg/l	mg/l		date / time	
Chlorine,residual	0.0330	J T8	0.0260	0.100	1	07/14/2024 12:14	WG2322664

Wet Chemistry by Method 4500CN-E

Analyte	Result	Qualifier	MDL	RDL	Dilution	Analysis	Batch
	mg/l		mg/l	mg/l		date / time	
Cyanide	U		0.00430	0.0100	1	07/11/2024 16:58	WG2321047

Wet Chemistry by Method 4500CN-G

Analyte	Result	Qualifier	MDL	RDL	Dilution	Analysis	Batch
	mg/l		mg/l	mg/l		date / time	
Cyanide,amenable	U		0.00350	0.0100	1	07/16/2024 16:14	WG2323646

Wet Chemistry by Method 4500P-E

Analyte	Result	Qualifier	MDL	RDL	Dilution	Analysis	Batch
	mg/l		mg/l	mg/l		date / time	
Phosphorus,Total	0.101		0.0152	0.0500	1	07/10/2024 10:11	WG2319455

Wet Chemistry by Method 4500-S2 D

Analyte	Result	Qualifier	MDL	RDL	Dilution	Analysis	Batch
	mg/l		mg/l	mg/l		date / time	
Sulfide	U		0.0230	0.100	1	07/09/2024 15:00	WG2319662

Wet Chemistry by Method 4500SO3 B-2011

Analyte	Result	Qualifier	MDL	RDL	Dilution	Analysis	Batch
	mg/l		mg/l	mg/l		date / time	
Sulfite	U	T8	1.19	3.00	1	07/15/2024 11:20	WG2323050

Wet Chemistry by Method 5210 B-2016

Analyte	Result	Qualifier	RDL	Dilution	Analysis	Batch
	mg/l		mg/l		date / time	
BOD	1.67		1.00	1	07/13/2024 09:39	WG2319171
CBOD	1.75		1.00	1	07/13/2024 10:03	WG2319172

Wet Chemistry by Method 5220D

Analyte	Result	Qualifier	MDL	RDL	Dilution	Analysis	Batch
	mg/l		mg/l	mg/l		date / time	
COD	25.4	J	16.1	35.0	1	07/09/2024 12:02	WG2319514

Wet Chemistry by Method 5310C

Analyte	Result	Qualifier	MDL	RDL	Dilution	Analysis	Batch
	mg/l		mg/l	mg/l		date / time	

Wet Chemistry by Method 5310C

Analyte	Result	Qualifier	MDL	RDL	Dilution	Analysis	Batch
	mg/l		mg/l	mg/l		date / time	
TOC (Total Organic Carbon)	11.5		0.540	1.40	2	07/11/2024 20:39	WG2320357

Wet Chemistry by Method 5540C

Analyte	Result	Qualifier	MDL	RDL	Dilution	Analysis	Batch
	mg/l		mg/l	mg/l		date / time	
MBAS	U	T8	0.360	0.500	1	07/09/2024 19:02	WG2319936

Wet Chemistry by Method SM 4500-H+B

Analyte	Result	Qualifier	Dilution	Analysis	Batch
	su			date / time	
pH	8.21	T8	1	07/11/2024 09:01	WG2321035

Sample Narrative:

L1754191-01 WG2321035: 8.21 at 19.1C

Wet Chemistry by Method SM4500NH3H

Analyte	Result	Qualifier	MDL	RDL	Dilution	Analysis	Batch
	mg/l		mg/l	mg/l		date / time	
Ammonia Nitrogen	U		0.0280	0.100	1	07/11/2024 16:41	WG2321326

Mercury by Method 245.1

Analyte	Result	Qualifier	MDL	RDL	Dilution	Analysis	Batch
	mg/l		mg/l	mg/l		date / time	
Mercury	0.0000780	B J	0.0000450	0.000200	1	07/10/2024 16:05	WG2320254

Metals (ICP) by Method 200.7

Analyte	Result	Qualifier	MDL	RDL	Dilution	Analysis	Batch
	mg/l		mg/l	mg/l		date / time	
Boron	0.0707	J	0.0186	0.100	1	07/11/2024 15:39	WG2320626
Tin	U		0.00240	0.0250	1	07/11/2024 15:39	WG2320626
Titanium	U		0.00835	0.100	1	07/11/2024 15:39	WG2320626

Metals (ICPMS) by Method 200.8

Analyte	Result	Qualifier	MDL	RDL	Dilution	Analysis	Batch
	mg/l		mg/l	mg/l		date / time	
Aluminum	0.0984		0.00186	0.00250	1	07/11/2024 17:29	WG2317944
Antimony	U		0.000580	0.00500	1	07/10/2024 21:56	WG2317944
Arsenic	0.00448		0.000100	0.000500	1	07/11/2024 17:29	WG2317944
Barium	0.0393		0.000440	0.00300	1	07/10/2024 21:56	WG2317944
Beryllium	0.0000935	J	0.0000600	0.000500	1	07/11/2024 17:29	WG2317944
Cadmium	U		0.000120	0.00100	1	07/10/2024 21:56	WG2317944
Chromium	0.000525	J	0.000510	0.00300	1	07/10/2024 21:56	WG2317944
Cobalt	0.000210	B J	0.0000400	0.000300	1	07/11/2024 17:29	WG2317944
Copper	0.00618		0.000900	0.00200	1	07/11/2024 17:29	WG2317944
Iron	0.0935		0.00432	0.00700	1	07/11/2024 17:29	WG2317944
Lead	U		0.000140	0.000500	1	07/10/2024 21:56	WG2317944
Magnesium	3.62		0.0121	0.0200	1	07/11/2024 17:29	WG2317944
Manganese	0.0324		0.000330	0.000500	1	07/10/2024 21:56	WG2317944
Molybdenum	0.000963	J	0.000530	0.00100	1	07/11/2024 17:29	WG2317944
Nickel	0.00166	J	0.000640	0.00200	1	07/11/2024 17:29	WG2317944
Selenium	U		0.000740	0.00500	1	07/10/2024 21:56	WG2317944
Silver	U		0.0000800	0.000500	1	07/10/2024 21:56	WG2317944
Thallium	0.000363	J	0.000190	0.000500	1	07/11/2024 17:29	WG2317944

Metals (ICPMS) by Method 200.8

Analyte	Result	Qualifier	MDL	RDL	Dilution	Analysis	Batch
	mg/l		mg/l	mg/l		date / time	
Zinc	0.00602		0.00265	0.00500	1	07/11/2024 17:29	WG2317944

Volatile Organic Compounds (GC/MS) by Method 624.1

Analyte	Result	Qualifier	MDL	RDL	Dilution	Analysis	Batch
	mg/l		mg/l	mg/l		date / time	
1,1,1-Trichloroethane	U		0.00335	0.00500	1	07/09/2024 18:02	WG2319924
1,1,2,2-Tetrachloroethane	U		0.000596	0.00500	1	07/09/2024 18:02	WG2319924
1,1,2-Trichloroethane	U		0.00145	0.00500	1	07/09/2024 18:02	WG2319924
1,1-Dichloroethene	U		0.00367	0.00500	1	07/09/2024 18:02	WG2319924
1,1-Dichloroethane	U		0.00292	0.00500	1	07/09/2024 18:02	WG2319924
1,2-Dibromoethane	U		0.000549	0.00200	1	07/09/2024 18:02	WG2319924
1,2-Dichlorobenzene	U		0.00172	0.00200	1	07/09/2024 18:02	WG2319924
1,2-Dichloroethane	U		0.00195	0.00500	1	07/09/2024 18:02	WG2319924
1,2-Dichloropropane	U		0.000804	0.00200	1	07/09/2024 18:02	WG2319924
1,3-Dichlorobenzene	U		0.00419	0.00500	1	07/09/2024 18:02	WG2319924
1,4-Dichlorobenzene	U		0.00173	0.00200	1	07/09/2024 18:02	WG2319924
2-Butanone (MEK)	U		0.00822	0.0250	1	07/09/2024 18:02	WG2319924
2-Chloroethyl vinyl ether	U	J6	0.00652	0.0100	1	07/09/2024 18:02	WG2319924
Acrolein	U		0.00544	0.0100	1	07/09/2024 18:02	WG2319924
Acrylonitrile	U		0.00709	0.0100	1	07/09/2024 18:02	WG2319924
Benzene	U		0.00207	0.00500	1	07/09/2024 18:02	WG2319924
Bromodichloromethane	U		0.00179	0.00200	1	07/09/2024 18:02	WG2319924
Bromoform	U		0.000960	0.0100	1	07/09/2024 18:02	WG2319924
Bromomethane	U		0.00347	0.00500	1	07/09/2024 18:02	WG2319924
Carbon tetrachloride	U		0.00159	0.00200	1	07/09/2024 18:02	WG2319924
Chlorobenzene	U		0.00276	0.0100	1	07/09/2024 18:02	WG2319924
Chloroethane	U		0.00296	0.00500	1	07/09/2024 18:02	WG2319924
Chloroform	U		0.00212	0.00500	1	07/09/2024 18:02	WG2319924
Chloromethane	U		0.00361	0.00500	1	07/09/2024 18:02	WG2319924
cis-1,3-Dichloropropene	U		0.00492	0.0100	1	07/09/2024 18:02	WG2319924
Dibromochloromethane	U		0.00327	0.00500	1	07/09/2024 18:02	WG2319924
Ethylbenzene	U		0.000401	0.00200	1	07/09/2024 18:02	WG2319924
Methylene Chloride	U		0.0117	0.0200	1	07/09/2024 18:02	WG2319924
Tetrachloroethene	U		0.00486	0.0100	1	07/09/2024 18:02	WG2319924
Toluene	U		0.00219	0.00500	1	07/09/2024 18:02	WG2319924
trans-1,2-Dichloroethene	U		0.00501	0.0100	1	07/09/2024 18:02	WG2319924
Trichloroethene	U		0.00262	0.00500	1	07/09/2024 18:02	WG2319924
Vinyl chloride	U		0.00466	0.00500	1	07/09/2024 18:02	WG2319924
(S) 1,2-Dichloroethane-d4	*93.9*			*70.0-130*		*07/09/2024 18:02*	WG2319924
(S) 4-Bromofluorobenzene	*94.4*			*70.0-130*		*07/09/2024 18:02*	WG2319924
(S) Toluene-d8	*97.8*			*70.0-130*		*07/09/2024 18:02*	WG2319924

Polychlorinated Biphenyls (GC) by Method EPA-608.3

Analyte	Result	Qualifier	MDL	RDL	Dilution	Analysis	Batch
	mg/l		mg/l	mg/l		date / time	
PCB 1016	U		0.000270	0.000500	1	07/14/2024 06:14	WG2322292
PCB 1221	U		0.000270	0.000500	1	07/14/2024 06:14	WG2322292
PCB 1232	U		0.000270	0.000500	1	07/14/2024 06:14	WG2322292
PCB 1242	U		0.000270	0.000500	1	07/14/2024 06:14	WG2322292
PCB 1248	U		0.000173	0.000500	1	07/14/2024 06:14	WG2322292
PCB 1254	U		0.000173	0.000500	1	07/14/2024 06:14	WG2322292
PCB 1260	U		0.000173	0.000500	1	07/14/2024 06:14	WG2322292
Total PCBs	U		0.000173	0.000500	1	07/14/2024 06:14	WG2322292
(S) Decachlorobiphenyl	*31.2*			*10.0-144*		*07/14/2024 06:14*	WG2322292
(S) Tetrachloro-m-xylene	*60.3*			*10.0-135*		*07/14/2024 06:14*	WG2322292

Semi Volatile Organic Compounds (GC/MS) by Method 625.1

Analyte	Result	Qualifier	MDL	RDL	Dilution	Analysis	Batch
	mg/l		mg/l	mg/l		date / time	
1,2,4,5-Tetrachlorobenzene	U		0.000200	0.00200	1	07/13/2024 15:45	WG2320434
2,4,6-Trichlorophenol	U		0.000238	0.00200	1	07/13/2024 15:45	WG2320434
2,4-Dichlorophenol	U		0.000336	0.00400	1	07/13/2024 15:45	WG2320434
2,4-Dimethylphenol	U		0.000613	0.00200	1	07/13/2024 15:45	WG2320434
2,4-Dinitrophenol	U		0.00154	0.0100	1	07/13/2024 15:45	WG2320434
2-Chlorophenol	U		0.000307	0.00200	1	07/13/2024 15:45	WG2320434
2-Methylphenol	U		0.000238	0.00200	1	07/13/2024 15:45	WG2320434
2-Nitrophenol	U		0.000247	0.00200	1	07/13/2024 15:45	WG2320434
3&4-Methyl Phenol	U		0.000238	0.00200	1	07/13/2024 15:45	WG2320434
3,3-Dichlorobenzidine	U		0.000788	0.00400	1	07/13/2024 15:45	WG2320434
4,6-Dinitro-2-methylphenol	U		0.00202	0.0100	1	07/13/2024 15:45	WG2320434
4-Chloro-3-methylphenol	U		0.000217	0.00200	1	07/13/2024 15:45	WG2320434
4-Nitrophenol	U		0.00123	0.0100	1	07/13/2024 15:45	WG2320434
Anthracene	U		0.000168	0.00200	1	07/13/2024 15:45	WG2320434
Benzidine	U		0.000350	0.00400	1	07/13/2024 15:45	WG2320434
Benzo(a)anthracene	U		0.000307	0.00200	1	07/13/2024 15:45	WG2320434
Benzo(a)pyrene	U		0.000470	0.00200	1	07/13/2024 15:45	WG2320434
Bis(2-chloroethyl)ether	U		0.000168	0.00200	1	07/13/2024 15:45	WG2320434
Bis(2-Ethylhexyl)phthalate	U		0.00180	0.00200	1	07/13/2024 15:45	WG2320434
Chrysene	U		0.000257	0.00200	1	07/13/2024 15:45	WG2320434
Di-n-butyl phthalate	U		0.00160	0.00200	1	07/13/2024 15:45	WG2320434
Hexachloro-1,3-butadiene	U		0.000217	0.00200	1	07/13/2024 15:45	WG2320434
Hexachlorobenzene	U		0.000307	0.00200	1	07/13/2024 15:45	WG2320434
Hexachlorocyclopentadiene	U		0.000299	0.00200	1	07/13/2024 15:45	WG2320434
Hexachloroethane	U		0.000247	0.00200	1	07/13/2024 15:45	WG2320434
n-Nitrosodi-n-butylamine	U		0.00110	0.00200	1	07/13/2024 15:45	WG2320434
n-Nitrosodiethylamine	U		0.000696	0.00200	1	07/13/2024 15:45	WG2320434
Nitrobenzene	U		0.000314	0.00200	1	07/13/2024 15:45	WG2320434
Nonylphenol	U		0.000168	0.00200	1	07/13/2024 15:45	WG2320434
Pentachlorobenzene	U		0.000247	0.00200	1	07/13/2024 15:45	WG2320434
Pentachlorophenol	U		0.000283	0.00200	1	07/13/2024 15:45	WG2320434
Phenanthrene	U		0.000200	0.00200	1	07/13/2024 15:45	WG2320434
Phenol	U		0.000500	0.00200	1	07/13/2024 15:45	WG2320434
Pyridine	U		0.00174	0.00400	1	07/13/2024 15:45	WG2320434
Total Cresols	U		0.00153	0.00800	1	07/13/2024 15:45	WG2320434
(S) 2,4,6-Tribromophenol	*49.6*			*29.0-132*		*07/13/2024 15:45*	WG2320434
(S) 2-Fluorobiphenyl	*76.0*			*26.0-102*		*07/13/2024 15:45*	WG2320434
(S) 2-Fluorophenol	*67.0*	J1		*10.0-66.0*		*07/13/2024 15:45*	WG2320434
(S) Nitrobenzene-d5	*75.5*			*15.0-106*		*07/13/2024 15:45*	WG2320434
(S) p-Terphenyl-d14	*84.5*			*10.0-120*		*07/13/2024 15:45*	WG2320434
(S) Phenol-D6	*61.0*	J1		*10.0-54.0*		*07/13/2024 15:45*	WG2320434

Method Blank (MB)

(MB) R4092654-1 07/10/24 17:12

Analyte	MB Result mg/l	MB Qualifier	MB MDL mg/l	MB RDL mg/l
Total Dissolved Solids	U		25.0	25.0

L1754191-01 Original Sample (OS) • Duplicate (DUP)

(OS) L1754191-01 07/10/24 17:12 • (DUP) R4092654-3 07/10/24 17:12

Analyte	Original Result mg/l	DUP Result mg/l	Dilution	DUP RPD %	DUP Qualifier	DUP RPD Limits %
Total Dissolved Solids	184	196	1	6.32		10

Laboratory Control Sample (LCS)

(LCS) R4092654-2 07/10/24 17:12

Analyte	Spike Amount mg/l	LCS Result mg/l	LCS Rec. %	Rec. Limits %	LCS Qualifier
Total Dissolved Solids	2410	2410	100	85.0-115	

Method Blank (MB)

(MB) R4092588-1 07/10/24 16:33

Analyte	MB Result mg/l	MB Qualifier	MB MDL mg/l	MB RDL mg/l
Suspended Solids	U		2.50	2.50

Laboratory Control Sample (LCS)

(LCS) R4092588-2 07/10/24 16:33

Analyte	Spike Amount mg/l	LCS Result mg/l	LCS Rec. %	Rec. Limits %	LCS Qualifier
Suspended Solids	879	803	91.4	85.0-115	

Method Blank (MB)

(MB) R4093012-1 07/11/24 15:24

Analyte	MB Result mg/l	MB Qualifier	MB MDL mg/l	MB RDL mg/l
Oil & Grease (Hexane Extr)	U		0.350	5.00

Laboratory Control Sample (LCS) • Laboratory Control Sample Duplicate (LCSD)

(LCS) R4093012-2 07/11/24 15:24 • (LCSD) R4093012-3 07/11/24 15:24

Analyte	Spike Amount mg/l	LCS Result mg/l	LCSD Result mg/l	LCS Rec. %	LCSD Rec. %	Rec. Limits %	LCS Qualifier	LCSD Qualifier	RPD %	RPD Limits %
Oil & Grease (Hexane Extr)	40.0	35.1	36.2	87.8	90.5	78.0-114			3.09	18

L1753541-02 Original Sample (OS) • Matrix Spike (MS)

(OS) L1753541-02 07/11/24 15:24 • (MS) R4093012-4 07/11/24 15:24

Analyte	Spike Amount mg/l	Original Result mg/l	MS Result mg/l	MS Rec. %	Dilution	Rec. Limits %	MS Qualifier
Oil & Grease (Hexane Extr)	40.0	U	36.8	92.0	1	78.0-114	

Method Blank (MB)

(MB) R4092474-1 07/10/24 10:40

Analyte	MB Result units	MB Qualifier	MB MDL units	MB RDL units
Color	U		5.00	5.00

Sample Narrative:

BLANK: 7

L1754283-01 Original Sample (OS) • Duplicate (DUP)

(OS) L1754283-01 07/10/24 10:40 • (DUP) R4092474-2 07/10/24 10:40

Analyte	Original Result units	DUP Result units	Dilution	DUP RPD %	DUP Qualifier	DUP RPD Limits %
Color	20.0	20.0	1	0.000		20

Sample Narrative:

OS: 7

DUP: 7

Method Blank (MB)

(MB) R4091456-1 07/09/24 09:39

Analyte	MB Result mg/l	MB Qualifier	MB MDL mg/l	MB RDL mg/l
Alkalinity	U		20.0	20.0

L1754191-01 Original Sample (OS) • Duplicate (DUP)

(OS) L1754191-01 07/09/24 09:39 • (DUP) R4091456-3 07/09/24 09:39

Analyte	Original Result mg/l	DUP Result mg/l	Dilution	DUP RPD %	DUP Qualifier	DUP RPD Limits %
Alkalinity	110	113	1	2.25		20

Laboratory Control Sample (LCS)

(LCS) R4091456-2 07/09/24 09:39

Analyte	Spike Amount mg/l	LCS Result mg/l	LCS Rec. %	Rec. Limits %	LCS Qualifier
Alkalinity	250	242	96.8	90.0-110	

Method Blank (MB)

(MB) R4093158-1 07/10/24 19:59

Analyte	MB Result mg/l	MB Qualifier	MB MDL mg/l	MB RDL mg/l
Bromide	U		0.353	1.00
Chloride	U		0.379	1.00
Fluoride	U		0.0640	0.150
Nitrate as (N)	U		0.0480	0.100
Sulfate	U		0.594	5.00

L1747043-13 Original Sample (OS) • Duplicate (DUP)

(OS) L1747043-13 07/10/24 20:26 • (DUP) R4093158-3 07/10/24 20:39

Analyte	Original Result mg/l	DUP Result mg/l	Dilution	DUP RPD %	DUP Qualifier	DUP RPD Limits %
Bromide	1.84	1.79	1	2.94		15
Chloride	67.4	64.7	1	4.05		15
Fluoride	0.125	0.116	1	7.49	J	15
Nitrate as (N)	2.69	2.58	1	4.08		15
Sulfate	95.6	91.0	1	4.92		15

L1754873-01 Original Sample (OS) • Duplicate (DUP)

(OS) L1754873-01 07/11/24 02:15 • (DUP) R4093158-6 07/11/24 02:28

Analyte	Original Result mg/l	DUP Result mg/l	Dilution	DUP RPD %	DUP Qualifier	DUP RPD Limits %
Bromide	0.637	0.595	1	6.79	J	15
Chloride	10.5	10.4	1	1.21		15
Fluoride	0.103	0.142	1	32.4	J P1	15
Nitrate as (N)	U	U	1	0.000		15
Sulfate	142	139	1	1.74		15

Laboratory Control Sample (LCS)

(LCS) R4093158-2 07/10/24 20:12

Analyte	Spike Amount mg/l	LCS Result mg/l	LCS Rec. %	Rec. Limits %	LCS Qualifier
Bromide	40.0	40.4	101	90.0-110	
Chloride	40.0	40.3	101	90.0-110	
Fluoride	8.00	8.11	101	90.0-110	
Nitrate as (N)	8.00	7.79	97.4	90.0-110	

Laboratory Control Sample (LCS)

(LCS) R4093158-2 07/10/24 20:12

Analyte	Spike Amount mg/l	LCS Result mg/l	LCS Rec. %	Rec. Limits %	LCS Qualifier
Sulfate	40.0	40.9	102	90.0-110	

L1747043-13 Original Sample (OS) • Matrix Spike (MS) • Matrix Spike Duplicate (MSD)

(OS) L1747043-13 07/10/24 20:26 • (MS) R4093158-4 07/10/24 20:53 • (MSD) R4093158-5 07/10/24 21:06

Analyte	Spike Amount mg/l	Original Result mg/l	MS Result mg/l	MSD Result mg/l	MS Rec. %	MSD Rec. %	Dilution	Rec. Limits %	MS Qualifier	MSD Qualifier	RPD %	RPD Limits %
Bromide	40.0	1.84	41.2	40.7	98.4	97.2	1	80.0-120			1.19	15
Chloride	40.0	67.4	93.0	91.9	64.0	61.4	1	80.0-120	J6	J6	1.12	15
Fluoride	8.00	0.125	8.34	7.99	103	98.4	1	80.0-120			4.18	15
Nitrate as (N)	8.00	2.69	10.1	9.98	92.6	91.1	1	80.0-120			1.15	15
Sulfate	40.0	95.6	115	112	48.9	42.2	1	80.0-120	J6	J6	2.36	15

L1754873-01 Original Sample (OS) • Matrix Spike (MS)

(OS) L1754873-01 07/11/24 02:15 • (MS) R4093158-7 07/11/24 02:42

Analyte	Spike Amount mg/l	Original Result mg/l	MS Result mg/l	MS Rec. %	Dilution	Rec. Limits %	MS Qualifier
Bromide	40.0	0.637	40.6	99.9	1	80.0-120	
Chloride	40.0	10.5	48.9	96.1	1	80.0-120	
Fluoride	8.00	0.103	8.07	99.5	1	80.0-120	
Nitrate as (N)	8.00	U	8.83	110	1	80.0-120	
Sulfate	40.0	142	149	17.3	1	80.0-120	J6

Method Blank (MB)

(MB) R4093286-1 07/12/24 19:03

Analyte	MB Result mg/l	MB Qualifier	MB MDL mg/l	MB RDL mg/l
Chromium,Hexavalent	U		0.00200	0.00300

Laboratory Control Sample (LCS)

(LCS) R4093286-2 07/12/24 19:03

Analyte	Spike Amount mg/l	LCS Result mg/l	LCS Rec. %	Rec. Limits %	LCS Qualifier
Chromium,Hexavalent	0.200	0.195	97.7	85.0-115	

L1756127-01 Original Sample (OS) • Matrix Spike (MS) • Matrix Spike Duplicate (MSD)

(OS) L1756127-01 07/12/24 19:03 • (MS) R4093286-3 07/12/24 19:03 • (MSD) R4093286-4 07/12/24 19:03

Analyte	Spike Amount mg/l	Original Result mg/l	MS Result mg/l	MSD Result mg/l	MS Rec. %	MSD Rec. %	Dilution	Rec. Limits %	MS Qualifier	MSD Qualifier	RPD %	RPD Limits %
Chromium,Hexavalent	0.200	U	0.204	0.202	102	101	1	10.0-120			0.842	20

Method Blank (MB)

(MB) R4094061-1 07/15/24 20:06

Analyte	MB Result	MB Qualifier	MB MDL	MB RDL
	mg/l		mg/l	mg/l
Kjeldahl Nitrogen, TKN	U		0.140	0.250

Laboratory Control Sample (LCS)

(LCS) R4094061-2 07/15/24 20:07

Analyte	Spike Amount	LCS Result	LCS Rec.	Rec. Limits	LCS Qualifier
	mg/l	mg/l	%	%	
Kjeldahl Nitrogen, TKN	4.00	4.27	107	90.0-110	

L1754191-01 Original Sample (OS) • Matrix Spike (MS) • Matrix Spike Duplicate (MSD)

(OS) L1754191-01 07/15/24 20:10 • (MS) R4094061-3 07/15/24 20:44 • (MSD) R4094061-4 07/15/24 20:45

Analyte	Spike Amount	Original Result	MS Result	MSD Result	MS Rec.	MSD Rec.	Dilution	Rec. Limits	MS Qualifier	MSD Qualifier	RPD	RPD Limits
	mg/l	mg/l	mg/l	mg/l	%	%		%			%	%
Kjeldahl Nitrogen, TKN	4.00	1.03	5.64	6.51	115	137	1	90.0-110	J5	J5	14.3	20

L1754283-01 Original Sample (OS) • Matrix Spike (MS) • Matrix Spike Duplicate (MSD)

(OS) L1754283-01 07/15/24 20:11 • (MS) R4094061-5 07/15/24 20:46 • (MSD) R4094061-6 07/15/24 20:48

Analyte	Spike Amount	Original Result	MS Result	MSD Result	MS Rec.	MSD Rec.	Dilution	Rec. Limits	MS Qualifier	MSD Qualifier	RPD	RPD Limits
	mg/l	mg/l	mg/l	mg/l	%	%		%			%	%
Kjeldahl Nitrogen, TKN	4.00	0.343	4.88	4.63	113	107	1	90.0-110	J5		5.26	20

Method Blank (MB)

(MB) R4093045-1 07/12/24 12:50

Analyte	MB Result mg/l	MB Qualifier	MB MDL mg/l	MB RDL mg/l
Nitrate-Nitrite	U		0.0300	0.0500

Laboratory Control Sample (LCS)

(LCS) R4093045-2 07/12/24 12:51

Analyte	Spike Amount mg/l	LCS Result mg/l	LCS Rec. %	Rec. Limits %	LCS Qualifier
Nitrate-Nitrite	2.50	2.40	96.0	90.0-110	

L1754182-01 Original Sample (OS) • Matrix Spike (MS) • Matrix Spike Duplicate (MSD)

(OS) L1754182-01 07/12/24 12:51 • (MS) R4093045-3 07/12/24 12:59 • (MSD) R4093045-4 07/12/24 13:00

Analyte	Spike Amount mg/l	Original Result mg/l	MS Result mg/l	MSD Result mg/l	MS Rec. %	MSD Rec. %	Dilution	Rec. Limits %	MS Qualifier	MSD Qualifier	RPD %	RPD Limits %
Nitrate-Nitrite	2.50	0.794	3.13	3.11	93.4	92.6	1	90.0-110			0.641	20

L1756836-01 Original Sample (OS) • Duplicate (DUP)

(OS) L1756836-01 07/16/24 14:05 • (DUP) R4094367-1 07/16/24 14:05

Analyte	Original Result mg/l	DUP Result mg/l	Dilution	DUP RPD %	DUP Qualifier	DUP RPD Limits %
Dissolved Oxygen	7.77	8.25	1	5.99		10

Method Blank (MB)

(MB) R4093561-1 07/14/24 11:59

Analyte	MB Result mg/l	MB Qualifier	MB MDL mg/l	MB RDL mg/l
Chlorine,residual	U		0.0260	0.100

L1754191-01 Original Sample (OS) • Duplicate (DUP)

(OS) L1754191-01 07/14/24 12:14 • (DUP) R4093561-3 07/14/24 12:15

Analyte	Original Result mg/l	DUP Result mg/l	Dilution	DUP RPD %	DUP Qualifier	DUP RPD Limits %
Chlorine,residual	0.0330	0.0340	1	2.99	J	20

Laboratory Control Sample (LCS)

(LCS) R4093561-2 07/14/24 12:13

Analyte	Spike Amount mg/l	LCS Result mg/l	LCS Rec. %	Rec. Limits %	LCS Qualifier
Chlorine,residual	1.00	0.960	96.0	85.0-115	

Method Blank (MB)

(MB) R4092740-1 07/11/24 16:58

Analyte	MB Result mg/l	MB Qualifier	MB MDL mg/l	MB RDL mg/l
Cyanide	U		0.00430	0.0100

Laboratory Control Sample (LCS)

(LCS) R4092740-2 07/11/24 16:58

Analyte	Spike Amount mg/l	LCS Result mg/l	LCS Rec. %	Rec. Limits %	LCS Qualifier
Cyanide	0.100	0.0908	90.8	85.0-115	

L1754359-01 Original Sample (OS) • Matrix Spike (MS) • Matrix Spike Duplicate (MSD)

(OS) L1754359-01 07/11/24 16:58 • (MS) R4092740-3 07/11/24 16:58 • (MSD) R4092740-4 07/11/24 16:58

Analyte	Spike Amount mg/l	Original Result mg/l	MS Result mg/l	MSD Result mg/l	MS Rec. %	MSD Rec. %	Dilution	Rec. Limits %	MS Qualifier	MSD Qualifier	RPD %	RPD Limits %
Cyanide	0.100	U	0.0928	0.0928	92.8	92.8	1	85.0-115			0.000	20

Method Blank (MB)

(MB) R4091941-1 07/10/24 10:09

Analyte	MB Result mg/l	MB Qualifier	MB MDL mg/l	MB RDL mg/l
Phosphorus,Total	U		0.0152	0.0500

Laboratory Control Sample (LCS)

(LCS) R4091941-2 07/10/24 10:09

Analyte	Spike Amount mg/l	LCS Result mg/l	LCS Rec. %	Rec. Limits %	LCS Qualifier
Phosphorus,Total	0.500	0.522	104	80.0-120	

L1753186-01 Original Sample (OS) • Matrix Spike (MS) • Matrix Spike Duplicate (MSD)

(OS) L1753186-01 07/10/24 10:09 • (MS) R4091941-3 07/10/24 10:11 • (MSD) R4091941-4 07/10/24 10:11

Analyte	Spike Amount mg/l	Original Result mg/l	MS Result mg/l	MSD Result mg/l	MS Rec. %	MSD Rec. %	Dilution	Rec. Limits %	MS Qualifier	MSD Qualifier	RPD %	RPD Limits %
Phosphorus,Total	0.500	2.51	2.70	2.79	38.4	55.9	5	80.0-120	V	V	3.18	20

L1753974-01 Original Sample (OS) • Matrix Spike (MS) • Matrix Spike Duplicate (MSD)

(OS) L1753974-01 07/10/24 10:10 • (MS) R4091941-5 07/10/24 10:11 • (MSD) R4091941-6 07/10/24 10:11

Analyte	Spike Amount mg/l	Original Result mg/l	MS Result mg/l	MSD Result mg/l	MS Rec. %	MSD Rec. %	Dilution	Rec. Limits %	MS Qualifier	MSD Qualifier	RPD %	RPD Limits %
Phosphorus,Total	0.500	0.0327	0.564	0.548	106	103	1	80.0-120			2.93	20

Method Blank (MB)

(MB) R4091612-1 07/09/24 15:00

Analyte	MB Result mg/l	MB Qualifier	MB MDL mg/l	MB RDL mg/l
Sulfide	U		0.0230	0.100

Laboratory Control Sample (LCS)

(LCS) R4091612-2 07/09/24 15:00

Analyte	Spike Amount mg/l	LCS Result mg/l	LCS Rec. %	Rec. Limits %	LCS Qualifier
Sulfide	0.800	0.850	106	80.0-120	

L1753522-01 Original Sample (OS) • Matrix Spike (MS) • Matrix Spike Duplicate (MSD)

(OS) L1753522-01 07/09/24 15:00 • (MS) R4091612-3 07/09/24 15:03 • (MSD) R4091612-4 07/09/24 15:03

Analyte	Spike Amount mg/l	Original Result mg/l	MS Result mg/l	MSD Result mg/l	MS Rec. %	MSD Rec. %	Dilution	Rec. Limits %	MS Qualifier	MSD Qualifier	RPD %	RPD Limits %
Sulfide	0.800	U	0.772	0.769	96.5	96.1	1	80.0-120			0.453	20

Method Blank (MB)

(MB) R4093789-1 07/15/24 11:20

Analyte	MB Result mg/l	MB Qualifier	MB MDL mg/l	MB RDL mg/l
Sulfite	U		1.19	3.00

L1754191-01 Original Sample (OS) • Duplicate (DUP)

(OS) L1754191-01 07/15/24 11:20 • (DUP) R4093789-3 07/15/24 11:20

Analyte	Original Result mg/l	DUP Result mg/l	Dilution	DUP RPD %	DUP Qualifier	DUP RPD Limits %
Sulfite	U	U	1	0.000		20

Laboratory Control Sample (LCS)

(LCS) R4093789-2 07/15/24 11:20

Analyte	Spike Amount mg/l	LCS Result mg/l	LCS Rec. %	Rec. Limits %	LCS Qualifier
Sulfite	20.0	18.0	90.0	85.0-115	

L1754283-01 Original Sample (OS) • Matrix Spike (MS) • Matrix Spike Duplicate (MSD)

(OS) L1754283-01 07/15/24 11:20 • (MS) R4093789-4 07/15/24 11:20 • (MSD) R4093789-5 07/15/24 11:20

Analyte	Spike Amount mg/l	Original Result mg/l	MS Result mg/l	MSD Result mg/l	MS Rec. %	MSD Rec. %	Dilution	Rec. Limits %	MS Qualifier	MSD Qualifier	RPD %	RPD Limits %
Sulfite	20.0	U	19.0	18.5	95.0	92.5	1	85.0-115			2.67	20

Method Blank (MB)

(MB) R4093354-1 07/13/24 09:30

Analyte	MB Result mg/l	MB Qualifier	MB MDL mg/l	MB RDL mg/l
BOD	U		0.200	0.200

L1754142-01 Original Sample (OS) • Duplicate (DUP)

(OS) L1754142-01 07/13/24 09:40 • (DUP) R4093354-3 07/13/24 09:44

Analyte	Original Result mg/l	DUP Result mg/l	Dilution	DUP RPD %	DUP Qualifier	DUP RPD Limits %
BOD	349	332	1	5.11		20

Laboratory Control Sample (LCS)

(LCS) R4093354-2 07/13/24 09:36

Analyte	Spike Amount mg/l	LCS Result mg/l	LCS Rec. %	Rec. Limits %	LCS Qualifier
BOD	198	188	95	85-115	

Method Blank (MB)

(MB) R4093367-1 07/13/24 09:54

Analyte	MB Result mg/l	MB Qualifier	MB MDL mg/l	MB RDL mg/l
CBOD	U		0.200	0.200

L1754163-02 Original Sample (OS) • Duplicate (DUP)

(OS) L1754163-02 07/13/24 10:21 • (DUP) R4093367-3 07/13/24 10:22

Analyte	Original Result mg/l	DUP Result mg/l	Dilution	DUP RPD %	DUP Qualifier	DUP RPD Limits %
CBOD	1.57	1.62	1	3.13		20

Laboratory Control Sample (LCS)

(LCS) R4093367-2 07/13/24 09:59

Analyte	Spike Amount mg/l	LCS Result mg/l	LCS Rec. %	Rec. Limits %	LCS Qualifier
CBOD	198	189	95.3	85-115	

Method Blank (MB)

(MB) R4091496-1 07/09/24 12:02

Analyte	MB Result mg/l	MB Qualifier	MB MDL mg/l	MB RDL mg/l
COD	U		16.1	35.0

Laboratory Control Sample (LCS)

(LCS) R4091496-2 07/09/24 12:02

Analyte	Spike Amount mg/l	LCS Result mg/l	LCS Rec. %	Rec. Limits %	LCS Qualifier
COD	500	509	102	80.0-120	

L1754191-01 Original Sample (OS) • Matrix Spike (MS) • Matrix Spike Duplicate (MSD)

(OS) L1754191-01 07/09/24 12:02 • (MS) R4091496-3 07/09/24 12:02 • (MSD) R4091496-4 07/09/24 12:02

Analyte	Spike Amount mg/l	Original Result mg/l	MS Result mg/l	MSD Result mg/l	MS Rec. %	MSD Rec. %	Dilution	Rec. Limits %	MS Qualifier	MSD Qualifier	RPD %	RPD Limits %
COD	500	25.4	526	532	100	101	1	80.0-120			1.20	20

Method Blank (MB)

(MB) R4092962-1 07/11/24 16:22

Analyte	MB Result mg/l	MB Qualifier	MB MDL mg/l	MB RDL mg/l
TOC (Total Organic Carbon)	U		0.270	0.700

Laboratory Control Sample (LCS)

(LCS) R4092962-2 07/11/24 16:42

Analyte	Spike Amount mg/l	LCS Result mg/l	LCS Rec. %	Rec. Limits %	LCS Qualifier
TOC (Total Organic Carbon)	10.0	10.4	104	90.0-110	

L1754776-01 Original Sample (OS) • Matrix Spike (MS) • Matrix Spike Duplicate (MSD)

(OS) L1754776-01 07/11/24 17:08 • (MS) R4092962-3 07/11/24 17:54 • (MSD) R4092962-4 07/11/24 18:14

Analyte	Spike Amount mg/l	Original Result mg/l	MS Result mg/l	MSD Result mg/l	MS Rec. %	MSD Rec. %	Dilution	Rec. Limits %	MS Qualifier	MSD Qualifier	RPD %	RPD Limits %
TOC (Total Organic Carbon)	100	30.8	127	127	96.3	96.3	10	80.0-120			0.000	20

Method Blank (MB)

(MB) R4092475-1 07/09/24 19:02

Analyte	MB Result mg/l	MB Qualifier	MB MDL mg/l	MB RDL mg/l
MBAS	U		0.360	0.500

Laboratory Control Sample (LCS)

(LCS) R4092475-2 07/09/24 19:02

Analyte	Spike Amount mg/l	LCS Result mg/l	LCS Rec. %	Rec. Limits %	LCS Qualifier
MBAS	1.00	1.17	117	80.0-120	

L1754283-01 Original Sample (OS) • Matrix Spike (MS) • Matrix Spike Duplicate (MSD)

(OS) L1754283-01 07/09/24 19:02 • (MS) R4092475-3 07/09/24 19:02 • (MSD) R4092475-4 07/09/24 19:02

Analyte	Spike Amount mg/l	Original Result mg/l	MS Result mg/l	MSD Result mg/l	MS Rec. %	MSD Rec. %	Dilution	Rec. Limits %	MS Qualifier	MSD Qualifier	RPD %	RPD Limits %
MBAS	1.00	U	1.20	1.25	120	125	1	80.0-120		J5	3.87	20

L1754340-01 Original Sample (OS) • Duplicate (DUP)

(OS) L1754340-01 07/11/24 09:01 • (DUP) R4092476-2 07/11/24 09:01

Analyte	Original Result	DUP Result	Dilution	DUP RPD	DUP Qualifier	DUP RPD Limits
	su	su		%		%
pH	7.61	7.62	1	0.131		20

Sample Narrative:
OS: 7.61 at 19.6C
DUP: 7.62 at 19.3C

Laboratory Control Sample (LCS)

(LCS) R4092476-1 07/11/24 09:01

Analyte	Spike Amount	LCS Result	LCS Rec.	Rec. Limits	LCS Qualifier
	su	su	%	%	
pH	6.00	5.99	99.8	99.0-101	

Sample Narrative:
LCS: 5.99 at 22C

Method Blank (MB)

(MB) R4092766-1 07/11/24 16:29

Analyte	MB Result mg/l	MB Qualifier	MB MDL mg/l	MB RDL mg/l
Ammonia Nitrogen	0.0285	J	0.0280	0.100

Laboratory Control Sample (LCS)

(LCS) R4092766-2 07/11/24 16:30

Analyte	Spike Amount mg/l	LCS Result mg/l	LCS Rec. %	Rec. Limits %	LCS Qualifier
Ammonia Nitrogen	5.00	5.28	106	80.0-120	

L1754163-02 Original Sample (OS) • Matrix Spike (MS) • Matrix Spike Duplicate (MSD)

(OS) L1754163-02 07/11/24 16:39 • (MS) R4092766-3 07/11/24 16:32 • (MSD) R4092766-4 07/11/24 16:34

Analyte	Spike Amount mg/l	Original Result mg/l	MS Result mg/l	MSD Result mg/l	MS Rec. %	MSD Rec. %	Dilution	Rec. Limits %	MS Qualifier	MSD Qualifier	RPD %	RPD Limits %
Ammonia Nitrogen	5.00	0.369	5.44	5.43	101	101	1	80.0-120			0.184	20

L1754191-01 Original Sample (OS) • Matrix Spike (MS) • Matrix Spike Duplicate (MSD)

(OS) L1754191-01 07/11/24 16:41 • (MS) R4092766-5 07/11/24 16:36 • (MSD) R4092766-6 07/11/24 16:37

Analyte	Spike Amount mg/l	Original Result mg/l	MS Result mg/l	MSD Result mg/l	MS Rec. %	MSD Rec. %	Dilution	Rec. Limits %	MS Qualifier	MSD Qualifier	RPD %	RPD Limits %
Ammonia Nitrogen	5.00	U	5.12	5.15	102	103	1	80.0-120			0.584	20

Method Blank (MB)

(MB) R4092198-3 07/10/24 16:35

Analyte	MB Result mg/l	MB Qualifier	MB MDL mg/l	MB RDL mg/l
Mercury	0.0000450	J	0.0000450	0.000200

Laboratory Control Sample (LCS)

(LCS) R4092198-4 07/10/24 16:37

Analyte	Spike Amount mg/l	LCS Result mg/l	LCS Rec. %	Rec. Limits %	LCS Qualifier
Mercury	0.00250	0.00227	90.8	85.0-115	

L1753552-01 Original Sample (OS) • Matrix Spike (MS) • Matrix Spike Duplicate (MSD)

(OS) L1753552-01 07/10/24 16:40 • (MS) R4092198-5 07/10/24 16:42 • (MSD) R4092198-6 07/10/24 16:44

Analyte	Spike Amount mg/l	Original Result mg/l	MS Result mg/l	MSD Result mg/l	MS Rec. %	MSD Rec. %	Dilution	Rec. Limits %	MS Qualifier	MSD Qualifier	RPD %	RPD Limits %
Mercury	0.00250	0.0000520	0.00170	0.00171	65.9	66.3	1	70.0-130	J6	J6	0.587	20

Method Blank (MB)

(MB) R4092733-2 07/11/24 13:15

Analyte	MB Result mg/l	MB Qualifier	MB MDL mg/l	MB RDL mg/l
Boron	U		0.0186	0.100
Tin	U		0.00240	0.0250
Titanium	U		0.00835	0.100

Laboratory Control Sample (LCS)

(LCS) R4092733-1 07/11/24 13:12

Analyte	Spike Amount mg/l	LCS Result mg/l	LCS Rec. %	Rec. Limits %	LCS Qualifier
Boron	1.00	0.962	96.2	85.0-115	
Tin	1.00	0.999	99.9	85.0-115	
Titanium	1.00	0.996	99.6	85.0-115	

Method Blank (MB)

(MB) R4092396-1 07/10/24 19:45

Analyte	MB Result mg/l	MB Qualifier	MB MDL mg/l	MB RDL mg/l
Antimony	U		0.000580	0.00500
Arsenic	0.000137	J	0.000100	0.000500
Barium	U		0.000440	0.00300
Beryllium	U		0.0000600	0.000500
Cadmium	U		0.000120	0.00100
Chromium	U		0.000510	0.00300
Cobalt	0.0000413	J	0.0000400	0.000300
Iron	0.00498	J	0.00432	0.00700
Lead	U		0.000140	0.000500
Magnesium	U		0.0121	0.0200
Manganese	0.000528		0.000330	0.000500
Molybdenum	U		0.000530	0.00100
Nickel	U		0.000640	0.00200
Selenium	U		0.000740	0.00500
Silver	U		0.0000800	0.000500

Method Blank (MB)

(MB) R4092655-1 07/11/24 14:06

Analyte	MB Result mg/l	MB Qualifier	MB MDL mg/l	MB RDL mg/l
Aluminum	0.00824		0.00186	0.00250
Copper	U		0.000900	0.00200
Thallium	U		0.000190	0.000500
Zinc	U		0.00265	0.00500

Laboratory Control Sample (LCS)

(LCS) R4092396-2 07/10/24 19:51

Analyte	Spike Amount mg/l	LCS Result mg/l	LCS Rec. %	Rec. Limits %	LCS Qualifier
Antimony	0.100	0.0953	95.3	85.0-115	
Arsenic	0.100	0.0925	92.5	85.0-115	
Barium	0.100	0.0975	97.5	85.0-115	
Beryllium	0.100	0.0906	90.6	85.0-115	
Cadmium	0.100	0.0946	94.6	85.0-115	
Chromium	0.100	0.0950	95.0	85.0-115	
Cobalt	0.100	0.0927	92.7	85.0-115	
Iron	1.00	0.940	94.0	85.0-115	

Laboratory Control Sample (LCS)

(LCS) R4092396-2 07/10/24 19:51

Analyte	Spike Amount mg/l	LCS Result mg/l	LCS Rec. %	Rec. Limits %	LCS Qualifier
Lead	0.100	0.0928	92.8	85.0-115	
Magnesium	1.00	0.959	95.9	85.0-115	
Manganese	0.100	0.0958	95.8	85.0-115	
Molybdenum	0.100	0.0960	96.0	85.0-115	
Nickel	0.100	0.0908	90.8	85.0-115	
Selenium	0.100	0.0938	93.8	85.0-115	
Silver	0.0500	0.0477	95.3	85.0-115	

Laboratory Control Sample (LCS)

(LCS) R4092655-2 07/11/24 14:12

Analyte	Spike Amount mg/l	LCS Result mg/l	LCS Rec. %	Rec. Limits %	LCS Qualifier
Aluminum	1.00	0.973	97.3	85.0-115	
Copper	0.100	0.102	102	85.0-115	
Thallium	0.100	0.0921	92.1	85.0-115	
Zinc	0.100	0.0972	97.2	85.0-115	

L1752768-10 Original Sample (OS) • Matrix Spike (MS) • Matrix Spike Duplicate (MSD)

(OS) L1752768-10 07/10/24 20:10 • (MS) R4092396-3 07/10/24 20:16 • (MSD) R4092396-4 07/10/24 20:22

Analyte	Spike Amount mg/l	Original Result mg/l	MS Result mg/l	MSD Result mg/l	MS Rec. %	MSD Rec. %	Dilution	Rec. Limits %	MS Qualifier	MSD Qualifier	RPD %	RPD Limits %
Antimony	0.100	0.000718	0.0936	0.0921	92.9	91.3	1	70.0-130			1.66	20
Arsenic	0.100	0.00198	0.0912	0.0924	89.2	90.4	1	70.0-130			1.35	20
Barium	0.100	0.0649	0.156	0.157	90.8	91.7	1	70.0-130			0.574	20
Beryllium	0.100	U	0.0895	0.0896	89.5	89.6	1	70.0-130			0.215	20
Cadmium	0.100	U	0.0859	0.0894	85.9	89.4	1	70.0-130			3.93	20
Chromium	0.100	0.000624	0.0883	0.0890	87.7	88.3	1	70.0-130			0.752	20
Cobalt	0.100	0.000235	0.0864	0.0882	86.1	88.0	1	70.0-130			2.08	20
Iron	1.00	0.0356	0.891	0.912	85.5	87.6	1	70.0-130			2.33	20
Lead	0.100	U	0.0870	0.0869	87.0	86.9	1	70.0-130			0.0364	20
Magnesium	1.00	14.9	15.1	15.7	16.7	73.0	1	70.0-130	V		3.66	20
Manganese	0.100	0.0249	0.110	0.113	84.9	88.6	1	70.0-130			3.30	20
Molybdenum	0.100	0.00356	0.0956	0.0981	92.0	94.6	1	70.0-130			2.62	20
Nickel	0.100	0.00232	0.0862	0.0876	83.9	85.2	1	70.0-130			1.59	20
Selenium	0.100	0.00164	0.0918	0.0942	90.2	92.6	1	70.0-130			2.53	20
Silver	0.0500	U	0.0443	0.0452	88.5	90.4	1	70.0-130			2.12	20

L1753977-02 Original Sample (OS) • Matrix Spike (MS) • Matrix Spike Duplicate (MSD)

(OS) L1753977-02 07/10/24 21:31 • (MS) R4092396-5 07/10/24 21:38 • (MSD) R4092396-6 07/10/24 21:44

Analyte	Spike Amount mg/l	Original Result mg/l	MS Result mg/l	MSD Result mg/l	MS Rec. %	MSD Rec. %	Dilution	Rec. Limits %	MS Qualifier	MSD Qualifier	RPD %	RPD Limits %
Antimony	0.100	U	0.103	0.0995	103	99.5	1	70.0-130			3.92	20
Barium	0.100	0.0577	0.162	0.157	104	99.2	1	70.0-130			3.09	20
Cadmium	0.100	U	0.102	0.0985	102	98.5	1	70.0-130			3.77	20
Chromium	0.100	0.00109	0.105	0.102	104	101	1	70.0-130			3.07	20
Lead	0.100	0.000216	0.101	0.0982	101	98.0	1	70.0-130			2.79	20
Manganese	0.100	0.171	0.274	0.268	103	97.6	1	70.0-130			2.02	20
Molybdenum	0.100	0.00727	0.113	0.110	105	103	1	70.0-130			2.31	20
Selenium	0.100	U	0.0945	0.105	94.5	105	1	70.0-130			10.0	20
Silver	0.0500	U	0.0507	0.0494	101	98.8	1	70.0-130			2.50	20

L1752768-10 Original Sample (OS) • Matrix Spike (MS) • Matrix Spike Duplicate (MSD)

(OS) L1752768-10 07/11/24 14:31 • (MS) R4092655-3 07/11/24 14:37 • (MSD) R4092655-4 07/11/24 14:43

Analyte	Spike Amount mg/l	Original Result mg/l	MS Result mg/l	MSD Result mg/l	MS Rec. %	MSD Rec. %	Dilution	Rec. Limits %	MS Qualifier	MSD Qualifier	RPD %	RPD Limits %
Aluminum	1.00	0.0394	0.972	0.996	93.3	95.7	1	70.0-130			2.43	20
Copper	0.100	0.00526	0.102	0.104	97.1	98.3	1	70.0-130			1.17	20
Thallium	0.100	U	0.0893	0.0923	89.3	92.3	1	70.0-130			3.28	20
Zinc	0.100	0.0484	0.141	0.142	92.3	93.7	1	70.0-130			1.02	20

L1753977-02 Original Sample (OS) • Matrix Spike (MS) • Matrix Spike Duplicate (MSD)

(OS) L1753977-02 07/11/24 17:03 • (MS) R4092655-5 07/11/24 17:10 • (MSD) R4092655-6 07/11/24 17:17

Analyte	Spike Amount mg/l	Original Result mg/l	MS Result mg/l	MSD Result mg/l	MS Rec. %	MSD Rec. %	Dilution	Rec. Limits %	MS Qualifier	MSD Qualifier	RPD %	RPD Limits %
Arsenic	0.100	0.00126	0.0982	0.0969	96.9	95.7	1	70.0-130			1.25	20
Beryllium	0.100	U	0.0979	0.0965	97.9	96.5	1	70.0-130			1.45	20
Cobalt	0.100	0.000213	0.0996	0.0988	99.4	98.6	1	70.0-130			0.823	20
Copper	0.100	U	0.101	0.100	101	100	1	70.0-130			0.503	20
Iron	1.00	0.538	1.51	1.47	97.0	93.5	1	70.0-130			2.37	20
Magnesium	1.00	3.86	4.82	4.73	96.1	86.6	1	70.0-130			1.99	20
Nickel	0.100	0.00152	0.102	0.0996	100	98.1	1	70.0-130			2.11	20
Thallium	0.100	U	0.0888	0.0907	88.8	90.7	1	70.0-130			2.15	20
Zinc	0.100	U	0.0953	0.0957	95.3	95.7	1	70.0-130			0.385	20

Method Blank (MB)

(MB) R4091976-2 07/09/24 17:32

Analyte	MB Result mg/l	MB Qualifier	MB MDL mg/l	MB RDL mg/l
1,1,1-Trichloroethane	U		0.00335	0.00500
1,1,2,2-Tetrachloroethane	U		0.000596	0.00500
1,1,2-Trichloroethane	U		0.00145	0.00500
1,1-Dichloroethene	U		0.00367	0.00500
1,1-Dichloroethane	U		0.00292	0.00500
1,2-Dibromoethane	U		0.000549	0.00200
1,2-Dichlorobenzene	U		0.00172	0.00200
1,2-Dichloroethane	U		0.00195	0.00500
1,2-Dichloropropane	U		0.000804	0.00200
1,3-Dichlorobenzene	U		0.00419	0.00500
1,4-Dichlorobenzene	U		0.00173	0.00200
2-Butanone (MEK)	U		0.00822	0.0250
2-Chloroethyl vinyl ether	U		0.00652	0.0100
Acrolein	U		0.00544	0.0100
Acrylonitrile	U		0.00709	0.0100
Benzene	U		0.00207	0.00500
Bromodichloromethane	U		0.00179	0.00200
Bromoform	U		0.000960	0.0100
Bromomethane	U		0.00347	0.00500
Carbon tetrachloride	U		0.00159	0.00200
Chlorobenzene	U		0.00276	0.0100
Chloroethane	U		0.00296	0.00500
Chloroform	U		0.00212	0.00500
Chloromethane	U		0.00361	0.00500
cis-1,3-Dichloropropene	U		0.00492	0.0100
Dibromochloromethane	U		0.00327	0.00500
Ethylbenzene	U		0.000401	0.00200
Methylene Chloride	U		0.0118	0.0200
Tetrachloroethene	U		0.00486	0.0100
Toluene	0.00317	J	0.00219	0.00500
trans-1,2-Dichloroethene	U		0.00501	0.0100
Trichloroethene	U		0.00262	0.00500
Vinyl chloride	U		0.00466	0.00500
(S) 1,2-Dichloroethane-d4	*93.5*			*70.0-130*
(S) 4-Bromofluorobenzene	*99.6*			*70.0-130*
(S) Toluene-d8	*97.4*			*70.0-130*

Laboratory Control Sample (LCS)

(LCS) R4091976-1 07/09/24 16:24

Analyte	Spike Amount mg/l	LCS Result mg/l	LCS Rec. %	Rec. Limits %	LCS Qualifier
1,1,1-Trichloroethane	0.0200	0.0201	101	70.0-130	
1,1,2,2-Tetrachloroethane	0.0200	0.0185	92.5	60.0-140	
1,1,2-Trichloroethane	0.0200	0.0190	95.0	70.0-130	
1,1-Dichloroethene	0.0200	0.0195	97.5	50.0-150	
1,1-Dichloroethane	0.0200	0.0203	102	70.0-130	
1,2-Dibromoethane	0.0200	0.0186	93.0	70.0-130	
1,2-Dichlorobenzene	0.0200	0.0203	102	65.0-135	
1,2-Dichloroethane	0.0200	0.0202	101	70.0-130	
1,2-Dichloropropane	0.0200	0.0181	90.5	35.0-165	
1,3-Dichlorobenzene	0.0200	0.0195	97.5	70.0-130	
1,4-Dichlorobenzene	0.0200	0.0192	96.0	65.0-135	
2-Butanone (MEK)	0.100	0.0829	82.9	70.0-130	
2-Chloroethyl vinyl ether	0.100	0.0529	52.9	1.00-225	
Acrolein	0.100	0.105	105	64.0-139	
Acrylonitrile	0.100	0.104	104	67.0-136	
Benzene	0.0200	0.0197	98.5	65.0-135	
Bromodichloromethane	0.0200	0.0203	102	65.0-135	
Bromoform	0.0200	0.0233	117	70.0-130	
Bromomethane	0.0200	0.0329	165	15.0-185	
Carbon tetrachloride	0.0200	0.0216	108	70.0-130	
Chlorobenzene	0.0200	0.0196	98.0	65.0-135	
Chloroethane	0.0200	0.0214	107	40.0-160	
Chloroform	0.0200	0.0207	104	70.0-135	
Chloromethane	0.0200	0.0159	79.5	1.00-205	
cis-1,3-Dichloropropene	0.0200	0.0177	88.5	25.0-175	
Dibromochloromethane	0.0200	0.0202	101	70.0-135	
Ethylbenzene	0.0200	0.0197	98.5	60.0-140	
Methylene Chloride	0.0200	0.0221	111	60.0-140	
Tetrachloroethene	0.0200	0.0181	90.5	70.0-130	
Toluene	0.0200	0.0196	98.0	70.0-130	
trans-1,2-Dichloroethene	0.0200	0.0206	103	70.0-130	
Trichloroethene	0.0200	0.0201	101	65.0-135	
Vinyl chloride	0.0200	0.0208	104	5.00-195	
(S) 1,2-Dichloroethane-d4			*95.4*	*70.0-130*	
(S) 4-Bromofluorobenzene			*91.3*	*70.0-130*	
(S) Toluene-d8			*99.6*	*70.0-130*	

L1754191-01 Original Sample (OS) • Matrix Spike (MS) • Matrix Spike Duplicate (MSD)

(OS) L1754191-01 07/09/24 18:02 • (MS) R4091976-3 07/09/24 18:26 • (MSD) R4091976-4 07/09/24 18:51

Analyte	Spike Amount mg/l	Original Result mg/l	MS Result mg/l	MSD Result mg/l	MS Rec. %	MSD Rec. %	Dilution	Rec. Limits %	MS Qualifier	MSD Qualifier	RPD %	RPD Limits %
1,1,1-Trichloroethane	0.0199	U	0.0200	0.0203	101	102	1	52.0-162			1.49	36
1,1,2,2-Tetrachloroethane	0.0201	U	0.0183	0.0188	91.0	93.5	1	46.0-157			2.70	61
1,1,2-Trichloroethane	0.0199	U	0.0194	0.0193	97.5	97.0	1	52.0-150			0.517	45
1,1-Dichloroethene	0.0200	U	0.0203	0.0203	102	102	1	1.00-234			0.000	32
1,1-Dichloroethane	0.0200	U	0.0214	0.0211	107	105	1	59.0-155			1.41	40
1,2-Dibromoethane	0.0200	U	0.0184	0.0187	92.0	93.5	1	70.0-130			1.62	20
1,2-Dichlorobenzene	0.0200	U	0.0212	0.0213	106	106	1	18.0-190			0.471	57
1,2-Dichloroethane	0.0200	U	0.0208	0.0209	104	105	1	49.0-155			0.480	49
1,2-Dichloropropane	0.0199	U	0.0185	0.0185	93.0	93.0	1	1.00-210			0.000	55
1,3-Dichlorobenzene	0.0199	U	0.0203	0.0205	102	103	1	59.0-156			0.980	43
1,4-Dichlorobenzene	0.0200	U	0.0201	0.0201	101	101	1	18.0-190			0.000	57
2-Butanone (MEK)	0.100	U	0.0762	0.0774	76.2	77.4	1	70.0-130			1.56	20
2-Chloroethyl vinyl ether	0.100	U	U	U	0.000	0.000	1	1.00-305	J6	J6	0.000	71
Acrolein	0.100	U	0.0936	0.0921	93.6	92.1	1	4.00-172			1.62	20
Acrylonitrile	0.100	U	0.0986	0.104	98.6	104	1	22.0-189			5.33	20
Benzene	0.0200	U	0.0204	0.0202	102	101	1	37.0-151			0.985	61
Bromodichloromethane	0.0199	U	0.0203	0.0199	102	100	1	35.0-155			1.99	56
Bromoform	0.0198	U	0.0225	0.0229	114	116	1	70.0-130			1.76	42
Bromomethane	0.0200	U	0.0261	0.0283	131	142	1	15.0-185			8.09	61
Carbon tetrachloride	0.0200	U	0.0224	0.0225	112	113	1	70.0-140			0.445	41
Chlorobenzene	0.0200	U	0.0203	0.0205	102	103	1	37.0-160			0.980	53
Chloroethane	0.0200	U	0.0203	0.0198	102	99.0	1	14.0-230			2.49	78
Chloroform	0.0200	U	0.0212	0.0215	106	108	1	51.0-138			1.41	54
Chloromethane	0.0200	U	0.0133	0.0137	66.5	68.5	1	1.00-273			2.96	20
cis-1,3-Dichloropropene	0.0200	U	0.0179	0.0181	89.5	90.5	1	1.00-227			1.11	58
Dibromochloromethane	0.0198	U	0.0204	0.0202	103	102	1	53.0-149			0.985	50
Ethylbenzene	0.0200	U	0.0211	0.0209	105	105	1	37.0-162			0.952	63
Methylene Chloride	0.0204	U	0.0193	0.0198	94.6	97.1	1	1.00-221	J	J	2.56	28
Tetrachloroethene	0.0200	U	0.0194	0.0193	97.0	96.5	1	64.0-148			0.517	39
Toluene	0.0200	U	0.0208	0.0206	104	103	1	47.0-150			0.966	41
trans-1,2-Dichloroethene	0.0200	U	0.0213	0.0213	106	106	1	54.0-156			0.000	45
Trichloroethene	0.0200	U	0.0215	0.0213	108	106	1	70.0-157			0.935	48
Vinyl chloride	0.0200	U	0.0189	0.0187	94.5	93.5	1	1.00-251			1.06	66
(S) 1,2-Dichloroethane-d4					*97.2*	*97.9*		*70.0-130*				
(S) 4-Bromofluorobenzene					*90.3*	*91.8*		*70.0-130*				
(S) Toluene-d8					*101*	*100*		*70.0-130*				

Method Blank (MB)

(MB) R4093629-1 07/14/24 04:29

Analyte	MB Result mg/l	MB Qualifier	MB MDL mg/l	MB RDL mg/l
PCB 1016	U		0.000270	0.000500
PCB 1221	U		0.000270	0.000500
PCB 1232	U		0.000270	0.000500
PCB 1242	U		0.000270	0.000500
PCB 1248	U		0.000173	0.000500
PCB 1254	U		0.000173	0.000500
PCB 1260	U		0.000173	0.000500
Total PCBs	U		0.000173	0.000500
(S) Decachlorobiphenyl	*40.9*			*10.0-144*
(S) Tetrachloro-m-xylene	*77.2*			*10.0-135*

Laboratory Control Sample (LCS)

(LCS) R4093629-5 07/14/24 04:50

Analyte	Spike Amount mg/l	LCS Result mg/l	LCS Rec. %	Rec. Limits %	LCS Qualifier
PCB 1016	0.00250	0.00226	90.4	50.0-140	
PCB 1260	0.00250	0.00211	84.4	8.00-140	
(S) Decachlorobiphenyl			*69.4*	*10.0-144*	
(S) Tetrachloro-m-xylene			*79.7*	*10.0-135*	

L1754575-01 Original Sample (OS) • Matrix Spike (MS) • Matrix Spike Duplicate (MSD)

(OS) L1754575-01 07/14/24 06:36 • (MS) R4093629-6 07/14/24 07:08 • (MSD) R4093629-7 07/14/24 07:20

Analyte	Spike Amount mg/l	Original Result mg/l	MS Result mg/l	MSD Result mg/l	MS Rec. %	MSD Rec. %	Dilution	Rec. Limits %	MS Qualifier	MSD Qualifier	RPD %	RPD Limits %
PCB 1016	0.00250	U	0.00210	0.00204	84.0	81.6	1	50.0-140			2.90	36
PCB 1260	0.00250	U	0.00139	0.00146	55.6	58.4	1	8.00-140			4.91	38
(S) Decachlorobiphenyl					*39.5*	*42.5*		*10.0-144*				
(S) Tetrachloro-m-xylene					*69.7*	*70.6*		*10.0-135*				

Method Blank (MB)

(MB) R4093641-1 07/13/24 14:45

Analyte	MB Result mg/l	MB Qualifier	MB MDL mg/l	MB RDL mg/l
1,2,4,5-Tetrachlorobenzene	U		0.000200	0.00200
2,4,6-Trichlorophenol	U		0.000238	0.00200
2,4-Dichlorophenol	U		0.000336	0.00400
2,4-Dimethylphenol	U		0.000613	0.00200
2,4-Dinitrophenol	U		0.00154	0.0100
2-Chlorophenol	U		0.000307	0.00200
2-Methylphenol	U		0.000238	0.00200
2-Nitrophenol	U		0.000247	0.00200
3&4-Methyl Phenol	U		0.000238	0.00200
3,3-Dichlorobenzidine	U		0.000788	0.00400
4,6-Dinitro-2-methylphenol	U		0.00202	0.0100
4-Chloro-3-methylphenol	U		0.000217	0.00200
4-Nitrophenol	U		0.00123	0.0100
Anthracene	U		0.000168	0.00200
Benzidine	U		0.000350	0.00400
Benzo(a)anthracene	U		0.000307	0.00200
Benzo(a)pyrene	U		0.000470	0.00200
Bis(2-chloroethyl)ether	U		0.000168	0.00200
Bis(2-Ethylhexyl)phthalate	U		0.00180	0.00200
Chrysene	U		0.000257	0.00200
Di-n-butyl phthalate	U		0.00160	0.00200
Hexachloro-1,3-butadiene	U		0.000217	0.00200
Hexachlorobenzene	U		0.000307	0.00200
Hexachlorocyclopentadiene	U		0.000299	0.00200
Hexachloroethane	U		0.000247	0.00200
n-Nitrosodi-n-butylamine	U		0.00110	0.00200
n-Nitrosodiethylamine	U		0.000696	0.00200
Nitrobenzene	U		0.000314	0.00200
Nonylphenol	U		0.000168	0.00200
Pentachlorobenzene	U		0.000247	0.00200
Pentachlorophenol	U		0.000283	0.00200
Phenanthrene	U		0.000200	0.00200
Phenol	U		0.000500	0.00200
Pyridine	U		0.00174	0.00400
Total Cresols	U		0.00153	0.00800
(S) 2,4,6-Tribromophenol	*55.0*			*29.0-132*
(S) 2-Fluorobiphenyl	*81.5*			*26.0-102*
(S) 2-Fluorophenol	*72.5*	J1		*10.0-66.0*
(S) Nitrobenzene-d5	*82.5*			*15.0-106*
(S) p-Terphenyl-d14	*95.0*			*10.0-120*

Method Blank (MB)

(MB) R4093641-1 07/13/24 14:45

Analyte	MB Result mg/l	MB Qualifier	MB MDL mg/l	MB RDL mg/l
(S) Phenol-d6	*69.0*	J1		*10.0-54.0*

Laboratory Control Sample (LCS)

(LCS) R4093641-2 07/13/24 15:15

Analyte	Spike Amount mg/l	LCS Result mg/l	LCS Rec. %	Rec. Limits %	LCS Qualifier
1,2,4,5-Tetrachlorobenzene	0.200	0.141	70.5	31.0-120	
2,4,6-Trichlorophenol	0.200	0.175	87.5	37.0-144	
2,4-Dichlorophenol	0.200	0.168	84.0	39.0-135	
2,4-Dimethylphenol	0.200	0.171	85.5	32.0-120	
2,4-Dinitrophenol	0.200	0.123	61.5	1.00-191	
2-Chlorophenol	0.200	0.172	86.0	23.0-134	
2-Methylphenol	0.200	0.179	89.5	26.0-120	
2-Nitrophenol	0.200	0.160	80.0	29.0-182	
3&4-Methyl Phenol	0.200	0.169	84.5	27.0-120	
3,3-Dichlorobenzidine	0.400	0.401	100	1.00-262	
4,6-Dinitro-2-methylphenol	0.200	0.152	76.0	1.00-181	
4-Chloro-3-methylphenol	0.200	0.170	85.0	22.0-147	
4-Nitrophenol	0.200	0.121	60.5	1.00-132	
Anthracene	0.200	0.184	92.0	27.0-133	
Benzidine	0.400	0.125	31.3	1.00-120	
Benzo(a)anthracene	0.200	0.189	94.5	33.0-143	
Benzo(a)pyrene	0.200	0.200	100	17.0-163	
Bis(2-chloroethyl)ether	0.200	0.163	81.5	33.0-185	
Bis(2-Ethylhexyl)phthalate	0.200	0.213	106	8.00-158	
Chrysene	0.200	0.178	89.0	17.0-168	
Di-n-butyl phthalate	0.200	0.196	98.0	1.00-120	
Hexachloro-1,3-butadiene	0.200	0.128	64.0	24.0-120	
Hexachlorobenzene	0.200	0.150	75.0	1.00-152	
Hexachlorocyclopentadiene	0.200	0.120	60.0	10.0-120	
Hexachloroethane	0.200	0.142	71.0	40.0-120	
n-Nitrosodi-n-butylamine	0.200	0.174	87.0	39.0-127	
n-Nitrosodiethylamine	0.200	0.182	91.0	10.0-142	
Nitrobenzene	0.200	0.169	84.5	35.0-180	
Nonylphenol	0.200	0.189	94.5	57.0-136	
Pentachlorobenzene	0.200	0.138	69.0	10.0-151	
Pentachlorophenol	0.200	0.163	81.5	14.0-176	
Phenanthrene	0.200	0.173	86.5	54.0-120	

Laboratory Control Sample (LCS)

(LCS) R4093641-2 07/13/24 15:15

Analyte	Spike Amount mg/l	LCS Result mg/l	LCS Rec. %	Rec. Limits %	LCS Qualifier
Phenol	0.200	0.137	68.5	5.00-120	
Pyridine	0.200	0.0338	16.9	10.0-120	
Total Cresols	0.400	0.348	87.0	36.0-110	
(S) 2,4,6-Tribromophenol			*67.5*	*29.0-132*	
(S) 2-Fluorobiphenyl			*81.5*	*26.0-102*	
(S) 2-Fluorophenol			*75.5*	*10.0-66.0*	J1
(S) Nitrobenzene-d5			*81.5*	*15.0-106*	
(S) p-Terphenyl-d14			*92.0*	*10.0-120*	
(S) Phenol-d6			*73.5*	*10.0-54.0*	J1

GLOSSARY OF TERMS

Guide to Reading and Understanding Your Laboratory Report

The information below is designed to better explain the various terms used in your report of analytical results from the Laboratory. This is not intended as a comprehensive explanation, and if you have additional questions please contact your project representative.

Results Disclaimer - Information that may be provided by the customer, and contained within this report, include Permit Limits, Project Name, Sample ID, Sample Matrix, Sample Preservation, Field Blanks, Field Spikes, Field Duplicates, On-Site Data, Sampling Collection Dates/Times, and Sampling Location. Results relate to the accuracy of this information provided, and as the samples are received.

Abbreviations and Definitions

MDL	Method Detection Limit.
RDL	Reported Detection Limit.
Rec.	Recovery.
RPD	Relative Percent Difference.
SDG	Sample Delivery Group.
(S)	Surrogate (Surrogate Standard) - Analytes added to every blank, sample, Laboratory Control Sample/Duplicate and Matrix Spike/Duplicate; used to evaluate analytical efficiency by measuring recovery. Surrogates are not expected to be detected in all environmental media.
U	Not detected at the Reporting Limit (or MDL where applicable).
Analyte	The name of the particular compound or analysis performed. Some Analyses and Methods will have multiple analytes reported.
Dilution	If the sample matrix contains an interfering material, the sample preparation volume or weight values differ from the standard, or if concentrations of analytes in the sample are higher than the highest limit of concentration that the laboratory can accurately report, the sample may be diluted for analysis. If a value different than 1 is used in this field, the result reported has already been corrected for this factor.
Limits	These are the target % recovery ranges or % difference value that the laboratory has historically determined as normal for the method and analyte being reported. Successful QC Sample analysis will target all analytes recovered or duplicated within these ranges.
Original Sample	The non-spiked sample in the prep batch used to determine the Relative Percent Difference (RPD) from a quality control sample. The Original Sample may not be included within the reported SDG.
Qualifier	This column provides a letter and/or number designation that corresponds to additional information concerning the result reported. If a Qualifier is present, a definition per Qualifier is provided within the Glossary and Definitions page and potentially a discussion of possible implications of the Qualifier in the Case Narrative if applicable.
Result	The actual analytical final result (corrected for any sample specific characteristics) reported for your sample. If there was no measurable result returned for a specific analyte, the result in this column may state "ND" (Not Detected) or "BDL" (Below Detectable Levels). The information in the results column should always be accompanied by either an MDL (Method Detection Limit) or RDL (Reporting Detection Limit) that defines the lowest value that the laboratory could detect or report for this analyte.
Uncertainty (Radiochemistry)	Confidence level of 2 sigma.
Case Narrative (Cn)	A brief discussion about the included sample results, including a discussion of any non-conformances to protocol observed either at sample receipt by the laboratory from the field or during the analytical process. If present, there will be a section in the Case Narrative to discuss the meaning of any data qualifiers used in the report.
Quality Control Summary (Qc)	This section of the report includes the results of the laboratory quality control analyses required by procedure or analytical methods to assist in evaluating the validity of the results reported for your samples. These analyses are not being performed on your samples typically, but on laboratory generated material.
Sample Chain of Custody (Sc)	This is the document created in the field when your samples were initially collected. This is used to verify the time and date of collection, the person collecting the samples, and the analyses that the laboratory is requested to perform. This chain of custody also documents all persons (excluding commercial shippers) that have had control or possession of the samples from the time of collection until delivery to the laboratory for analysis.
Sample Results (Sr)	This section of your report will provide the results of all testing performed on your samples. These results are provided by sample ID and are separated by the analyses performed on each sample. The header line of each analysis section for each sample will provide the name and method number for the analysis reported.
Sample Summary (Ss)	This section of the Analytical Report defines the specific analyses performed for each sample ID, including the dates and times of preparation and/or analysis.

Qualifier	Description
B	The same analyte is found in the associated blank.
J	The identification of the analyte is acceptable; the reported value is an estimate.
J1	Surrogate recovery limits have been exceeded; values are outside upper control limits.
J5	The sample matrix interfered with the ability to make any accurate determination; spike value is high.
J6	The sample matrix interfered with the ability to make any accurate determination; spike value is low.
P1	RPD value not applicable for sample concentrations less than 5 times the reporting limit.
Q	Sample was prepared and/or analyzed past holding time as defined in the method. Concentrations should be considered minimum values.
T8	Sample(s) received past/too close to holding time expiration.
V	The sample concentration is too high to evaluate accurate spike recoveries.

ACCREDITATIONS & LOCATIONS

Pace Analytical National 12065 Lebanon Rd Mount Juliet, TN 37122

Alabama	40660	Nebraska	NE-OS-15-05
Alaska	17-026	Nevada	TN000032021-1
Arizona	AZ0612	New Hampshire	2975
Arkansas	88-0469	New Jersey–NELAP	TN002
California	2932	New Mexico [1]	TN00003
Colorado	TN00003	New York	11742
Connecticut	PH-0197	North Carolina	Env375
Florida	E87487	North Carolina [1]	DW21704
Georgia	NELAP	North Carolina [3]	41
Georgia [1]	923	North Dakota	R-140
Idaho	TN00003	Ohio–VAP	CL0069
Illinois	200008	Oklahoma	9915
Indiana	C-TN-01	Oregon	TN200002
Iowa	364	Pennsylvania	68-02979
Kansas	E-10277	Rhode Island	LA000356
Kentucky [1 6]	KY90010	South Carolina	84004002
Kentucky [2]	16	South Dakota	n/a
Louisiana	AI30792	Tennessee [1 4]	2006
Louisiana	LA018	Texas	T104704245-20-18
Maine	TN00003	Texas [5]	LAB0152
Maryland	324	Utah	TN000032021-11
Massachusetts	M-TN003	Vermont	VT2006
Michigan	9958	Virginia	110033
Minnesota	047-999-395	Washington	C847
Mississippi	TN00003	West Virginia	233
Missouri	340	Wisconsin	998093910
Montana	CERT0086	Wyoming	A2LA
A2LA – ISO 17025	1461.01	AIHA-LAP,LLC EMLAP	100789
A2LA – ISO 17025 [5]	1461.02	DOD	1461.01
Canada	1461.01	USDA	P330-15-00234
EPA–Crypto	TN00003		

Pace Analytical Services, LLC -Dallas 400 W. Bethany Drive Suite 190 Allen, TX 75013

Arkansas	88-0647	Kansas	E10388
Florida	E871118	Texas	T104704232-23-39
Iowa	408	Oklahoma	8727
Louisiana	30686		

[1] Drinking Water [2] Underground Storage Tanks [3] Aquatic Toxicity [4] Chemical/Microbiological [5] Mold [6] Wastewater n/a Accreditation not applicable

* Not all certifications held by the laboratory are applicable to the results reported in the attached report.

* Accreditation is only applicable to the test methods specified on each scope of accreditation held by Pace Analytical.

Pace Analytical®

CHAIN-OF-CUSTODY Analytical Request Document

Chain-of-Custody is a LEGAL DOCUMENT - Complete all relevent fields

LAB USE ONLY- Affix Workorder/Login Label Here or List Pace Workorder Number or MTJL Log-in Number Here

ALL SHADED AREAS are for LAB USE ONLY

Company: GPL

Address: 13835 CR 489

Billing Information:

Report To:

Email To:

Copy To:

Site Collection Info/Address:

Customer Project Name/Number:

State: / County/City: Time Zone Collected: [ ] PT [ ] MT [ ] CT [ ] ET

Container Preservative Type **

Lab Project Manager:

** Preservative Types: (1) nitric acid, (2) sulfuric acid, (3) hydrochloric acid, (4) sodium hydroxide, (5) zinc acetate, (6) methanol, (7) sodium bisulfate, (8) sodium thiosulfate, (9) hexane, (A) ascorbic acid, (B) ammonium sulfate, (C) ammonium hydroxide, (D) TSP, (U) Unpreserved, (O) Other ______

Analyses: See Attached

Lab Profile/Line:

Phone:
Email:

Site/Facility ID #:

Compliance Monitoring? [ ] Yes [ ] No

Collected By (print):

Purchase Order #:
Quote #:

DW PWS ID #:
DW Location Code:

Collected By (signature):

Turnaround Date Required:

Immediately Packed on Ice: [ ] Yes [ ] No

Sample Disposal:
[ ] Dispose as appropriate [ ] Return
[ ] Archive: ______
[ ] Hold: ______

Rush:
[ ] Same Day [ ] Next Day
[ ] 2 Day [ ] 3 Day [ ] 4 Day [ ] 5 Day
(Expedite Charges Apply)

Field Filtered (if applicable): [ ] Yes [ ] No

Analysis: ______

Lab Sample Receipt Checklist:

Custody Seals Present/Intact	Y N NA
Custody Signatures Present	Y N NA
Collector Signature Present	Y N NA
Bottles Intact	Y N NA
Correct Bottles	Y N NA
Sufficient Volume	Y N NA
Samples Received on Ice	Y N NA
VOA - Headspace Acceptable	Y N NA
USDA Regulated Soils	Y N NA
Samples in Holding Time	Y N NA
Residual Chlorine Present	Y N NA
Cl Strips: ______	
Sample pH Acceptable	Y N NA
pH Strips: ______	
Sulfide Present	Y N NA
Lead Acetate Strips: ______	

* Matrix Codes (Insert in Matrix box below): Drinking Water (DW), Ground Water (GW), Wastewater (WW), Product (P), Soil/Solid (SL), Oil (OL), Wipe (WP), Air (AR), Tissue (TS), Bioassay (B), Vapor (V), Other (OT)

Customer Sample ID	Matrix *	Comp / Grab	Collected (or Composite Start) Date	Collected (or Composite Start) Time	Composite End Date	Composite End Time	Res Cl	# of Ctns	Analyses	LAB USE ONLY: Lab Sample # / Comments:
Outfall 001	WW	G			7/6/24	2307		4	X	L1754191-01

Customer Remarks / Special Conditions / Possible Hazards:

EDAT 1.2+0.3=1.5

Type of Ice Used: Wet Blue Dry None

Packing Material Used:

Radchem sample(s) screened (<500 cpm): Y N NA

SHORT HOLDS PRESENT (<72 hours): Y N N/A

Lab Tracking #: 2893516

Samples received via: FEDEX UPS Client Courier Pace Courier

Lab Sample Temperature Info:
Temp Blank Received: Y N NA
Therm ID#: ______
Cooler 1 Temp Upon Receipt: ____oC
Cooler 1 Therm Corr. Factor: ____oC
Cooler 1 Corrected Temp: ____oC
Comments:

Relinquished by/Company: (Signature)	Date/Time:	Received by/Company: (Signature)	Date/Time:
JMcCain	7/8/24 0951	[signature] 7/8/24 0951	
[signature] Pace	7/9/24 1700	FedEx 7/9/24 1700	
FedEx		[signature]	7-10-24 0900

MTJL LAB USE ONLY
Table #:
Acctnum:
Template:
Prelogin:
PM:

Trip Blank Received: Y N NA
HCL MeOH TSP Other

Non Conformance(s): Page: ______

Pace ANALYTICAL SERVICES	DC#_Title: ENV-FRM-ALLE-0017 v15_Sample Condition Upon Receipt
	Effective Date: 12/18/2023

Sample Condition Upon Receipt

☐Dallas ☐Ft Worth ☐Corpus Christi ☐Austin

Client Name: GPL Project Work order (place label):

Courier: FedEX ☐ UPS ☐ USPS ☐ Client ☑ LSO ☐ PACE ☐ Other: _____

Tracking #: _____

Custody Seal on Cooler/Box: Yes ☐ No ☑

Received on ice: Wet ☐ Blue ☐ No ice ☐

Receiving Lab 1 Thermometer Used: IR18 **Cooler Temp °C:** 6.6 (Recorded) +0.3 (Correction Factor) 6.9 (Actual) — 7.9 / 8.2

Receiving Lab 2 Thermometer Used: _____ **Cooler Temp °C:** _____ (Recorded) _____ (Correction Factor) _____ (Actual)

Chain of Custody relinquished	Yes ☑ No ☐
Sampler name & signature on COC	Yes ☐ No ☑
Short HT analyses (<72 hrs)	Yes ☑ No ☐

Temperature should be above freezing to 6°C unless collected same day as receipt in which evidence of cooling is acceptable.

Triage Person: AR Date: 7/8

Sufficient Volume received	Yes ☑ No ☐
Correct Container used	Yes ☑ No ☐
Container Intact	Yes ☑ No ☐
Sample pH Acceptable pH Strips: 64U2007	Yes ☑ No ☐ NA ☐
Residual Chlorine Present Cl Strips: _____	Yes ☐ No ☐ NA ☑
Sulfide Present Lead Acetate Strips: _____	Yes ☐ No ☐ NA ☑
Are soil samples (volatiles, TPH) received in 5035A Kits (not applicable to TCLP VOA or PST Program TPH)	Yes ☐ No ☐ NA ☑
Unpreserved 5035A soil frozen within 48 hrs	Yes ☐ No ☐ NA ☑
Headspace in VOA (>6mm)	Yes ☐ No ☑ NA ☐
Project sampled in USDA Regulated Area outside of Texas State Sampled: _____	Yes ☐ No ☐ NA ☑
Non-Conformance(s):	Yes ☑ No ☐

Login Person: JW Date: 7/8

Labeling Person (if different than log-in): _____ Date: _____

DAL - L1754191 DSGARLWNTX NCF - JWW 7/9 Shortholds

Time estimate: oh **Time spent:** oh

Members

V Jeremy Watkins (responsible) DPR Dorothy Roberts

- [ ] 1 . If Chain-of-custody (COC) is not received: contact client and if necessary, fill out a COC and indicate that it was filled out by lab personnel. Note issues on this NCF.
- [ ] 2. If COC is incomplete, check applicable issues below and add details where appropiate:
- [ ] *Collection date/time missing or incorrect
- [ ] *Analyses or analytes: missing or Clarification needed
- [ ] *Samples listed on COC do not match samples recieved (missing, additional,etc.)
- [ ] *Sample IDs on COC do not match sample Labels
- [ ] *Required trip blanks were not received
- [ ] *Required signatures are missing
- [x] 3. Sample integrity issues: check applicable issues below and add details where appropriate:
- [x] *Samples: Past holding time
- [ ] *Samples: Not Field Filtered
- [ ] *samples: Insufficent volume received
- [ ] *Samples: Cooler damaged or compromised
- [ ] *Samples: contain Chlorine or Sulfide
- [ ] *Samples: condition needs to be brought to lab personnel's attention (details below)
- [ ] *Containers: Broken or compromised
- [ ] *Containers: Incorrect
- [ ] *Custody Seals: missing or compromised on samples, trip blanks or coolers
- [ ] *Packing Material: Insufficient/Improper
- [x] *Preservation: improper
- [ ] *Temperature:not witin acceptance criteria (typically 0-6C)
- [ ] *Temperature: Samples arrived frozen
- [ ] *Vials received with improper headspace
- [ ] *Other:
- [ ] 4. If Samples not preserved properly and Sample Receiving adjusts pH, add details below:
- [ ] Sample ID:_____
- [ ] Preserved by:_____
- [ ] Date/Time:_____
- [ ] Initial and Final pH:_____
- [ ] Amount/type pres added:_____
- [ ] Lot # of Pres added:_____
- [ ] 5. Client contact: If Client is Contacted for any issue listed above, fill in details below:
- [x] Client:
- [x] PM Initials: DPR
- [x] Contacted per: JMcClain
- [x] Date/Time: 7/9 1051

Comments

Jeremy Watkins *9 July 2024 8:48 AM*

1. MBAS, NITRATE, CR6 all out of hold
2. CN and SULFIDE recieved unpreserved.

Dorothy Roberts *10 July 2024 9:34 AM*

Proceed / may not report if replacements can be collected

also sending replacement bottles to recollect T256352

ANALYTICAL REPORT

July 23, 2024

Garland Power & Light

Sample Delivery Group:	L1754283
Samples Received:	07/08/2024
Project Number:	
Description:	TPDES

Report To: Jeff McClain
13835 County Rd 489
Nevada, TX 75173

Entire Report Reviewed By: Dorothy P Roberts

Dorothy P Roberts
Project Manager

Pace Analytical National
12065 Lebanon Rd Mount Juliet, TN 37122 615-758-5858 800-767-5859 mydata.pacelabs.com

TABLE OF CONTENTS

SAMPLE SUMMARY

OUTFALL 001 L1754283-01 WW

	Collected by	Collected date/time	Received date/time
		07/08/24 12:34	07/08/24 14:30

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst	Location
Calculated Results	WG2321072	1	07/12/24 19:03	07/12/24 19:03	KCM	Allen, TX
Calculated Results	WG2323027	1	07/15/24 20:11	07/15/24 20:11	EIG	Allen, TX
Gravimetric Analysis by Method 2540C	WG2321280	1	07/11/24 13:04	07/11/24 15:55	QQT	Allen, TX
Gravimetric Analysis by Method 2540D	WG2322092	1	07/12/24 15:40	07/12/24 17:30	QQT	Allen, TX
Wet Chemistry by Method 1664A	WG2320716	1	07/12/24 05:40	07/12/24 07:26	TK	Allen, TX
Wet Chemistry by Method 2120B	WG2320288	1	07/10/24 10:40	07/10/24 10:40	EIG	Allen, TX
Wet Chemistry by Method 2320B	WG2320255	1	07/10/24 09:19	07/10/24 09:19	SEN	Allen, TX
Wet Chemistry by Method 300.0	WG2320279	1	07/10/24 23:07	07/10/24 23:07	DLH	Mt. Juliet, TN
Wet Chemistry by Method 3500Cr-B	WG2322157	1	07/12/24 19:03	07/12/24 19:03	KCM	Allen, TX
Wet Chemistry by Method 351.2	WG2323027	1	07/15/24 11:10	07/15/24 20:11	EIG	Allen, TX
Wet Chemistry by Method 353.2	WG2321792	1	07/12/24 12:55	07/12/24 12:55	EIG	Allen, TX
Wet Chemistry by Method 360.1	WG2324067	1	07/16/24 14:05	07/16/24 14:05	JBS	Allen, TX
Wet Chemistry by Method 4500Cl G-2011	WG2322664	1	07/14/24 12:15	07/14/24 12:15	CAH	Mt. Juliet, TN
Wet Chemistry by Method 4500CN-E	WG2321047	1	07/11/24 11:30	07/11/24 16:58	KCM	Allen, TX
Wet Chemistry by Method 4500CN-G	WG2323646	1	07/16/24 16:14	07/16/24 16:14	KCM	Allen, TX
Wet Chemistry by Method 4500P-E	WG2320999	1	07/11/24 14:26	07/11/24 14:26	SMC	Allen, TX
Wet Chemistry by Method 4500-S2 D	WG2319662	1	07/09/24 15:00	07/09/24 15:00	EIG	Allen, TX
Wet Chemistry by Method 4500SO3 B-2011	WG2323050	1	07/15/24 11:20	07/15/24 11:20	JAR	Mt. Juliet, TN
Wet Chemistry by Method 5210 B-2016	WG2319546	1	07/09/24 14:09	07/14/24 13:01	QQT	Allen, TX
Wet Chemistry by Method 5210 B-2016	WG2319551	1	07/09/24 15:54	07/14/24 14:30	SEN	Allen, TX
Wet Chemistry by Method 5220D	WG2323013	1	07/15/24 10:31	07/15/24 13:10	JBS	Allen, TX
Wet Chemistry by Method 5310C	WG2320357	2	07/11/24 21:00	07/11/24 21:00	EIG	Allen, TX
Wet Chemistry by Method 5540C	WG2319936	1	07/09/24 18:54	07/09/24 19:02	EIG	Allen, TX
Wet Chemistry by Method SM 4500-H+B	WG2321035	1	07/11/24 09:01	07/11/24 09:01	JBS	Allen, TX
Wet Chemistry by Method SM4500NH3H	WG2321326	1	07/11/24 16:43	07/11/24 16:43	EIG	Allen, TX
Mercury by Method 245.1	WG2320254	1	07/10/24 09:46	07/10/24 16:09	TDM	Allen, TX
Metals (ICP) by Method 200.7	WG2320626	1	07/10/24 16:30	07/11/24 15:43	TJG	Allen, TX
Metals (ICPMS) by Method 200.8	WG2321072	1	07/11/24 10:47	07/11/24 21:58	NA	Allen, TX
Volatile Organic Compounds (GC/MS) by Method 624.1	WG2319924	1	07/09/24 19:15	07/09/24 19:15	ZST	Allen, TX
Polychlorinated Biphenyls (GC) by Method EPA-608.3	WG2322292	1	07/13/24 19:04	07/14/24 06:24	LJD	Mt. Juliet, TN
Semi Volatile Organic Compounds (GC/MS) by Method 625.1	WG2320434	1	07/10/24 12:55	07/13/24 16:14	XLY	Allen, TX

CASE NARRATIVE

All sample aliquots were received at the correct temperature, in the proper containers, with the appropriate preservatives, and within method specified holding times, unless qualified or notated within the report. Where applicable, all MDL (LOD) and RDL (LOQ) values reported for environmental samples have been corrected for the dilution factor used in the analysis. All Method and Batch Quality Control are within established criteria except where addressed in this case narrative, a non-conformance form or properly qualified within the sample results. By my digital signature below, I affirm to the best of my knowledge, all problems/anomalies observed by the laboratory as having the potential to affect the quality of the data have been identified by the laboratory, and no information or data have been knowingly withheld that would affect the quality of the data.

Dorothy P Roberts
Project Manager

Sample Delivery Group (SDG) Narrative

The following analysis were performed from an unpreserved, insufficiently or inadequately preserved sample.

Lab Sample ID	Project Sample ID	Method
L1754283-01	OUTFALL 001	4500-S2 D, 4500CN-E

The Laboratory is not accredited for specific analytes on the associated Sample/Method. These analytes are flagged in the Sample Results section of the report with an asterisk (*).

Lab Sample ID	Project Sample ID	Method
L1754283-01	OUTFALL 001	300.0

Analysis was filtered in the laboratory.

Lab Sample ID	Project Sample ID	Method
L1754283-01	OUTFALL 001	3500Cr-B

No extra volume received to perform Matrix Spike samples.

Lab Sample ID	Project Sample ID	Method
L1754283-01	OUTFALL 001	625.1

Calculated Results

Analyte	Result mg/l	Qualifier	MDL mg/l	RDL mg/l	Dilution	Analysis date / time	Batch
Chromium,Trivalent	U		0.000510	0.00300	1	07/12/2024 19:03	WG2321072
Organic Nitrogen	0.343		0.0280	0.100	1	07/15/2024 20:11	WG2323027

Gravimetric Analysis by Method 2540C

Analyte	Result mg/l	Qualifier	RDL mg/l	Dilution	Analysis date / time	Batch
Total Dissolved Solids	159		25.0	1	07/11/2024 15:55	WG2321280

Gravimetric Analysis by Method 2540D

Analyte	Result mg/l	Qualifier	RDL mg/l	Dilution	Analysis date / time	Batch
Suspended Solids	6.20		2.93	1	07/12/2024 17:30	WG2322092

Wet Chemistry by Method 1664A

Analyte	Result mg/l	Qualifier	MDL mg/l	RDL mg/l	Dilution	Analysis date / time	Batch
Oil & Grease (Hexane Extr)	U		0.350	5.00	1	07/12/2024 07:26	WG2320716

Wet Chemistry by Method 2120B

Analyte	Result units	Qualifier	RDL units	Dilution	Analysis date / time	Batch
Color	20.0		5.00	1	07/10/2024 10:40	WG2320288

Sample Narrative:

L1754283-01 WG2320288: 7

Wet Chemistry by Method 2320B

Analyte	Result mg/l	Qualifier	MDL mg/l	RDL mg/l	Dilution	Analysis date / time	Batch
Alkalinity	120		20.0	20.0	1	07/10/2024 09:19	WG2320255

Wet Chemistry by Method 300.0

Analyte	Result mg/l	Qualifier	MDL mg/l	RDL mg/l	Dilution	Analysis date / time	Batch
*Bromide	U		0.353	1.00	1	07/10/2024 23:07	WG2320279
Chloride	14.4		0.379	1.00	1	07/10/2024 23:07	WG2320279
Fluoride	0.172		0.0640	0.150	1	07/10/2024 23:07	WG2320279
Nitrate as (N)	U	Q	0.0480	0.100	1	07/10/2024 23:07	WG2320279
Sulfate	23.3		0.594	5.00	1	07/10/2024 23:07	WG2320279

Wet Chemistry by Method 3500Cr-B

Analyte	Result mg/l	Qualifier	MDL mg/l	RDL mg/l	Dilution	Analysis date / time	Batch
Chromium,Hexavalent	U		0.00200	0.00300	1	07/12/2024 19:03	WG2322157

Sample Narrative:

L1754283-01 WG2322157: Sample preserved in lab w/in 24 hrs of collection

Wet Chemistry by Method 351.2

Analyte	Result mg/l	Qualifier	MDL mg/l	RDL mg/l	Dilution	Analysis date / time	Batch
Kjeldahl Nitrogen, TKN	0.343	J5	0.140	0.250	1	07/15/2024 20:11	WG2323027

Wet Chemistry by Method 353.2

Analyte	Result	Qualifier	MDL	RDL	Dilution	Analysis	Batch
	mg/l		mg/l	mg/l		date / time	
Nitrate-Nitrite	U		0.0300	0.0500	1	07/12/2024 12:55	WG2321792

Wet Chemistry by Method 360.1

Analyte	Result	Qualifier	RDL	Dilution	Analysis	Batch
	mg/l		mg/l		date / time	
Dissolved Oxygen	10.2	T8	1	1	07/16/2024 14:05	WG2324067

Wet Chemistry by Method 4500Cl G-2011

Analyte	Result	Qualifier	MDL	RDL	Dilution	Analysis	Batch
	mg/l		mg/l	mg/l		date / time	
Chlorine,residual	0.108	T8	0.0260	0.100	1	07/14/2024 12:15	WG2322664

Wet Chemistry by Method 4500CN-E

Analyte	Result	Qualifier	MDL	RDL	Dilution	Analysis	Batch
	mg/l		mg/l	mg/l		date / time	
Cyanide	U		0.00430	0.0100	1	07/11/2024 16:58	WG2321047

Wet Chemistry by Method 4500CN-G

Analyte	Result	Qualifier	MDL	RDL	Dilution	Analysis	Batch
	mg/l		mg/l	mg/l		date / time	
Cyanide,amenable	U		0.00350	0.0100	1	07/16/2024 16:14	WG2323646

Wet Chemistry by Method 4500P-E

Analyte	Result	Qualifier	MDL	RDL	Dilution	Analysis	Batch
	mg/l		mg/l	mg/l		date / time	
Phosphorus,Total	0.0443	J	0.0152	0.0500	1	07/11/2024 14:26	WG2320999

Wet Chemistry by Method 4500-S2 D

Analyte	Result	Qualifier	MDL	RDL	Dilution	Analysis	Batch
	mg/l		mg/l	mg/l		date / time	
Sulfide	U		0.0230	0.100	1	07/09/2024 15:00	WG2319662

Wet Chemistry by Method 4500SO3 B-2011

Analyte	Result	Qualifier	MDL	RDL	Dilution	Analysis	Batch
	mg/l		mg/l	mg/l		date / time	
Sulfite	U	T8	1.19	3.00	1	07/15/2024 11:20	WG2323050

Wet Chemistry by Method 5210 B-2016

Analyte	Result	Qualifier	RDL	Dilution	Analysis	Batch
	mg/l		mg/l		date / time	
BOD	1.39		1.00	1	07/14/2024 13:01	WG2319546
CBOD	1.44	B1	1.00	1	07/14/2024 14:30	WG2319551

Wet Chemistry by Method 5220D

Analyte	Result	Qualifier	MDL	RDL	Dilution	Analysis	Batch
	mg/l		mg/l	mg/l		date / time	
COD	19.0	J	16.1	35.0	1	07/15/2024 13:10	WG2323013

Wet Chemistry by Method 5310C

Analyte	Result	Qualifier	MDL	RDL	Dilution	Analysis	Batch
	mg/l		mg/l	mg/l		date / time	

Wet Chemistry by Method 5310C

Analyte	Result	Qualifier	MDL	RDL	Dilution	Analysis	Batch
	mg/l		mg/l	mg/l		date / time	
TOC (Total Organic Carbon)	11.2		0.540	1.40	2	07/11/2024 21:00	WG2320357

Wet Chemistry by Method 5540C

Analyte	Result	Qualifier	MDL	RDL	Dilution	Analysis	Batch
	mg/l		mg/l	mg/l		date / time	
MBAS	U	J5	0.360	0.500	1	07/09/2024 19:02	WG2319936

Wet Chemistry by Method SM 4500-H+B

Analyte	Result	Qualifier	Dilution	Analysis	Batch
	su			date / time	
pH	7.83	T8	1	07/11/2024 09:01	WG2321035

Sample Narrative:

L1754283-01 WG2321035: 7.83 at 19.6C

Wet Chemistry by Method SM4500NH3H

Analyte	Result	Qualifier	MDL	RDL	Dilution	Analysis	Batch
	mg/l		mg/l	mg/l		date / time	
Ammonia Nitrogen	U		0.0280	0.100	1	07/11/2024 16:43	WG2321326

Mercury by Method 245.1

Analyte	Result	Qualifier	MDL	RDL	Dilution	Analysis	Batch
	mg/l		mg/l	mg/l		date / time	
Mercury	U		0.0000450	0.000200	1	07/10/2024 16:09	WG2320254

Metals (ICP) by Method 200.7

Analyte	Result	Qualifier	MDL	RDL	Dilution	Analysis	Batch
	mg/l		mg/l	mg/l		date / time	
Boron	0.0759	J	0.0186	0.100	1	07/11/2024 15:43	WG2320626
Tin	U		0.00240	0.0250	1	07/11/2024 15:43	WG2320626
Titanium	U		0.00835	0.100	1	07/11/2024 15:43	WG2320626

Metals (ICPMS) by Method 200.8

Analyte	Result	Qualifier	MDL	RDL	Dilution	Analysis	Batch
	mg/l		mg/l	mg/l		date / time	
Aluminum	0.115		0.00186	0.00250	1	07/11/2024 21:58	WG2321072
Antimony	U		0.000580	0.00500	1	07/11/2024 21:58	WG2321072
Arsenic	0.00518		0.000100	0.000500	1	07/11/2024 21:58	WG2321072
Barium	0.0659		0.000440	0.00300	1	07/11/2024 21:58	WG2321072
Beryllium	U		0.0000600	0.000500	1	07/11/2024 21:58	WG2321072
Cadmium	U		0.000120	0.00100	1	07/11/2024 21:58	WG2321072
Chromium	U		0.000510	0.00300	1	07/11/2024 21:58	WG2321072
Cobalt	0.000199	B J	0.0000400	0.000300	1	07/11/2024 21:58	WG2321072
Copper	0.00609		0.000900	0.00200	1	07/11/2024 21:58	WG2321072
Iron	0.119		0.00432	0.00700	1	07/11/2024 21:58	WG2321072
Lead	U		0.000140	0.000500	1	07/11/2024 21:58	WG2321072
Magnesium	3.78		0.0121	0.0200	1	07/11/2024 21:58	WG2321072
Manganese	0.135		0.000330	0.000500	1	07/11/2024 21:58	WG2321072
Molybdenum	0.00103		0.000530	0.00100	1	07/11/2024 21:58	WG2321072
Nickel	0.00161	J	0.000640	0.00200	1	07/11/2024 21:58	WG2321072
Selenium	U		0.000740	0.00500	1	07/11/2024 21:58	WG2321072
Silver	U		0.0000800	0.000500	1	07/11/2024 21:58	WG2321072
Thallium	U		0.000190	0.000500	1	07/11/2024 21:58	WG2321072

Metals (ICPMS) by Method 200.8

Analyte	Result	Qualifier	MDL	RDL	Dilution	Analysis	Batch
	mg/l		mg/l	mg/l		date / time	
Zinc	U		0.00265	0.00500	1	07/11/2024 21:58	WG2321072

Volatile Organic Compounds (GC/MS) by Method 624.1

Analyte	Result	Qualifier	MDL	RDL	Dilution	Analysis	Batch
	mg/l		mg/l	mg/l		date / time	
1,1,1-Trichloroethane	U		0.00335	0.00500	1	07/09/2024 19:15	WG2319924
1,1,2,2-Tetrachloroethane	U		0.000596	0.00500	1	07/09/2024 19:15	WG2319924
1,1,2-Trichloroethane	U		0.00145	0.00500	1	07/09/2024 19:15	WG2319924
1,1-Dichloroethene	U		0.00367	0.00500	1	07/09/2024 19:15	WG2319924
1,1-Dichloroethane	U		0.00292	0.00500	1	07/09/2024 19:15	WG2319924
1,2-Dibromoethane	U		0.000549	0.00200	1	07/09/2024 19:15	WG2319924
1,2-Dichlorobenzene	U		0.00172	0.00200	1	07/09/2024 19:15	WG2319924
1,2-Dichloroethane	U		0.00195	0.00500	1	07/09/2024 19:15	WG2319924
1,2-Dichloropropane	U		0.000804	0.00200	1	07/09/2024 19:15	WG2319924
1,3-Dichlorobenzene	U		0.00419	0.00500	1	07/09/2024 19:15	WG2319924
1,4-Dichlorobenzene	U		0.00173	0.00200	1	07/09/2024 19:15	WG2319924
2-Butanone (MEK)	U		0.00822	0.0250	1	07/09/2024 19:15	WG2319924
2-Chloroethyl vinyl ether	U		0.00652	0.0100	1	07/09/2024 19:15	WG2319924
Acrolein	U		0.00544	0.0100	1	07/09/2024 19:15	WG2319924
Acrylonitrile	U		0.00709	0.0100	1	07/09/2024 19:15	WG2319924
Benzene	U		0.00207	0.00500	1	07/09/2024 19:15	WG2319924
Bromodichloromethane	U		0.00179	0.00200	1	07/09/2024 19:15	WG2319924
Bromoform	U		0.000960	0.0100	1	07/09/2024 19:15	WG2319924
Bromomethane	U		0.00347	0.00500	1	07/09/2024 19:15	WG2319924
Carbon tetrachloride	U		0.00159	0.00200	1	07/09/2024 19:15	WG2319924
Chlorobenzene	U		0.00276	0.0100	1	07/09/2024 19:15	WG2319924
Chloroethane	U		0.00296	0.00500	1	07/09/2024 19:15	WG2319924
Chloroform	U		0.00212	0.00500	1	07/09/2024 19:15	WG2319924
Chloromethane	U		0.00361	0.00500	1	07/09/2024 19:15	WG2319924
cis-1,3-Dichloropropene	U		0.00492	0.0100	1	07/09/2024 19:15	WG2319924
Dibromochloromethane	U		0.00327	0.00500	1	07/09/2024 19:15	WG2319924
Ethylbenzene	U		0.000401	0.00200	1	07/09/2024 19:15	WG2319924
Methylene Chloride	U		0.0117	0.0200	1	07/09/2024 19:15	WG2319924
Tetrachloroethene	U		0.00486	0.0100	1	07/09/2024 19:15	WG2319924
Toluene	U		0.00219	0.00500	1	07/09/2024 19:15	WG2319924
trans-1,2-Dichloroethene	U		0.00501	0.0100	1	07/09/2024 19:15	WG2319924
Trichloroethene	U		0.00262	0.00500	1	07/09/2024 19:15	WG2319924
Vinyl chloride	U		0.00466	0.00500	1	07/09/2024 19:15	WG2319924
(S) 1,2-Dichloroethane-d4	*93.2*			*70.0-130*		*07/09/2024 19:15*	WG2319924
(S) 4-Bromofluorobenzene	*93.1*			*70.0-130*		*07/09/2024 19:15*	WG2319924
(S) Toluene-d8	*100*			*70.0-130*		*07/09/2024 19:15*	WG2319924

Polychlorinated Biphenyls (GC) by Method EPA-608.3

Analyte	Result	Qualifier	MDL	RDL	Dilution	Analysis	Batch
	mg/l		mg/l	mg/l		date / time	
PCB 1016	U		0.000270	0.000500	1	07/14/2024 06:24	WG2322292
PCB 1221	U		0.000270	0.000500	1	07/14/2024 06:24	WG2322292
PCB 1232	U		0.000270	0.000500	1	07/14/2024 06:24	WG2322292
PCB 1242	U		0.000270	0.000500	1	07/14/2024 06:24	WG2322292
PCB 1248	U		0.000173	0.000500	1	07/14/2024 06:24	WG2322292
PCB 1254	U		0.000173	0.000500	1	07/14/2024 06:24	WG2322292
PCB 1260	U		0.000173	0.000500	1	07/14/2024 06:24	WG2322292
Total PCBs	U		0.000173	0.000500	1	07/14/2024 06:24	WG2322292
(S) Decachlorobiphenyl	*43.0*			*10.0-144*		*07/14/2024 06:24*	WG2322292
(S) Tetrachloro-m-xylene	*71.7*			*10.0-135*		*07/14/2024 06:24*	WG2322292

Semi Volatile Organic Compounds (GC/MS) by Method 625.1

Analyte	Result	Qualifier	MDL	RDL	Dilution	Analysis	Batch
	mg/l		mg/l	mg/l		date / time	
1,2,4,5-Tetrachlorobenzene	U		0.000200	0.00200	1	07/13/2024 16:14	WG2320434
2,4,6-Trichlorophenol	U		0.000238	0.00200	1	07/13/2024 16:14	WG2320434
2,4-Dichlorophenol	U		0.000336	0.00400	1	07/13/2024 16:14	WG2320434
2,4-Dimethylphenol	U		0.000613	0.00200	1	07/13/2024 16:14	WG2320434
2,4-Dinitrophenol	U		0.00154	0.0100	1	07/13/2024 16:14	WG2320434
2-Chlorophenol	U		0.000307	0.00200	1	07/13/2024 16:14	WG2320434
2-Methylphenol	U		0.000238	0.00200	1	07/13/2024 16:14	WG2320434
2-Nitrophenol	U		0.000247	0.00200	1	07/13/2024 16:14	WG2320434
3&4-Methyl Phenol	U		0.000238	0.00200	1	07/13/2024 16:14	WG2320434
3,3-Dichlorobenzidine	U		0.000788	0.00400	1	07/13/2024 16:14	WG2320434
4,6-Dinitro-2-methylphenol	U		0.00202	0.0100	1	07/13/2024 16:14	WG2320434
4-Chloro-3-methylphenol	U		0.000217	0.00200	1	07/13/2024 16:14	WG2320434
4-Nitrophenol	U		0.00123	0.0100	1	07/13/2024 16:14	WG2320434
Anthracene	U		0.000168	0.00200	1	07/13/2024 16:14	WG2320434
Benzidine	U		0.000350	0.00400	1	07/13/2024 16:14	WG2320434
Benzo(a)anthracene	U		0.000307	0.00200	1	07/13/2024 16:14	WG2320434
Benzo(a)pyrene	U		0.000470	0.00200	1	07/13/2024 16:14	WG2320434
Bis(2-chloroethyl)ether	U		0.000168	0.00200	1	07/13/2024 16:14	WG2320434
Bis(2-Ethylhexyl)phthalate	U		0.00180	0.00200	1	07/13/2024 16:14	WG2320434
Chrysene	U		0.000257	0.00200	1	07/13/2024 16:14	WG2320434
Di-n-butyl phthalate	U		0.00160	0.00200	1	07/13/2024 16:14	WG2320434
Hexachloro-1,3-butadiene	U		0.000217	0.00200	1	07/13/2024 16:14	WG2320434
Hexachlorobenzene	U		0.000307	0.00200	1	07/13/2024 16:14	WG2320434
Hexachlorocyclopentadiene	U		0.000299	0.00200	1	07/13/2024 16:14	WG2320434
Hexachloroethane	U		0.000247	0.00200	1	07/13/2024 16:14	WG2320434
n-Nitrosodi-n-butylamine	U		0.00110	0.00200	1	07/13/2024 16:14	WG2320434
n-Nitrosodiethylamine	U		0.000696	0.00200	1	07/13/2024 16:14	WG2320434
Nitrobenzene	U		0.000314	0.00200	1	07/13/2024 16:14	WG2320434
Nonylphenol	U		0.000168	0.00200	1	07/13/2024 16:14	WG2320434
Pentachlorobenzene	U		0.000247	0.00200	1	07/13/2024 16:14	WG2320434
Pentachlorophenol	U		0.000283	0.00200	1	07/13/2024 16:14	WG2320434
Phenanthrene	U		0.000200	0.00200	1	07/13/2024 16:14	WG2320434
Phenol	U		0.000500	0.00200	1	07/13/2024 16:14	WG2320434
Pyridine	U		0.00174	0.00400	1	07/13/2024 16:14	WG2320434
Total Cresols	U		0.00153	0.00800	1	07/13/2024 16:14	WG2320434
(S) 2,4,6-Tribromophenol	*48.6*			*29.0-132*		*07/13/2024 16:14*	WG2320434
(S) 2-Fluorobiphenyl	*74.5*			*26.0-102*		*07/13/2024 16:14*	WG2320434
(S) 2-Fluorophenol	*63.5*			*10.0-66.0*		*07/13/2024 16:14*	WG2320434
(S) Nitrobenzene-d5	*73.5*			*15.0-106*		*07/13/2024 16:14*	WG2320434
(S) p-Terphenyl-d14	*84.5*			*10.0-120*		*07/13/2024 16:14*	WG2320434
(S) Phenol-D6	*56.5*	J1		*10.0-54.0*		*07/13/2024 16:14*	WG2320434

Method Blank (MB)

(MB) R4093133-1 07/11/24 15:55

Analyte	MB Result mg/l	MB Qualifier	MB MDL mg/l	MB RDL mg/l
Total Dissolved Solids	U		25.0	25.0

L1754251-01 Original Sample (OS) • Duplicate (DUP)

(OS) L1754251-01 07/11/24 15:55 • (DUP) R4093133-3 07/11/24 15:55

Analyte	Original Result mg/l	DUP Result mg/l	Dilution	DUP RPD %	DUP Qualifier	DUP RPD Limits %
Total Dissolved Solids	467	416	1	11.6	J3	10

L1754251-03 Original Sample (OS) • Duplicate (DUP)

(OS) L1754251-03 07/11/24 15:55 • (DUP) R4093133-4 07/11/24 15:55

Analyte	Original Result mg/l	DUP Result mg/l	Dilution	DUP RPD %	DUP Qualifier	DUP RPD Limits %
Total Dissolved Solids	450	475	1	5.41		10

Laboratory Control Sample (LCS)

(LCS) R4093133-2 07/11/24 15:55

Analyte	Spike Amount mg/l	LCS Result mg/l	LCS Rec. %	Rec. Limits %	LCS Qualifier
Total Dissolved Solids	2410	2440	101	85.0-115	

Method Blank (MB)

(MB) R4093943-1 07/12/24 17:30

Analyte	MB Result mg/l	MB Qualifier	MB MDL mg/l	MB RDL mg/l
Suspended Solids	U		2.50	2.50

L1754525-04 Original Sample (OS) • Duplicate (DUP)

(OS) L1754525-04 07/12/24 17:30 • (DUP) R4093943-3 07/12/24 17:30

Analyte	Original Result mg/l	DUP Result mg/l	Dilution	DUP RPD %	DUP Qualifier	DUP RPD Limits %
Suspended Solids	15400	15400	1	0.260		10

L1754525-06 Original Sample (OS) • Duplicate (DUP)

(OS) L1754525-06 07/12/24 17:30 • (DUP) R4093943-4 07/12/24 17:30

Analyte	Original Result mg/l	DUP Result mg/l	Dilution	DUP RPD %	DUP Qualifier	DUP RPD Limits %
Suspended Solids	15700	15700	1	0.000		10

Laboratory Control Sample (LCS)

(LCS) R4093943-2 07/12/24 17:30

Analyte	Spike Amount mg/l	LCS Result mg/l	LCS Rec. %	Rec. Limits %	LCS Qualifier
Suspended Solids	879	844	96.0	85.0-115	

Method Blank (MB)

(MB) R4093066-1 07/12/24 07:26

Analyte	MB Result mg/l	MB Qualifier	MB MDL mg/l	MB RDL mg/l
Oil & Grease (Hexane Extr)	U		0.350	5.00

Laboratory Control Sample (LCS) • Laboratory Control Sample Duplicate (LCSD)

(LCS) R4093066-2 07/12/24 07:26 • (LCSD) R4093066-3 07/12/24 07:26

Analyte	Spike Amount mg/l	LCS Result mg/l	LCSD Result mg/l	LCS Rec. %	LCSD Rec. %	Rec. Limits %	LCS Qualifier	LCSD Qualifier	RPD %	RPD Limits %
Oil & Grease (Hexane Extr)	40.0	39.8	37.9	99.5	94.8	78.0-114			4.89	18

L1753717-02 Original Sample (OS) • Matrix Spike (MS)

(OS) L1753717-02 07/12/24 07:26 • (MS) R4093066-4 07/12/24 07:26

Analyte	Spike Amount mg/l	Original Result mg/l	MS Result mg/l	MS Rec. %	Dilution	Rec. Limits %	MS Qualifier
Oil & Grease (Hexane Extr)	40.0	U	39.6	99.0	1	78.0-114	

Method Blank (MB)

(MB) R4092474-1 07/10/24 10:40

Analyte	MB Result units	MB Qualifier	MB MDL units	MB RDL units
Color	U		5.00	5.00

Sample Narrative:

BLANK: 7

L1754283-01 Original Sample (OS) • Duplicate (DUP)

(OS) L1754283-01 07/10/24 10:40 • (DUP) R4092474-2 07/10/24 10:40

Analyte	Original Result units	DUP Result units	Dilution	DUP RPD %	DUP Qualifier	DUP RPD Limits %
Color	20.0	20.0	1	0.000		20

Sample Narrative:

OS: 7

DUP: 7

Method Blank (MB)

(MB) R4091926-1 07/10/24 09:19

Analyte	MB Result mg/l	MB Qualifier	MB MDL mg/l	MB RDL mg/l
Alkalinity	U		20.0	20.0

L1754283-01 Original Sample (OS) • Duplicate (DUP)

(OS) L1754283-01 07/10/24 09:19 • (DUP) R4091926-3 07/10/24 09:19

Analyte	Original Result mg/l	DUP Result mg/l	Dilution	DUP RPD %	DUP Qualifier	DUP RPD Limits %
Alkalinity	120	118	1	2.11		20

Laboratory Control Sample (LCS)

(LCS) R4091926-2 07/10/24 09:19

Analyte	Spike Amount mg/l	LCS Result mg/l	LCS Rec. %	Rec. Limits %	LCS Qualifier
Alkalinity	250	240	96.0	90.0-110	

Method Blank (MB)

(MB) R4092616-3 07/10/24 19:14

Analyte	MB Result mg/l	MB Qualifier	MB MDL mg/l	MB RDL mg/l
Bromide	U		0.353	1.00
Chloride	U		0.379	1.00
Fluoride	U		0.0640	0.150
Nitrate as (N)	U		0.0480	0.100
Sulfate	U		0.594	5.00

L1754251-01 Original Sample (OS) • Duplicate (DUP)

(OS) L1754251-01 07/10/24 21:50 • (DUP) R4092616-5 07/10/24 22:03

Analyte	Original Result mg/l	DUP Result mg/l	Dilution	DUP RPD %	DUP Qualifier	DUP RPD Limits %
Bromide	U	U	1	0.000		15
Chloride	112	112	1	0.610		15
Fluoride	0.393	0.408	1	3.67		15
Nitrate as (N)	0.155	0.244	1	44.5	P1	15
Sulfate	22.2	22.2	1	0.105		15

L1754732-01 Original Sample (OS) • Duplicate (DUP)

(OS) L1754732-01 07/11/24 01:02 • (DUP) R4092616-8 07/11/24 01:15

Analyte	Original Result mg/l	DUP Result mg/l	Dilution	DUP RPD %	DUP Qualifier	DUP RPD Limits %
Bromide	U	U	1	0.000		15
Chloride	2.86	2.84	1	0.806		15
Fluoride	0.653	0.643	1	1.58		15
Nitrate as (N)	0.0661	0.0653	1	1.22	J	15
Sulfate	1.27	1.32	1	3.37	J	15

Laboratory Control Sample (LCS)

(LCS) R4092616-4 07/10/24 19:26

Analyte	Spike Amount mg/l	LCS Result mg/l	LCS Rec. %	Rec. Limits %	LCS Qualifier
Bromide	40.0	40.0	99.9	90.0-110	
Chloride	40.0	39.3	98.3	90.0-110	
Fluoride	8.00	8.20	102	90.0-110	
Nitrate as (N)	8.00	7.87	98.4	90.0-110	

Laboratory Control Sample (LCS)

(LCS) R4092616-4 07/10/24 19:26

Analyte	Spike Amount mg/l	LCS Result mg/l	LCS Rec. %	Rec. Limits %	LCS Qualifier
Sulfate	40.0	39.3	98.1	90.0-110	

L1754251-01 Original Sample (OS) • Matrix Spike (MS) • Matrix Spike Duplicate (MSD)

(OS) L1754251-01 07/10/24 21:50 • (MS) R4092616-6 07/10/24 22:16 • (MSD) R4092616-7 07/10/24 22:29

Analyte	Spike Amount mg/l	Original Result mg/l	MS Result mg/l	MSD Result mg/l	MS Rec. %	MSD Rec. %	Dilution	Rec. Limits %	MS Qualifier	MSD Qualifier	RPD %	RPD Limits %
Bromide	40.0	U	40.4	40.9	101	102	1	80.0-120			1.03	15
Chloride	40.0	112	130	130	45.8	46.8	1	80.0-120	J6	J6	0.313	15
Fluoride	8.00	0.393	9.14	8.41	109	100	1	80.0-120			8.31	15
Nitrate as (N)	8.00	0.155	8.04	8.09	98.5	99.2	1	80.0-120			0.661	15
Sulfate	40.0	22.2	57.6	58.7	88.4	91.3	1	80.0-120			2.00	15

L1754732-01 Original Sample (OS) • Matrix Spike (MS)

(OS) L1754732-01 07/11/24 01:02 • (MS) R4092616-9 07/11/24 01:28

Analyte	Spike Amount mg/l	Original Result mg/l	MS Result mg/l	MS Rec. %	Dilution	Rec. Limits %	MS Qualifier
Bromide	40.0	U	39.7	99.2	1	80.0-120	
Chloride	40.0	2.86	42.2	98.5	1	80.0-120	
Fluoride	8.00	0.653	8.69	100	1	80.0-120	
Nitrate as (N)	8.00	0.0661	8.00	99.2	1	80.0-120	
Sulfate	40.0	1.27	40.3	97.7	1	80.0-120	

Method Blank (MB)

(MB) R4093286-1 07/12/24 19:03

Analyte	MB Result mg/l	MB Qualifier	MB MDL mg/l	MB RDL mg/l
Chromium,Hexavalent	U		0.00200	0.00300

Laboratory Control Sample (LCS)

(LCS) R4093286-2 07/12/24 19:03

Analyte	Spike Amount mg/l	LCS Result mg/l	LCS Rec. %	Rec. Limits %	LCS Qualifier
Chromium,Hexavalent	0.200	0.195	97.7	85.0-115	

L1756127-01 Original Sample (OS) • Matrix Spike (MS) • Matrix Spike Duplicate (MSD)

(OS) L1756127-01 07/12/24 19:03 • (MS) R4093286-3 07/12/24 19:03 • (MSD) R4093286-4 07/12/24 19:03

Analyte	Spike Amount mg/l	Original Result mg/l	MS Result mg/l	MSD Result mg/l	MS Rec. %	MSD Rec. %	Dilution	Rec. Limits %	MS Qualifier	MSD Qualifier	RPD %	RPD Limits %
Chromium,Hexavalent	0.200	U	0.204	0.202	102	101	1	10.0-120			0.842	20

Method Blank (MB)

(MB) R4094061-1 07/15/24 20:06

Analyte	MB Result	MB Qualifier	MB MDL	MB RDL
	mg/l		mg/l	mg/l
Kjeldahl Nitrogen, TKN	U		0.140	0.250

Laboratory Control Sample (LCS)

(LCS) R4094061-2 07/15/24 20:07

Analyte	Spike Amount	LCS Result	LCS Rec.	Rec. Limits	LCS Qualifier
	mg/l	mg/l	%	%	
Kjeldahl Nitrogen, TKN	4.00	4.27	107	90.0-110	

L1754191-01 Original Sample (OS) • Matrix Spike (MS) • Matrix Spike Duplicate (MSD)

(OS) L1754191-01 07/15/24 20:10 • (MS) R4094061-3 07/15/24 20:44 • (MSD) R4094061-4 07/15/24 20:45

Analyte	Spike Amount	Original Result	MS Result	MSD Result	MS Rec.	MSD Rec.	Dilution	Rec. Limits	MS Qualifier	MSD Qualifier	RPD	RPD Limits
	mg/l	mg/l	mg/l	mg/l	%	%		%			%	%
Kjeldahl Nitrogen, TKN	4.00	1.03	5.64	6.51	115	137	1	90.0-110	J5	J5	14.3	20

L1754283-01 Original Sample (OS) • Matrix Spike (MS) • Matrix Spike Duplicate (MSD)

(OS) L1754283-01 07/15/24 20:11 • (MS) R4094061-5 07/15/24 20:46 • (MSD) R4094061-6 07/15/24 20:48

Analyte	Spike Amount	Original Result	MS Result	MSD Result	MS Rec.	MSD Rec.	Dilution	Rec. Limits	MS Qualifier	MSD Qualifier	RPD	RPD Limits
	mg/l	mg/l	mg/l	mg/l	%	%		%			%	%
Kjeldahl Nitrogen, TKN	4.00	0.343	4.88	4.63	113	107	1	90.0-110	J5		5.26	20

Method Blank (MB)

(MB) R4093045-1 07/12/24 12:50

Analyte	MB Result mg/l	MB Qualifier	MB MDL mg/l	MB RDL mg/l
Nitrate-Nitrite	U		0.0300	0.0500

Laboratory Control Sample (LCS)

(LCS) R4093045-2 07/12/24 12:51

Analyte	Spike Amount mg/l	LCS Result mg/l	LCS Rec. %	Rec. Limits %	LCS Qualifier
Nitrate-Nitrite	2.50	2.40	96.0	90.0-110	

L1754182-01 Original Sample (OS) • Matrix Spike (MS) • Matrix Spike Duplicate (MSD)

(OS) L1754182-01 07/12/24 12:51 • (MS) R4093045-3 07/12/24 12:59 • (MSD) R4093045-4 07/12/24 13:00

Analyte	Spike Amount mg/l	Original Result mg/l	MS Result mg/l	MSD Result mg/l	MS Rec. %	MSD Rec. %	Dilution	Rec. Limits %	MS Qualifier	MSD Qualifier	RPD %	RPD Limits %
Nitrate-Nitrite	2.50	0.794	3.13	3.11	93.4	92.6	1	90.0-110			0.641	20

L1756836-01 Original Sample (OS) • Duplicate (DUP)

(OS) L1756836-01 07/16/24 14:05 • (DUP) R4094367-1 07/16/24 14:05

Analyte	Original Result mg/l	DUP Result mg/l	Dilution	DUP RPD %	DUP Qualifier	DUP RPD Limits %
Dissolved Oxygen	7.77	8.25	1	5.99		10

Method Blank (MB)

(MB) R4093561-1 07/14/24 11:59

Analyte	MB Result mg/l	MB Qualifier	MB MDL mg/l	MB RDL mg/l
Chlorine,residual	U		0.0260	0.100

L1754191-01 Original Sample (OS) • Duplicate (DUP)

(OS) L1754191-01 07/14/24 12:14 • (DUP) R4093561-3 07/14/24 12:15

Analyte	Original Result mg/l	DUP Result mg/l	Dilution	DUP RPD %	DUP Qualifier	DUP RPD Limits %
Chlorine,residual	0.0330	0.0340	1	2.99	J	20

Laboratory Control Sample (LCS)

(LCS) R4093561-2 07/14/24 12:13

Analyte	Spike Amount mg/l	LCS Result mg/l	LCS Rec. %	Rec. Limits %	LCS Qualifier
Chlorine,residual	1.00	0.960	96.0	85.0-115	

Method Blank (MB)

(MB) R4092740-1 07/11/24 16:58

Analyte	MB Result mg/l	MB Qualifier	MB MDL mg/l	MB RDL mg/l
Cyanide	U		0.00430	0.0100

Laboratory Control Sample (LCS)

(LCS) R4092740-2 07/11/24 16:58

Analyte	Spike Amount mg/l	LCS Result mg/l	LCS Rec. %	Rec. Limits %	LCS Qualifier
Cyanide	0.100	0.0908	90.8	85.0-115	

L1754359-01 Original Sample (OS) • Matrix Spike (MS) • Matrix Spike Duplicate (MSD)

(OS) L1754359-01 07/11/24 16:58 • (MS) R4092740-3 07/11/24 16:58 • (MSD) R4092740-4 07/11/24 16:58

Analyte	Spike Amount mg/l	Original Result mg/l	MS Result mg/l	MSD Result mg/l	MS Rec. %	MSD Rec. %	Dilution	Rec. Limits %	MS Qualifier	MSD Qualifier	RPD %	RPD Limits %
Cyanide	0.100	U	0.0928	0.0928	92.8	92.8	1	85.0-115			0.000	20

Method Blank (MB)

(MB) R4092631-1 07/11/24 14:26

Analyte	MB Result mg/l	MB Qualifier	MB MDL mg/l	MB RDL mg/l
Phosphorus,Total	U		0.0152	0.0500

Laboratory Control Sample (LCS)

(LCS) R4092631-2 07/11/24 14:26

Analyte	Spike Amount mg/l	LCS Result mg/l	LCS Rec. %	Rec. Limits %	LCS Qualifier
Phosphorus,Total	0.500	0.526	105	80.0-120	

L1754283-01 Original Sample (OS) • Matrix Spike (MS) • Matrix Spike Duplicate (MSD)

(OS) L1754283-01 07/11/24 14:26 • (MS) R4092631-3 07/11/24 14:27 • (MSD) R4092631-4 07/11/24 14:27

Analyte	Spike Amount mg/l	Original Result mg/l	MS Result mg/l	MSD Result mg/l	MS Rec. %	MSD Rec. %	Dilution	Rec. Limits %	MS Qualifier	MSD Qualifier	RPD %	RPD Limits %
Phosphorus,Total	0.500	0.0443	0.569	0.562	105	104	1	80.0-120			1.20	20

Method Blank (MB)

(MB) R4091612-1 07/09/24 15:00

Analyte	MB Result mg/l	MB Qualifier	MB MDL mg/l	MB RDL mg/l
Sulfide	U		0.0230	0.100

Laboratory Control Sample (LCS)

(LCS) R4091612-2 07/09/24 15:00

Analyte	Spike Amount mg/l	LCS Result mg/l	LCS Rec. %	Rec. Limits %	LCS Qualifier
Sulfide	0.800	0.850	106	80.0-120	

L1753522-01 Original Sample (OS) • Matrix Spike (MS) • Matrix Spike Duplicate (MSD)

(OS) L1753522-01 07/09/24 15:00 • (MS) R4091612-3 07/09/24 15:03 • (MSD) R4091612-4 07/09/24 15:03

Analyte	Spike Amount mg/l	Original Result mg/l	MS Result mg/l	MSD Result mg/l	MS Rec. %	MSD Rec. %	Dilution	Rec. Limits %	MS Qualifier	MSD Qualifier	RPD %	RPD Limits %
Sulfide	0.800	U	0.772	0.769	96.5	96.1	1	80.0-120			0.453	20

Method Blank (MB)

(MB) R4093789-1 07/15/24 11:20

Analyte	MB Result mg/l	MB Qualifier	MB MDL mg/l	MB RDL mg/l
Sulfite	U		1.19	3.00

L1754191-01 Original Sample (OS) • Duplicate (DUP)

(OS) L1754191-01 07/15/24 11:20 • (DUP) R4093789-3 07/15/24 11:20

Analyte	Original Result mg/l	DUP Result mg/l	Dilution	DUP RPD %	DUP Qualifier	DUP RPD Limits %
Sulfite	U	U	1	0.000		20

Laboratory Control Sample (LCS)

(LCS) R4093789-2 07/15/24 11:20

Analyte	Spike Amount mg/l	LCS Result mg/l	LCS Rec. %	Rec. Limits %	LCS Qualifier
Sulfite	20.0	18.0	90.0	85.0-115	

L1754283-01 Original Sample (OS) • Matrix Spike (MS) • Matrix Spike Duplicate (MSD)

(OS) L1754283-01 07/15/24 11:20 • (MS) R4093789-4 07/15/24 11:20 • (MSD) R4093789-5 07/15/24 11:20

Analyte	Spike Amount mg/l	Original Result mg/l	MS Result mg/l	MSD Result mg/l	MS Rec. %	MSD Rec. %	Dilution	Rec. Limits %	MS Qualifier	MSD Qualifier	RPD %	RPD Limits %
Sulfite	20.0	U	19.0	18.5	95.0	92.5	1	85.0-115			2.67	20

Method Blank (MB)

(MB) R4093582-1 07/14/24 12:45

Analyte	MB Result mg/l	MB Qualifier	MB MDL mg/l	MB RDL mg/l
BOD	U		0.200	0.200

L1754172-01 Original Sample (OS) • Duplicate (DUP)

(OS) L1754172-01 07/14/24 12:55 • (DUP) R4093582-3 07/14/24 13:42

Analyte	Original Result mg/l	DUP Result mg/l	Dilution	DUP RPD %	DUP Qualifier	DUP RPD Limits %
BOD	3.30	ND	1	200	P1	20

L1754283-01 Original Sample (OS) • Duplicate (DUP)

(OS) L1754283-01 07/14/24 13:01 • (DUP) R4093582-4 07/14/24 13:44

Analyte	Original Result mg/l	DUP Result mg/l	Dilution	DUP RPD %	DUP Qualifier	DUP RPD Limits %
BOD	1.39	1.45	1	4.23		20

Laboratory Control Sample (LCS)

(LCS) R4093582-2 07/14/24 12:52

Analyte	Spike Amount mg/l	LCS Result mg/l	LCS Rec. %	Rec. Limits %	LCS Qualifier
BOD	198	187	94.6	85-115	

Method Blank (MB)

(MB) R4093709-1 07/14/24 14:20

Analyte	MB Result mg/l	MB Qualifier	MB MDL mg/l	MB RDL mg/l
CBOD	0.220	B1	0.200	0.200

L1754373-01 Original Sample (OS) • Duplicate (DUP)

(OS) L1754373-01 07/14/24 14:46 • (DUP) R4093709-3 07/14/24 14:54

Analyte	Original Result mg/l	DUP Result mg/l	Dilution	DUP RPD %	DUP Qualifier	DUP RPD Limits %
CBOD	1.04	7.58	1	200	J3	20

Laboratory Control Sample (LCS)

(LCS) R4093709-2 07/14/24 14:26

Analyte	Spike Amount mg/l	LCS Result mg/l	LCS Rec. %	Rec. Limits %	LCS Qualifier
CBOD	198	183	92.5	85-115	

Method Blank (MB)

(MB) R4093841-1 07/15/24 13:10

Analyte	MB Result mg/l	MB Qualifier	MB MDL mg/l	MB RDL mg/l
COD	U		16.1	35.0

Laboratory Control Sample (LCS)

(LCS) R4093841-2 07/15/24 13:10

Analyte	Spike Amount mg/l	LCS Result mg/l	LCS Rec. %	Rec. Limits %	LCS Qualifier
COD	500	511	102	80.0-120	

L1754283-01 Original Sample (OS) • Matrix Spike (MS) • Matrix Spike Duplicate (MSD)

(OS) L1754283-01 07/15/24 13:10 • (MS) R4093841-3 07/15/24 13:10 • (MSD) R4093841-4 07/15/24 13:10

Analyte	Spike Amount mg/l	Original Result mg/l	MS Result mg/l	MSD Result mg/l	MS Rec. %	MSD Rec. %	Dilution	Rec. Limits %	MS Qualifier	MSD Qualifier	RPD %	RPD Limits %
COD	500	19.0	517	524	99.7	101	1	80.0-120			1.22	20

L1754768-01 Original Sample (OS) • Matrix Spike (MS) • Matrix Spike Duplicate (MSD)

(OS) L1754768-01 07/15/24 13:10 • (MS) R4093841-5 07/15/24 13:10 • (MSD) R4093841-6 07/15/24 13:10

Analyte	Spike Amount mg/l	Original Result mg/l	MS Result mg/l	MSD Result mg/l	MS Rec. %	MSD Rec. %	Dilution	Rec. Limits %	MS Qualifier	MSD Qualifier	RPD %	RPD Limits %
COD	500	67.6	524	526	91.2	91.7	1	80.0-120			0.402	20

Method Blank (MB)

(MB) R4092962-1 07/11/24 16:22

Analyte	MB Result mg/l	MB Qualifier	MB MDL mg/l	MB RDL mg/l
TOC (Total Organic Carbon)	U		0.270	0.700

Laboratory Control Sample (LCS)

(LCS) R4092962-2 07/11/24 16:42

Analyte	Spike Amount mg/l	LCS Result mg/l	LCS Rec. %	Rec. Limits %	LCS Qualifier
TOC (Total Organic Carbon)	10.0	10.4	104	90.0-110	

L1754776-01 Original Sample (OS) • Matrix Spike (MS) • Matrix Spike Duplicate (MSD)

(OS) L1754776-01 07/11/24 17:08 • (MS) R4092962-3 07/11/24 17:54 • (MSD) R4092962-4 07/11/24 18:14

Analyte	Spike Amount mg/l	Original Result mg/l	MS Result mg/l	MSD Result mg/l	MS Rec. %	MSD Rec. %	Dilution	Rec. Limits %	MS Qualifier	MSD Qualifier	RPD %	RPD Limits %
TOC (Total Organic Carbon)	100	30.8	127	127	96.3	96.3	10	80.0-120			0.000	20

Method Blank (MB)

(MB) R4092475-1 07/09/24 19:02

Analyte	MB Result mg/l	MB Qualifier	MB MDL mg/l	MB RDL mg/l
MBAS	U		0.360	0.500

Laboratory Control Sample (LCS)

(LCS) R4092475-2 07/09/24 19:02

Analyte	Spike Amount mg/l	LCS Result mg/l	LCS Rec. %	Rec. Limits %	LCS Qualifier
MBAS	1.00	1.17	117	80.0-120	

L1754283-01 Original Sample (OS) • Matrix Spike (MS) • Matrix Spike Duplicate (MSD)

(OS) L1754283-01 07/09/24 19:02 • (MS) R4092475-3 07/09/24 19:02 • (MSD) R4092475-4 07/09/24 19:02

Analyte	Spike Amount mg/l	Original Result mg/l	MS Result mg/l	MSD Result mg/l	MS Rec. %	MSD Rec. %	Dilution	Rec. Limits %	MS Qualifier	MSD Qualifier	RPD %	RPD Limits %
MBAS	1.00	U	1.20	1.25	120	125	1	80.0-120		J5	3.87	20

L1754340-01 Original Sample (OS) • Duplicate (DUP)

(OS) L1754340-01 07/11/24 09:01 • (DUP) R4092476-2 07/11/24 09:01

Analyte	Original Result	DUP Result	Dilution	DUP RPD	DUP Qualifier	DUP RPD Limits
	su	su		%		%
pH	7.61	7.62	1	0.131		20

Sample Narrative:
OS: 7.61 at 19.6C
DUP: 7.62 at 19.3C

Laboratory Control Sample (LCS)

(LCS) R4092476-1 07/11/24 09:01

Analyte	Spike Amount	LCS Result	LCS Rec.	Rec. Limits	LCS Qualifier
	su	su	%	%	
pH	6.00	5.99	99.8	99.0-101	

Sample Narrative:
LCS: 5.99 at 22C

Method Blank (MB)

(MB) R4092766-1 07/11/24 16:29

Analyte	MB Result mg/l	MB Qualifier	MB MDL mg/l	MB RDL mg/l
Ammonia Nitrogen	0.0285	J	0.0280	0.100

Laboratory Control Sample (LCS)

(LCS) R4092766-2 07/11/24 16:30

Analyte	Spike Amount mg/l	LCS Result mg/l	LCS Rec. %	Rec. Limits %	LCS Qualifier
Ammonia Nitrogen	5.00	5.28	106	80.0-120	

L1754163-02 Original Sample (OS) • Matrix Spike (MS) • Matrix Spike Duplicate (MSD)

(OS) L1754163-02 07/11/24 16:39 • (MS) R4092766-3 07/11/24 16:32 • (MSD) R4092766-4 07/11/24 16:34

Analyte	Spike Amount mg/l	Original Result mg/l	MS Result mg/l	MSD Result mg/l	MS Rec. %	MSD Rec. %	Dilution	Rec. Limits %	MS Qualifier	MSD Qualifier	RPD %	RPD Limits %
Ammonia Nitrogen	5.00	0.369	5.44	5.43	101	101	1	80.0-120			0.184	20

L1754191-01 Original Sample (OS) • Matrix Spike (MS) • Matrix Spike Duplicate (MSD)

(OS) L1754191-01 07/11/24 16:41 • (MS) R4092766-5 07/11/24 16:36 • (MSD) R4092766-6 07/11/24 16:37

Analyte	Spike Amount mg/l	Original Result mg/l	MS Result mg/l	MSD Result mg/l	MS Rec. %	MSD Rec. %	Dilution	Rec. Limits %	MS Qualifier	MSD Qualifier	RPD %	RPD Limits %
Ammonia Nitrogen	5.00	U	5.12	5.15	102	103	1	80.0-120			0.584	20

Method Blank (MB)

(MB) R4092198-3 07/10/24 16:35

Analyte	MB Result mg/l	MB Qualifier	MB MDL mg/l	MB RDL mg/l
Mercury	0.0000450	J	0.0000450	0.000200

Laboratory Control Sample (LCS)

(LCS) R4092198-4 07/10/24 16:37

Analyte	Spike Amount mg/l	LCS Result mg/l	LCS Rec. %	Rec. Limits %	LCS Qualifier
Mercury	0.00250	0.00227	90.8	85.0-115	

L1753552-01 Original Sample (OS) • Matrix Spike (MS) • Matrix Spike Duplicate (MSD)

(OS) L1753552-01 07/10/24 16:40 • (MS) R4092198-5 07/10/24 16:42 • (MSD) R4092198-6 07/10/24 16:44

Analyte	Spike Amount mg/l	Original Result mg/l	MS Result mg/l	MSD Result mg/l	MS Rec. %	MSD Rec. %	Dilution	Rec. Limits %	MS Qualifier	MSD Qualifier	RPD %	RPD Limits %
Mercury	0.00250	0.0000520	0.00170	0.00171	65.9	66.3	1	70.0-130	J6	J6	0.587	20

Method Blank (MB)

(MB) R4092733-2 07/11/24 13:15

Analyte	MB Result mg/l	MB Qualifier	MB MDL mg/l	MB RDL mg/l
Boron	U		0.0186	0.100
Tin	U		0.00240	0.0250
Titanium	U		0.00835	0.100

Laboratory Control Sample (LCS)

(LCS) R4092733-1 07/11/24 13:12

Analyte	Spike Amount mg/l	LCS Result mg/l	LCS Rec. %	Rec. Limits %	LCS Qualifier
Boron	1.00	0.962	96.2	85.0-115	
Tin	1.00	0.999	99.9	85.0-115	
Titanium	1.00	0.996	99.6	85.0-115	

L1754731-01 Original Sample (OS) • Matrix Spike (MS) • Matrix Spike Duplicate (MSD)

(OS) L1754731-01 07/11/24 13:19 • (MS) R4092733-3 07/11/24 13:23 • (MSD) R4092733-4 07/11/24 13:27

Analyte	Spike Amount mg/l	Original Result mg/l	MS Result mg/l	MSD Result mg/l	MS Rec. %	MSD Rec. %	Dilution	Rec. Limits %	MS Qualifier	MSD Qualifier	RPD %	RPD Limits %
Boron	1.00	0.0190	0.980	0.983	96.1	96.4	1	70.0-130			0.357	20
Tin	1.00	0.00833	1.00	1.01	99.2	99.8	1	70.0-130			0.598	20
Titanium	1.00	0.0438	1.04	1.04	99.3	99.6	1	70.0-130			0.289	20

L1754768-01 Original Sample (OS) • Matrix Spike (MS) • Matrix Spike Duplicate (MSD)

(OS) L1754768-01 07/11/24 14:11 • (MS) R4092733-5 07/11/24 14:15 • (MSD) R4092733-6 07/11/24 14:19

Analyte	Spike Amount mg/l	Original Result mg/l	MS Result mg/l	MSD Result mg/l	MS Rec. %	MSD Rec. %	Dilution	Rec. Limits %	MS Qualifier	MSD Qualifier	RPD %	RPD Limits %
Boron	1.00	1.72	2.62	2.65	89.9	93.5	1	70.0-130			1.37	20
Tin	1.00	U	0.947	0.958	94.7	95.8	1	70.0-130			1.11	20
Titanium	1.00	U	0.977	0.995	97.7	99.5	1	70.0-130			1.73	20

Method Blank (MB)

(MB) R4092690-1 07/11/24 15:02

Analyte	MB Result mg/l	MB Qualifier	MB MDL mg/l	MB RDL mg/l
Aluminum	0.00743		0.00186	0.00250
Antimony	U		0.000580	0.00500
Arsenic	0.000222	J	0.000100	0.000500
Barium	U		0.000440	0.00300
Beryllium	0.000152	J	0.0000600	0.000500
Cadmium	U		0.000120	0.00100
Chromium	U		0.000510	0.00300
Cobalt	0.000117	J	0.0000400	0.000300
Copper	U		0.000900	0.00200
Iron	0.00776		0.00432	0.00700
Lead	U		0.000140	0.000500
Magnesium	U		0.0121	0.0200
Manganese	U		0.000330	0.000500
Molybdenum	U		0.000530	0.00100
Nickel	U		0.000640	0.00200
Selenium	U		0.000740	0.00500
Silver	0.0000896	J	0.0000800	0.000500
Thallium	0.000232	J	0.000190	0.000500
Zinc	U		0.00265	0.00500

Laboratory Control Sample (LCS)

(LCS) R4092690-2 07/11/24 15:08

Analyte	Spike Amount mg/l	LCS Result mg/l	LCS Rec. %	Rec. Limits %	LCS Qualifier
Aluminum	1.00	0.969	96.9	85.0-115	
Antimony	0.100	0.0971	97.1	85.0-115	
Arsenic	0.100	0.0983	98.3	85.0-115	
Barium	0.100	0.0963	96.3	85.0-115	
Beryllium	0.100	0.0990	99.0	85.0-115	
Cadmium	0.100	0.0998	99.8	85.0-115	
Chromium	0.100	0.0995	99.5	85.0-115	
Cobalt	0.100	0.0999	99.9	85.0-115	
Copper	0.100	0.101	101	85.0-115	
Iron	1.00	0.971	97.1	85.0-115	
Lead	0.100	0.0951	95.1	85.0-115	
Magnesium	1.00	1.00	100	85.0-115	
Manganese	0.100	0.0981	98.1	85.0-115	
Molybdenum	0.100	0.100	100	85.0-115	

Laboratory Control Sample (LCS)

(LCS) R4092690-2 07/11/24 15:08

Analyte	Spike Amount mg/l	LCS Result mg/l	LCS Rec. %	Rec. Limits %	LCS Qualifier
Nickel	0.100	0.101	101	85.0-115	
Selenium	0.100	0.101	101	85.0-115	
Silver	0.0500	0.0505	101	85.0-115	
Thallium	0.100	0.0900	90.0	85.0-115	
Zinc	0.100	0.0963	96.3	85.0-115	

L1752148-01 Original Sample (OS) • Matrix Spike (MS) • Matrix Spike Duplicate (MSD)

(OS) L1752148-01 07/11/24 15:15 • (MS) R4092690-3 07/11/24 15:21 • (MSD) R4092690-4 07/11/24 15:27

Analyte	Spike Amount mg/l	Original Result mg/l	MS Result mg/l	MSD Result mg/l	MS Rec. %	MSD Rec. %	Dilution	Rec. Limits %	MS Qualifier	MSD Qualifier	RPD %	RPD Limits %
Aluminum	1.00	0.0185	0.981	0.958	96.3	93.9	1	70.0-130			2.39	20
Antimony	0.100	0.000615	0.0978	0.0991	97.2	98.5	1	70.0-130			1.39	20
Arsenic	0.100	0.0149	0.113	0.113	97.7	97.8	1	70.0-130			0.0911	20
Barium	0.100	0.427	0.523	0.529	96.4	102	1	70.0-130			1.08	20
Beryllium	0.100	0.000212	0.0935	0.0912	93.3	91.0	1	70.0-130			2.44	20
Cadmium	0.100	0.000135	0.0926	0.0923	92.5	92.1	1	70.0-130			0.419	20
Chromium	0.100	0.0179	0.114	0.112	96.4	94.1	1	70.0-130			2.02	20
Cobalt	0.100	0.000261	0.0957	0.0961	95.5	95.8	1	70.0-130			0.341	20
Copper	0.100	0.0163	0.110	0.110	93.7	94.2	1	70.0-130			0.435	20
Iron	1.00	0.149	1.08	1.07	92.9	91.9	1	70.0-130			0.897	20
Lead	0.100	0.000194	0.0913	0.0906	91.1	90.4	1	70.0-130			0.834	20
Magnesium	1.00	33.8	35.1	34.4	125	54.6	1	70.0-130		V	2.02	20
Manganese	0.100	0.00562	0.101	0.0990	95.6	93.4	1	70.0-130			2.17	20
Molybdenum	0.100	0.00292	0.103	0.103	99.8	99.8	1	70.0-130			0.0476	20
Nickel	0.100	0.0466	0.140	0.140	93.1	92.9	1	70.0-130			0.152	20
Selenium	0.100	0.0173	0.117	0.115	99.3	98.1	1	70.0-130			0.986	20
Silver	0.0500	0.000107	0.0474	0.0468	94.5	93.4	1	70.0-130			1.17	20
Thallium	0.100	0.000987	0.0860	0.0863	85.0	85.3	1	70.0-130			0.438	20
Zinc	0.100	0.00409	0.0947	0.0940	90.6	89.9	1	70.0-130			0.793	20

L1754390-06 Original Sample (OS) • Matrix Spike (MS) • Matrix Spike Duplicate (MSD)

(OS) L1754390-06 07/11/24 22:48 • (MS) R4092690-5 07/11/24 22:55 • (MSD) R4092690-6 07/11/24 23:01

Analyte	Spike Amount mg/l	Original Result mg/l	MS Result mg/l	MSD Result mg/l	MS Rec. %	MSD Rec. %	Dilution	Rec. Limits %	MS Qualifier	MSD Qualifier	RPD %	RPD Limits %
Antimony	0.100	U	0.0992	0.0970	99.2	97.0	1	70.0-130			2.24	20
Arsenic	0.100	0.000533	0.0977	0.0956	97.1	95.0	1	70.0-130			2.16	20
Barium	0.100	0.0429	0.145	0.143	102	99.8	1	70.0-130			1.67	20

L1754390-06 Original Sample (OS) • Matrix Spike (MS) • Matrix Spike Duplicate (MSD)

(OS) L1754390-06 07/11/24 22:48 • (MS) R4092690-5 07/11/24 22:55 • (MSD) R4092690-6 07/11/24 23:01

Analyte	Spike Amount mg/l	Original Result mg/l	MS Result mg/l	MSD Result mg/l	MS Rec. %	MSD Rec. %	Dilution	Rec. Limits %	MS Qualifier	MSD Qualifier	RPD %	RPD Limits %
Beryllium	0.100	U	0.0938	0.102	93.8	102	1	70.0-130			8.31	20
Cadmium	0.100	0.000379	0.0952	0.0955	94.8	95.1	1	70.0-130			0.298	20
Chromium	0.100	U	0.0948	0.0957	94.8	95.7	1	70.0-130			0.921	20
Cobalt	0.100	0.00123	0.0992	0.0972	98.0	96.0	1	70.0-130			2.07	20
Copper	0.100	0.290	0.419	0.409	129	119	1	70.0-130			2.41	20
Iron	1.00	0.00434	0.930	0.940	92.6	93.5	1	70.0-130			0.996	20
Lead	0.100	0.00217	0.0951	0.0936	92.9	91.4	1	70.0-130			1.60	20
Magnesium	1.00	3.50	4.78	4.77	128	127	1	70.0-130			0.0436	20
Manganese	0.100	0.256	0.374	0.375	118	119	1	70.0-130			0.191	20
Molybdenum	0.100	0.000975	0.102	0.0997	101	98.8	1	70.0-130			2.54	20
Nickel	0.100	0.304	0.439	0.431	135	127	1	70.0-130	J5		1.79	20
Selenium	0.100	U	0.0991	0.104	99.1	104	1	70.0-130			4.71	20
Silver	0.0500	U	0.0483	0.0485	96.6	97.1	1	70.0-130			0.481	20
Thallium	0.100	U	0.0907	0.0885	90.7	88.5	1	70.0-130			2.46	20
Zinc	0.100	1.14	1.37	1.34	221	199	1	70.0-130	V	V	1.61	20

Method Blank (MB)

(MB) R4091976-2 07/09/24 17:32

Analyte	MB Result mg/l	MB Qualifier	MB MDL mg/l	MB RDL mg/l
1,1,1-Trichloroethane	U		0.00335	0.00500
1,1,2,2-Tetrachloroethane	U		0.000596	0.00500
1,1,2-Trichloroethane	U		0.00145	0.00500
1,1-Dichloroethene	U		0.00367	0.00500
1,1-Dichloroethane	U		0.00292	0.00500
1,2-Dibromoethane	U		0.000549	0.00200
1,2-Dichlorobenzene	U		0.00172	0.00200
1,2-Dichloroethane	U		0.00195	0.00500
1,2-Dichloropropane	U		0.000804	0.00200
1,3-Dichlorobenzene	U		0.00419	0.00500
1,4-Dichlorobenzene	U		0.00173	0.00200
2-Butanone (MEK)	U		0.00822	0.0250
2-Chloroethyl vinyl ether	U		0.00652	0.0100
Acrolein	U		0.00544	0.0100
Acrylonitrile	U		0.00709	0.0100
Benzene	U		0.00207	0.00500
Bromodichloromethane	U		0.00179	0.00200
Bromoform	U		0.000960	0.0100
Bromomethane	U		0.00347	0.00500
Carbon tetrachloride	U		0.00159	0.00200
Chlorobenzene	U		0.00276	0.0100
Chloroethane	U		0.00296	0.00500
Chloroform	U		0.00212	0.00500
Chloromethane	U		0.00361	0.00500
cis-1,3-Dichloropropene	U		0.00492	0.0100
Dibromochloromethane	U		0.00327	0.00500
Ethylbenzene	U		0.000401	0.00200
Methylene Chloride	U		0.0118	0.0200
Tetrachloroethene	U		0.00486	0.0100
Toluene	0.00317	J	0.00219	0.00500
trans-1,2-Dichloroethene	U		0.00501	0.0100
Trichloroethene	U		0.00262	0.00500
Vinyl chloride	U		0.00466	0.00500
(S) 1,2-Dichloroethane-d4	*93.5*			*70.0-130*
(S) 4-Bromofluorobenzene	*99.6*			*70.0-130*
(S) Toluene-d8	*97.4*			*70.0-130*

Laboratory Control Sample (LCS)

(LCS) R4091976-1 07/09/24 16:24

Analyte	Spike Amount mg/l	LCS Result mg/l	LCS Rec. %	Rec. Limits %	LCS Qualifier
1,1,1-Trichloroethane	0.0200	0.0201	101	70.0-130	
1,1,2,2-Tetrachloroethane	0.0200	0.0185	92.5	60.0-140	
1,1,2-Trichloroethane	0.0200	0.0190	95.0	70.0-130	
1,1-Dichloroethene	0.0200	0.0195	97.5	50.0-150	
1,1-Dichloroethane	0.0200	0.0203	102	70.0-130	
1,2-Dibromoethane	0.0200	0.0186	93.0	70.0-130	
1,2-Dichlorobenzene	0.0200	0.0203	102	65.0-135	
1,2-Dichloroethane	0.0200	0.0202	101	70.0-130	
1,2-Dichloropropane	0.0200	0.0181	90.5	35.0-165	
1,3-Dichlorobenzene	0.0200	0.0195	97.5	70.0-130	
1,4-Dichlorobenzene	0.0200	0.0192	96.0	65.0-135	
2-Butanone (MEK)	0.100	0.0829	82.9	70.0-130	
2-Chloroethyl vinyl ether	0.100	0.0529	52.9	1.00-225	
Acrolein	0.100	0.105	105	64.0-139	
Acrylonitrile	0.100	0.104	104	67.0-136	
Benzene	0.0200	0.0197	98.5	65.0-135	
Bromodichloromethane	0.0200	0.0203	102	65.0-135	
Bromoform	0.0200	0.0233	117	70.0-130	
Bromomethane	0.0200	0.0329	165	15.0-185	
Carbon tetrachloride	0.0200	0.0216	108	70.0-130	
Chlorobenzene	0.0200	0.0196	98.0	65.0-135	
Chloroethane	0.0200	0.0214	107	40.0-160	
Chloroform	0.0200	0.0207	104	70.0-135	
Chloromethane	0.0200	0.0159	79.5	1.00-205	
cis-1,3-Dichloropropene	0.0200	0.0177	88.5	25.0-175	
Dibromochloromethane	0.0200	0.0202	101	70.0-135	
Ethylbenzene	0.0200	0.0197	98.5	60.0-140	
Methylene Chloride	0.0200	0.0221	111	60.0-140	
Tetrachloroethene	0.0200	0.0181	90.5	70.0-130	
Toluene	0.0200	0.0196	98.0	70.0-130	
trans-1,2-Dichloroethene	0.0200	0.0206	103	70.0-130	
Trichloroethene	0.0200	0.0201	101	65.0-135	
Vinyl chloride	0.0200	0.0208	104	5.00-195	
(S) 1,2-Dichloroethane-d4			*95.4*	*70.0-130*	
(S) 4-Bromofluorobenzene			*91.3*	*70.0-130*	
(S) Toluene-d8			*99.6*	*70.0-130*	

L1754191-01 Original Sample (OS) • Matrix Spike (MS) • Matrix Spike Duplicate (MSD)

(OS) L1754191-01 07/09/24 18:02 • (MS) R4091976-3 07/09/24 18:26 • (MSD) R4091976-4 07/09/24 18:51

Analyte	Spike Amount mg/l	Original Result mg/l	MS Result mg/l	MSD Result mg/l	MS Rec. %	MSD Rec. %	Dilution	Rec. Limits %	MS Qualifier	MSD Qualifier	RPD %	RPD Limits %
1,1,1-Trichloroethane	0.0199	U	0.0200	0.0203	101	102	1	52.0-162			1.49	36
1,1,2,2-Tetrachloroethane	0.0201	U	0.0183	0.0188	91.0	93.5	1	46.0-157			2.70	61
1,1,2-Trichloroethane	0.0199	U	0.0194	0.0193	97.5	97.0	1	52.0-150			0.517	45
1,1-Dichloroethene	0.0200	U	0.0203	0.0203	102	102	1	1.00-234			0.000	32
1,1-Dichloroethane	0.0200	U	0.0214	0.0211	107	105	1	59.0-155			1.41	40
1,2-Dibromoethane	0.0200	U	0.0184	0.0187	92.0	93.5	1	70.0-130			1.62	20
1,2-Dichlorobenzene	0.0200	U	0.0212	0.0213	106	106	1	18.0-190			0.471	57
1,2-Dichloroethane	0.0200	U	0.0208	0.0209	104	105	1	49.0-155			0.480	49
1,2-Dichloropropane	0.0199	U	0.0185	0.0185	93.0	93.0	1	1.00-210			0.000	55
1,3-Dichlorobenzene	0.0199	U	0.0203	0.0205	102	103	1	59.0-156			0.980	43
1,4-Dichlorobenzene	0.0200	U	0.0201	0.0201	101	101	1	18.0-190			0.000	57
2-Butanone (MEK)	0.100	U	0.0762	0.0774	76.2	77.4	1	70.0-130			1.56	20
2-Chloroethyl vinyl ether	0.100	U	U	U	0.000	0.000	1	1.00-305	J6	J6	0.000	71
Acrolein	0.100	U	0.0936	0.0921	93.6	92.1	1	4.00-172			1.62	20
Acrylonitrile	0.100	U	0.0986	0.104	98.6	104	1	22.0-189			5.33	20
Benzene	0.0200	U	0.0204	0.0202	102	101	1	37.0-151			0.985	61
Bromodichloromethane	0.0199	U	0.0203	0.0199	102	100	1	35.0-155			1.99	56
Bromoform	0.0198	U	0.0225	0.0229	114	116	1	70.0-130			1.76	42
Bromomethane	0.0200	U	0.0261	0.0283	131	142	1	15.0-185			8.09	61
Carbon tetrachloride	0.0200	U	0.0224	0.0225	112	113	1	70.0-140			0.445	41
Chlorobenzene	0.0200	U	0.0203	0.0205	102	103	1	37.0-160			0.980	53
Chloroethane	0.0200	U	0.0203	0.0198	102	99.0	1	14.0-230			2.49	78
Chloroform	0.0200	U	0.0212	0.0215	106	108	1	51.0-138			1.41	54
Chloromethane	0.0200	U	0.0133	0.0137	66.5	68.5	1	1.00-273			2.96	20
cis-1,3-Dichloropropene	0.0200	U	0.0179	0.0181	89.5	90.5	1	1.00-227			1.11	58
Dibromochloromethane	0.0198	U	0.0204	0.0202	103	102	1	53.0-149			0.985	50
Ethylbenzene	0.0200	U	0.0211	0.0209	105	105	1	37.0-162			0.952	63
Methylene Chloride	0.0204	U	0.0193	0.0198	94.6	97.1	1	1.00-221	J	J	2.56	28
Tetrachloroethene	0.0200	U	0.0194	0.0193	97.0	96.5	1	64.0-148			0.517	39
Toluene	0.0200	U	0.0208	0.0206	104	103	1	47.0-150			0.966	41
trans-1,2-Dichloroethene	0.0200	U	0.0213	0.0213	106	106	1	54.0-156			0.000	45
Trichloroethene	0.0200	U	0.0215	0.0213	108	106	1	70.0-157			0.935	48
Vinyl chloride	0.0200	U	0.0189	0.0187	94.5	93.5	1	1.00-251			1.06	66
(S) 1,2-Dichloroethane-d4					*97.2*	*97.9*		*70.0-130*				
(S) 4-Bromofluorobenzene					*90.3*	*91.8*		*70.0-130*				
(S) Toluene-d8					*101*	*100*		*70.0-130*				

Method Blank (MB)

(MB) R4093629-1 07/14/24 04:29

Analyte	MB Result mg/l	MB Qualifier	MB MDL mg/l	MB RDL mg/l
PCB 1016	U		0.000270	0.000500
PCB 1221	U		0.000270	0.000500
PCB 1232	U		0.000270	0.000500
PCB 1242	U		0.000270	0.000500
PCB 1248	U		0.000173	0.000500
PCB 1254	U		0.000173	0.000500
PCB 1260	U		0.000173	0.000500
Total PCBs	U		0.000173	0.000500
(S) Decachlorobiphenyl	*40.9*			*10.0-144*
(S) Tetrachloro-m-xylene	*77.2*			*10.0-135*

Laboratory Control Sample (LCS)

(LCS) R4093629-5 07/14/24 04:50

Analyte	Spike Amount mg/l	LCS Result mg/l	LCS Rec. %	Rec. Limits %	LCS Qualifier
PCB 1016	0.00250	0.00226	90.4	50.0-140	
PCB 1260	0.00250	0.00211	84.4	8.00-140	
(S) Decachlorobiphenyl			*69.4*	*10.0-144*	
(S) Tetrachloro-m-xylene			*79.7*	*10.0-135*	

L1754575-01 Original Sample (OS) • Matrix Spike (MS) • Matrix Spike Duplicate (MSD)

(OS) L1754575-01 07/14/24 06:36 • (MS) R4093629-6 07/14/24 07:08 • (MSD) R4093629-7 07/14/24 07:20

Analyte	Spike Amount mg/l	Original Result mg/l	MS Result mg/l	MSD Result mg/l	MS Rec. %	MSD Rec. %	Dilution	Rec. Limits %	MS Qualifier	MSD Qualifier	RPD %	RPD Limits %
PCB 1016	0.00250	U	0.00210	0.00204	84.0	81.6	1	50.0-140			2.90	36
PCB 1260	0.00250	U	0.00139	0.00146	55.6	58.4	1	8.00-140			4.91	38
(S) Decachlorobiphenyl					*39.5*	*42.5*		*10.0-144*				
(S) Tetrachloro-m-xylene					*69.7*	*70.6*		*10.0-135*				

Method Blank (MB)

(MB) R4093641-1 07/13/24 14:45

Analyte	MB Result mg/l	MB Qualifier	MB MDL mg/l	MB RDL mg/l
1,2,4,5-Tetrachlorobenzene	U		0.000200	0.00200
2,4,6-Trichlorophenol	U		0.000238	0.00200
2,4-Dichlorophenol	U		0.000336	0.00400
2,4-Dimethylphenol	U		0.000613	0.00200
2,4-Dinitrophenol	U		0.00154	0.0100
2-Chlorophenol	U		0.000307	0.00200
2-Methylphenol	U		0.000238	0.00200
2-Nitrophenol	U		0.000247	0.00200
3&4-Methyl Phenol	U		0.000238	0.00200
3,3-Dichlorobenzidine	U		0.000788	0.00400
4,6-Dinitro-2-methylphenol	U		0.00202	0.0100
4-Chloro-3-methylphenol	U		0.000217	0.00200
4-Nitrophenol	U		0.00123	0.0100
Anthracene	U		0.000168	0.00200
Benzidine	U		0.000350	0.00400
Benzo(a)anthracene	U		0.000307	0.00200
Benzo(a)pyrene	U		0.000470	0.00200
Bis(2-chloroethyl)ether	U		0.000168	0.00200
Bis(2-Ethylhexyl)phthalate	U		0.00180	0.00200
Chrysene	U		0.000257	0.00200
Di-n-butyl phthalate	U		0.00160	0.00200
Hexachloro-1,3-butadiene	U		0.000217	0.00200
Hexachlorobenzene	U		0.000307	0.00200
Hexachlorocyclopentadiene	U		0.000299	0.00200
Hexachloroethane	U		0.000247	0.00200
n-Nitrosodi-n-butylamine	U		0.00110	0.00200
n-Nitrosodiethylamine	U		0.000696	0.00200
Nitrobenzene	U		0.000314	0.00200
Nonylphenol	U		0.000168	0.00200
Pentachlorobenzene	U		0.000247	0.00200
Pentachlorophenol	U		0.000283	0.00200
Phenanthrene	U		0.000200	0.00200
Phenol	U		0.000500	0.00200
Pyridine	U		0.00174	0.00400
Total Cresols	U		0.00153	0.00800
(S) 2,4,6-Tribromophenol	*55.0*			*29.0-132*
(S) 2-Fluorobiphenyl	*81.5*			*26.0-102*
(S) 2-Fluorophenol	*72.5*	J1		*10.0-66.0*
(S) Nitrobenzene-d5	*82.5*			*15.0-106*
(S) p-Terphenyl-d14	*95.0*			*10.0-120*

Method Blank (MB)

(MB) R4093641-1 07/13/24 14:45

Analyte	MB Result mg/l	MB Qualifier	MB MDL mg/l	MB RDL mg/l
(S) Phenol-d6	*69.0*	J1		*10.0-54.0*

Laboratory Control Sample (LCS)

(LCS) R4093641-2 07/13/24 15:15

Analyte	Spike Amount mg/l	LCS Result mg/l	LCS Rec. %	Rec. Limits %	LCS Qualifier
1,2,4,5-Tetrachlorobenzene	0.200	0.141	70.5	31.0-120	
2,4,6-Trichlorophenol	0.200	0.175	87.5	37.0-144	
2,4-Dichlorophenol	0.200	0.168	84.0	39.0-135	
2,4-Dimethylphenol	0.200	0.171	85.5	32.0-120	
2,4-Dinitrophenol	0.200	0.123	61.5	1.00-191	
2-Chlorophenol	0.200	0.172	86.0	23.0-134	
2-Methylphenol	0.200	0.179	89.5	26.0-120	
2-Nitrophenol	0.200	0.160	80.0	29.0-182	
3&4-Methyl Phenol	0.200	0.169	84.5	27.0-120	
3,3-Dichlorobenzidine	0.400	0.401	100	1.00-262	
4,6-Dinitro-2-methylphenol	0.200	0.152	76.0	1.00-181	
4-Chloro-3-methylphenol	0.200	0.170	85.0	22.0-147	
4-Nitrophenol	0.200	0.121	60.5	1.00-132	
Anthracene	0.200	0.184	92.0	27.0-133	
Benzidine	0.400	0.125	31.3	1.00-120	
Benzo(a)anthracene	0.200	0.189	94.5	33.0-143	
Benzo(a)pyrene	0.200	0.200	100	17.0-163	
Bis(2-chloroethyl)ether	0.200	0.163	81.5	33.0-185	
Bis(2-Ethylhexyl)phthalate	0.200	0.213	106	8.00-158	
Chrysene	0.200	0.178	89.0	17.0-168	
Di-n-butyl phthalate	0.200	0.196	98.0	1.00-120	
Hexachloro-1,3-butadiene	0.200	0.128	64.0	24.0-120	
Hexachlorobenzene	0.200	0.150	75.0	1.00-152	
Hexachlorocyclopentadiene	0.200	0.120	60.0	10.0-120	
Hexachloroethane	0.200	0.142	71.0	40.0-120	
n-Nitrosodi-n-butylamine	0.200	0.174	87.0	39.0-127	
n-Nitrosodiethylamine	0.200	0.182	91.0	10.0-142	
Nitrobenzene	0.200	0.169	84.5	35.0-180	
Nonylphenol	0.200	0.189	94.5	57.0-136	
Pentachlorobenzene	0.200	0.138	69.0	10.0-151	
Pentachlorophenol	0.200	0.163	81.5	14.0-176	
Phenanthrene	0.200	0.173	86.5	54.0-120	

Laboratory Control Sample (LCS)

(LCS) R4093641-2 07/13/24 15:15

Analyte	Spike Amount mg/l	LCS Result mg/l	LCS Rec. %	Rec. Limits %	LCS Qualifier
Phenol	0.200	0.137	68.5	5.00-120	
Pyridine	0.200	0.0338	16.9	10.0-120	
Total Cresols	0.400	0.348	87.0	36.0-110	
(S) 2,4,6-Tribromophenol			*67.5*	*29.0-132*	
(S) 2-Fluorobiphenyl			*81.5*	*26.0-102*	
(S) 2-Fluorophenol			*75.5*	*10.0-66.0*	J1
(S) Nitrobenzene-d5			*81.5*	*15.0-106*	
(S) p-Terphenyl-d14			*92.0*	*10.0-120*	
(S) Phenol-d6			*73.5*	*10.0-54.0*	J1

GLOSSARY OF TERMS

Guide to Reading and Understanding Your Laboratory Report

The information below is designed to better explain the various terms used in your report of analytical results from the Laboratory. This is not intended as a comprehensive explanation, and if you have additional questions please contact your project representative.

Results Disclaimer - Information that may be provided by the customer, and contained within this report, include Permit Limits, Project Name, Sample ID, Sample Matrix, Sample Preservation, Field Blanks, Field Spikes, Field Duplicates, On-Site Data, Sampling Collection Dates/Times, and Sampling Location. Results relate to the accuracy of this information provided, and as the samples are received.

Abbreviations and Definitions

MDL	Method Detection Limit.
ND	Not detected at the Reporting Limit (or MDL where applicable).
RDL	Reported Detection Limit.
Rec.	Recovery.
RPD	Relative Percent Difference.
SDG	Sample Delivery Group.
(S)	Surrogate (Surrogate Standard) - Analytes added to every blank, sample, Laboratory Control Sample/Duplicate and Matrix Spike/Duplicate; used to evaluate analytical efficiency by measuring recovery. Surrogates are not expected to be detected in all environmental media.
U	Not detected at the Reporting Limit (or MDL where applicable).
Analyte	The name of the particular compound or analysis performed. Some Analyses and Methods will have multiple analytes reported.
Dilution	If the sample matrix contains an interfering material, the sample preparation volume or weight values differ from the standard, or if concentrations of analytes in the sample are higher than the highest limit of concentration that the laboratory can accurately report, the sample may be diluted for analysis. If a value different than 1 is used in this field, the result reported has already been corrected for this factor.
Limits	These are the target % recovery ranges or % difference value that the laboratory has historically determined as normal for the method and analyte being reported. Successful QC Sample analysis will target all analytes recovered or duplicated within these ranges.
Original Sample	The non-spiked sample in the prep batch used to determine the Relative Percent Difference (RPD) from a quality control sample. The Original Sample may not be included within the reported SDG.
Qualifier	This column provides a letter and/or number designation that corresponds to additional information concerning the result reported. If a Qualifier is present, a definition per Qualifier is provided within the Glossary and Definitions page and potentially a discussion of possible implications of the Qualifier in the Case Narrative if applicable.
Result	The actual analytical final result (corrected for any sample specific characteristics) reported for your sample. If there was no measurable result returned for a specific analyte, the result in this column may state "ND" (Not Detected) or "BDL" (Below Detectable Levels). The information in the results column should always be accompanied by either an MDL (Method Detection Limit) or RDL (Reporting Detection Limit) that defines the lowest value that the laboratory could detect or report for this analyte.
Uncertainty (Radiochemistry)	Confidence level of 2 sigma.
Case Narrative (Cn)	A brief discussion about the included sample results, including a discussion of any non-conformances to protocol observed either at sample receipt by the laboratory from the field or during the analytical process. If present, there will be a section in the Case Narrative to discuss the meaning of any data qualifiers used in the report.
Quality Control Summary (Qc)	This section of the report includes the results of the laboratory quality control analyses required by procedure or analytical methods to assist in evaluating the validity of the results reported for your samples. These analyses are not being performed on your samples typically, but on laboratory generated material.
Sample Chain of Custody (Sc)	This is the document created in the field when your samples were initially collected. This is used to verify the time and date of collection, the person collecting the samples, and the analyses that the laboratory is requested to perform. This chain of custody also documents all persons (excluding commercial shippers) that have had control or possession of the samples from the time of collection until delivery to the laboratory for analysis.
Sample Results (Sr)	This section of your report will provide the results of all testing performed on your samples. These results are provided by sample ID and are separated by the analyses performed on each sample. The header line of each analysis section for each sample will provide the name and method number for the analysis reported.
Sample Summary (Ss)	This section of the Analytical Report defines the specific analyses performed for each sample ID, including the dates and times of preparation and/or analysis.

Qualifier	Description
B	The same analyte is found in the associated blank.
B1	The blank depletion was greater than the recommended maximum depletion of 0.2mg/L.
J	The identification of the analyte is acceptable; the reported value is an estimate.
J1	Surrogate recovery limits have been exceeded; values are outside upper control limits.
J3	The associated batch QC was outside the established quality control range for precision.
J5	The sample matrix interfered with the ability to make any accurate determination; spike value is high.
J6	The sample matrix interfered with the ability to make any accurate determination; spike value is low.
P1	RPD value not applicable for sample concentrations less than 5 times the reporting limit.
Q	Sample was prepared and/or analyzed past holding time as defined in the method. Concentrations should be considered minimum values.
T8	Sample(s) received past/too close to holding time expiration.
V	The sample concentration is too high to evaluate accurate spike recoveries.

ACCREDITATIONS & LOCATIONS

Pace Analytical National 12065 Lebanon Rd Mount Juliet, TN 37122

Alabama	40660	Nebraska	NE-OS-15-05
Alaska	17-026	Nevada	TN000032021-1
Arizona	AZ0612	New Hampshire	2975
Arkansas	88-0469	New Jersey–NELAP	TN002
California	2932	New Mexico [1]	TN00003
Colorado	TN00003	New York	11742
Connecticut	PH-0197	North Carolina	Env375
Florida	E87487	North Carolina [1]	DW21704
Georgia	NELAP	North Carolina [3]	41
Georgia [1]	923	North Dakota	R-140
Idaho	TN00003	Ohio–VAP	CL0069
Illinois	200008	Oklahoma	9915
Indiana	C-TN-01	Oregon	TN200002
Iowa	364	Pennsylvania	68-02979
Kansas	E-10277	Rhode Island	LA000356
Kentucky [1 6]	KY90010	South Carolina	84004002
Kentucky [2]	16	South Dakota	n/a
Louisiana	AI30792	Tennessee [1 4]	2006
Louisiana	LA018	Texas	T104704245-20-18
Maine	TN00003	Texas [5]	LAB0152
Maryland	324	Utah	TN000032021-11
Massachusetts	M-TN003	Vermont	VT2006
Michigan	9958	Virginia	110033
Minnesota	047-999-395	Washington	C847
Mississippi	TN00003	West Virginia	233
Missouri	340	Wisconsin	998093910
Montana	CERT0086	Wyoming	A2LA
A2LA – ISO 17025	1461.01	AIHA-LAP,LLC EMLAP	100789
A2LA – ISO 17025 [5]	1461.02	DOD	1461.01
Canada	1461.01	USDA	P330-15-00234
EPA–Crypto	TN00003		

Pace Analytical Services, LLC -Dallas 400 W. Bethany Drive Suite 190 Allen, TX 75013

Arkansas	88-0647	Kansas	E10388
Florida	E871118	Texas	T104704232-23-39
Iowa	408	Oklahoma	8727
Louisiana	30686		

[1] Drinking Water [2] Underground Storage Tanks [3] Aquatic Toxicity [4] Chemical/Microbiological [5] Mold [6] Wastewater n/a Accreditation not applicable

* Not all certifications held by the laboratory are applicable to the results reported in the attached report.

* Accreditation is only applicable to the test methods specified on each scope of accreditation held by Pace Analytical.

CHAIN-OF-CUSTODY Analytical Request Document

Pace Analytical®

Chain-of-Custody is a LEGAL DOCUMENT - Complete all relevent fields

LAB USE ONLY- Affix Workorder/Login Label Here or List Pace Workorder Number or MTJL Log-in Number Here

ALL SHADED AREAS are for LAB USE ONLY

Company: GPL	Billing Information:
Address: 13835 CR 485	
Report To:	Email To:
Copy To:	Site Collection Info/Address:
Customer Project Name/Number:	State: / County/City: Time Zone Collected: [ ] PT [ ] MT [ ] CT [ ] ET
Phone: Email:	Site/Facility ID #: Compliance Monitoring? [ ] Yes [ ] No
Collected By (print):	Purchase Order #: Quote #: DW PWS ID #: DW Location Code:
Collected By (signature):	Turnaround Date Required: Immediately Packed on Ice: [ ] Yes [ ] No
Sample Disposal: [ ] Dispose as appropriate [ ] Return [ ] Archive: _____ [ ] Hold: _____	Rush: [ ] Same Day [ ] Next Day [ ] 2 Day [ ] 3 Day [ ] 4 Day [ ] 5 Day (Expedite Charges Apply) Field Filtered (if applicable): [ ] Yes [ ] No Analysis: _____

Container Preservative Type **

Lab Project Manager:

** Preservative Types: (1) nitric acid, (2) sulfuric acid, (3) hydrochloric acid, (4) sodium hydroxide, (5) zinc acetate, (6) methanol, (7) sodium bisulfate, (8) sodium thiosulfate, (9) hexane, (A) ascorbic acid, (B) ammonium sulfate, (C) ammonium hydroxide, (D) TSP, (U) Unpreserved, (O) Other _____

Analyses

Lab Profile/Line:

* Matrix Codes (Insert in Matrix box below): Drinking Water (DW), Ground Water (GW), Wastewater (WW), Product (P), Soil/Solid (SL), Oil (OL), Wipe (WP), Air (AR), Tissue (TS), Bioassay (B), Vapor (V), Other (OT)

Customer Sample ID	Matrix *	Comp / Grab	Collected (or Composite Start) Date	Collected (or Composite Start) Time	Composite End Date	Composite End Time	Res Cl	# of Ctns	Lab Profile/Line
OUTFALL 001	WW	G			7/8/24	1234		1	L1754283-01

See Attached

Lab Sample Receipt Checklist:

Custody Seals Present/Intact	Y N NA
Custody Signatures Present	Y N NA
Collector Signature Present	Y N NA
Bottles Intact	Y N NA
Correct Bottles	Y N NA
Sufficient Volume	Y N NA
Samples Received on Ice	Y N NA
VOA - Headspace Acceptable	Y N NA
USDA Regulated Soils	Y N NA
Samples in Holding Time	Y N NA
Residual Chlorine Present	Y N NA
Cl Strips: _____	
Sample pH Acceptable	Y N NA
pH Strips: _____	
Sulfide Present	Y N NA
Lead Acetate Strips: _____	

LAB USE ONLY:
Lab Sample # / Comments:

Customer Remarks / Special Conditions / Possible Hazards:

EDA7 1.2+0.3=1.5

Type of Ice Used: Wet Blue Dry None

Packing Material Used:

Radchem sample(s) screened (<500 cpm): Y N NA

SHORT HOLDS PRESENT (<72 hours): Y N N/A

Lab Tracking #: 2893476

Samples received via: FEDEX UPS Client Courier Pace Courier

Lab Sample Temperature Info:
Temp Blank Received: Y N NA
Therm ID#: _____
Cooler 1 Temp Upon Receipt: _____oC
Cooler 1 Therm Corr. Factor: _____oC
Cooler 1 Corrected Temp: _____oC
Comments:

Relinquished by/Company: (Signature)	Date/Time:	Received by/Company: (Signature)	Date/Time:
JM McClain	7/8/24 1430		7/8/24 1430
Relinquished by/Company: (Signature)	Date/Time:	Received by/Company: (Signature)	Date/Time:
Jonathan Ramos/FedEx	7/9/24 1700	FedEx	7/9/24 1700
Relinquished by/Company: (Signature)	Date/Time:	Received by/Company: (Signature)	Date/Time:
FedEx		Jamcorn	7-10-24 0900

MTJL LAB USE ONLY
Table #:
Acctnum:
Template:
Prelogin:
PM:

Trip Blank Received: Y N NA
HCL MeOH TSP Other

Non Conformance(s): Page: _____

Pace ANALYTICAL SERVICES	DC#_Title: ENV-FRM-ALLE-0017 v15_Sample Condition Upon Receipt
	Effective Date: 12/18/2023

Sample Condition Upon Receipt

☐Dallas ☐Ft Worth ☐Corpus Christi ☐Austin

Client Name: GPL Project Work order (place label):

Courier: FedEX ☐ UPS ☐ USPS ☐ Client ☑ LSO ☐ PACE ☐ Other: _____

Tracking #: _____

Custody Seal on Cooler/Box: Yes ☐ No ☑

Received on ice: Wet ☑ Blue ☐ No ice ☐

Receiving Lab 1 Thermometer Used: IR-18 **Cooler Temp °C**: 27.6 (Recorded) +0.3 (Correction Factor) 28.1 (Actual) ~~26.9~~ ~~29.2~~

Receiving Lab 2 Thermometer Used: _____ **Cooler Temp °C**: _____ (Recorded) _____ (Correction Factor) _____ (Actual)

Chain of Custody relinquished	Yes ☑ No ☐
Sampler name & signature on COC	Yes ☐ No ☑
Short HT analyses (<72 hrs)	Yes ☑ No ☐

Temperature should be above freezing to 6°C unless collected same day as receipt in which evidence of cooling is acceptable.

Triage Person: AG Date: 7/9/24

Sufficient Volume received	Yes ☑ No ☐
Correct Container used	Yes ☑ No ☐
Container Intact	Yes ☑ No ☐
Sample pH Acceptable pH Strips: 6402007 Residual Chlorine Present Cl Strips: _____ Sulfide Present Lead Acetate Strips: _____	Yes ☑ No ☐ NA ☐ Yes ☐ No ☐ NA ☑ Yes ☐ No ☐ NA ☑
Are soil samples (volatiles, TPH) received in 5035A Kits (not applicable to TCLP VOA or PST Program TPH)	Yes ☐ No ☐ NA ☑
Unpreserved 5035A soil frozen within 48 hrs	Yes ☐ No ☐ NA ☑
Headspace in VOA (>6mm)	Yes ☐ No ☑ NA ☐
Project sampled in USDA Regulated Area outside of Texas State Sampled: _____	Yes ☐ No ☐ NA ☑
Non-Conformance(s):	Yes ☐ No ☑

Login Person: JW Date: 7/8/24

Labeling Person (if different than log-in): _____ Date: _____

Qualtrax ID: 48806

DAL - L1754283 DSGARLWNTX NCF - JWW 7/8

Shortholds

Time estimate: oh **Time spent:** oh

Members

V Jeremy Watkins (responsible) DPR Dorothy Roberts

- [ ] 1 . If Chain-of-custody (COC) is not received: contact client and if necessary, fill out a COC and indicate that it was filled out by lab personnel. Note issues on this NCF.
- [ ] 2. If COC is incomplete, check applicable issues below and add details where appropiate:
- [ ] *Collection date/time missing or incorrect
- [ ] *Analyses or analytes: missing or Clarification needed
- [ ] *Samples listed on COC do not match samples recieved (missing, additional,etc.)
- [ ] *Sample IDs on COC do not match sample Labels
- [ ] *Required trip blanks were not received
- [ ] *Required signatures are missing
- [x] 3. Sample integrity issues: check applicable issues below and add details where appropriate:
- [ ] *Samples: Past holding time
- [ ] *Samples: Not Field Filtered
- [ ] *samples: Insufficent volume received
- [ ] *Samples: Cooler damaged or compromised
- [ ] *Samples: contain Chlorine or Sulfide
- [ ] *Samples: condition needs to be brought to lab personnel's attention (details below)
- [ ] *Containers: Broken or compromised
- [ ] *Containers: Incorrect
- [ ] *Custody Seals: missing or compromised on samples, trip blanks or coolers
- [ ] *Packing Material: Insufficient/Improper
- [x] *Preservation: improper
- [ ] *Temperature:not witin acceptance criteria (typically 0-6C)
- [ ] *Temperature: Samples arrived frozen
- [ ] *Vials received with improper headspace
- [ ] *Other:
- [ ] 4. If Samples not preserved properly and Sample Receiving adjusts pH, add details below:
- [ ] Sample ID:_____
- [ ] Preserved by:_____
- [ ] Date/Time:_____
- [ ] Initial and Final pH:_____
- [ ] Amount/type pres added:_____
- [ ] Lot # of Pres added:_____
- [ ] 5. Client contact: If Client is Contacted for any issue listed above, fill in details below:
- [x] Client:
- [x] PM Initials: DPR
- [x] Contacted per: JMcClain
- [x] Date/Time: 07/09/24 1050

Comments

Jeremy Watkins *9 July 2024 10:21 AM*

CN and SULFIDE recieved unpreserved.

Dorothy Roberts *10 July 2024 9:35 AM*

Proceed / may not report if replacements can be collected

also sending replacement bottles T256352

ANALYTICAL REPORT

July 26, 2024

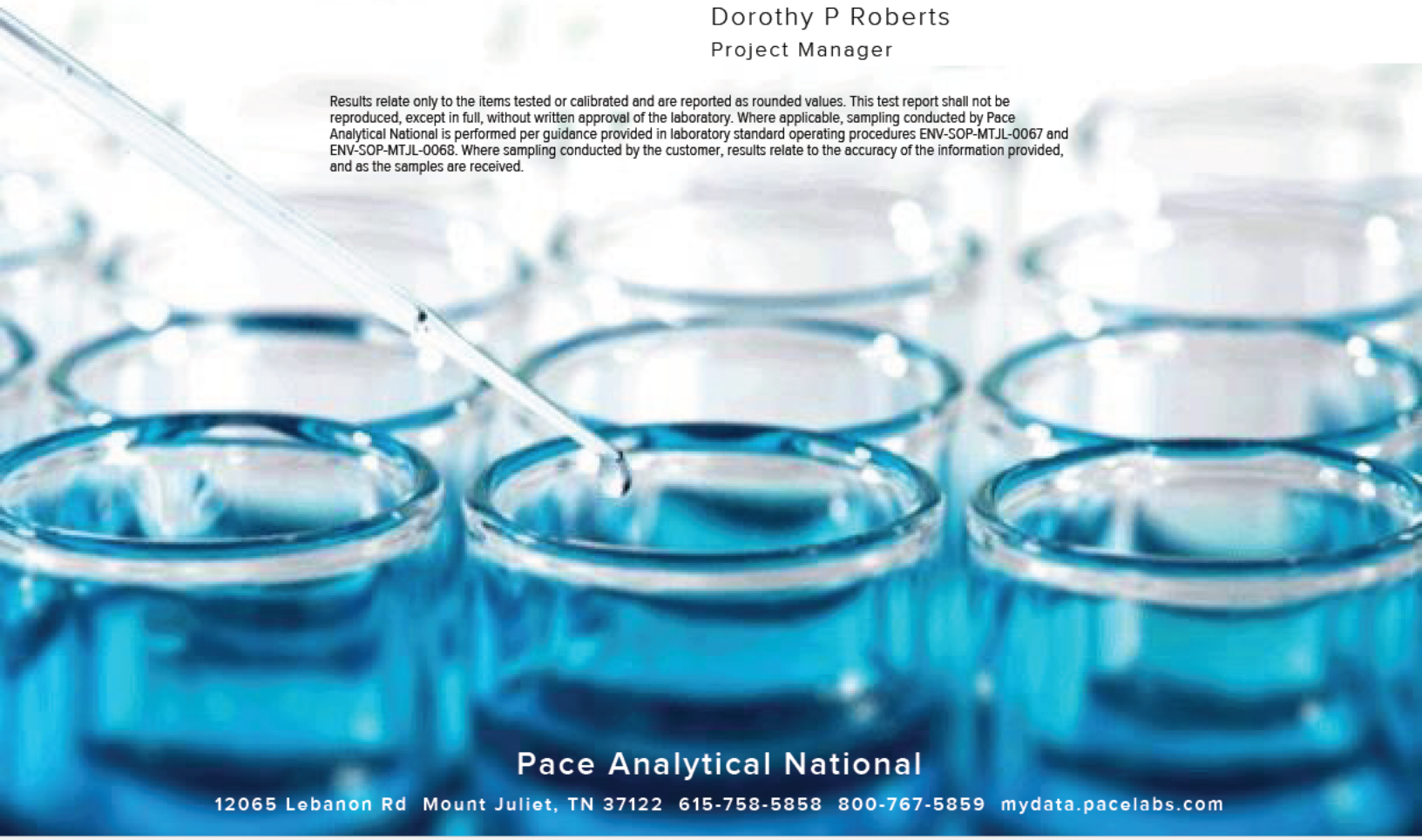
Garland Power & Light

Sample Delivery Group:	L1756836
Samples Received:	07/16/2024
Project Number:	
Description:	TPDES

Report To: Jeff McClain
13835 County Rd 489
Nevada, TX 75173

Entire Report Reviewed By: Dorothy P Roberts

Dorothy P Roberts
Project Manager



Pace Analytical National
12065 Lebanon Rd Mount Juliet, TN 37122 615-758-5858 800-767-5859 mydata.pacelabs.com

TABLE OF CONTENTS

SAMPLE SUMMARY

OUTFALL 001 L1756836-01 WW

	Collected by	Collected date/time	Received date/time
		07/16/24 08:18	07/16/24 09:42

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst	Location
Calculated Results	WG2327774	1	07/22/24 16:22	07/22/24 16:22	EIG	Allen, TX
Calculated Results	WG2329841	1	07/26/24 14:40	07/26/24 14:40	NA	Allen, TX
Gravimetric Analysis by Method 2540C	WG2325834	1	07/18/24 15:18	07/18/24 17:02	QQT	Allen, TX
Gravimetric Analysis by Method 2540D	WG2328064	1	07/23/24 06:21	07/23/24 07:41	QQT	Allen, TX
Wet Chemistry by Method 1664A	WG2324487	1	07/18/24 13:00	07/19/24 09:53	TK	Allen, TX
Wet Chemistry by Method 2120B	WG2324656	1	07/17/24 13:58	07/17/24 13:58	EIG	Allen, TX
Wet Chemistry by Method 2320B	WG2327704	1	07/22/24 12:47	07/22/24 12:47	JBS	Allen, TX
Wet Chemistry by Method 300.0	WG2323759	1	07/16/24 17:30	07/16/24 17:30	SMC	Allen, TX
Wet Chemistry by Method 300.0	WG2323759	5	07/16/24 22:34	07/16/24 22:34	SMC	Allen, TX
Wet Chemistry by Method 3500Cr-B	WG2324738	1	07/17/24 15:16	07/17/24 15:16	KCM	Allen, TX
Wet Chemistry by Method 351.2	WG2326234	1	07/19/24 10:40	07/19/24 20:41	EIG	Allen, TX
Wet Chemistry by Method 353.2	WG2325801	1	07/18/24 15:59	07/18/24 15:59	EIG	Allen, TX
Wet Chemistry by Method 360.1	WG2324067	1	07/16/24 14:05	07/16/24 14:05	JBS	Allen, TX
Wet Chemistry by Method 4500Cl G-2011	WG2325082	1	07/18/24 12:43	07/18/24 12:43	JAR	Mt. Juliet, TN
Wet Chemistry by Method 4500CN-E	WG2325383	1	07/18/24 11:00	07/18/24 18:49	KCM	Allen, TX
Wet Chemistry by Method 4500CN-G	WG2328176	1	07/23/24 15:25	07/23/24 15:25	KCM	Allen, TX
Wet Chemistry by Method 4500P-E	WG2327473	1	07/22/24 16:34	07/22/24 16:34	SMC	Allen, TX
Wet Chemistry by Method 4500-S2 D	WG2324648	1	07/17/24 13:40	07/17/24 13:40	EIG	Allen, TX
Wet Chemistry by Method 4500SO3 B-2011	WG2328484	1	07/23/24 15:00	07/23/24 15:00	CAH	Mt. Juliet, TN
Wet Chemistry by Method 5210 B-2016	WG2323729	1	07/16/24 15:58	07/21/24 11:53	JBS	Allen, TX
Wet Chemistry by Method 5210 B-2016	WG2323730	1	07/16/24 17:37	07/21/24 13:30	JBS	Allen, TX
Wet Chemistry by Method 5220D	WG2324533	1	07/17/24 08:52	07/17/24 11:53	JBS	Allen, TX
Wet Chemistry by Method 5310C	WG2323910	2	07/16/24 20:56	07/16/24 20:56	EIG	Allen, TX
Wet Chemistry by Method 5540C	WG2324658	1	07/17/24 17:24	07/17/24 17:29	EIG	Allen, TX
Wet Chemistry by Method SM 4500-H+B	WG2325390	1	07/18/24 08:46	07/18/24 08:46	SEN	Allen, TX
Wet Chemistry by Method SM4500NH3H	WG2327774	1	07/22/24 16:22	07/22/24 16:22	EIG	Allen, TX
Mercury by Method 245.1	WG2325148	1	07/18/24 12:44	07/18/24 17:47	TDM	Allen, TX
Metals (ICP) by Method 200.7	WG2325465	1	07/18/24 16:25	07/19/24 10:56	SKW	Allen, TX
Metals (ICPMS) by Method 200.8	WG2329841	1	07/25/24 15:11	07/26/24 14:40	NA	Allen, TX
Volatile Organic Compounds (GC/MS) by Method 624.1	WG2324214	1	07/16/24 22:36	07/16/24 22:36	ZST	Allen, TX
Polychlorinated Biphenyls (GC) by Method EPA-608.3	WG2325314	1	07/18/24 20:00	07/19/24 02:59	NWH	Mt. Juliet, TN
Semi Volatile Organic Compounds (GC/MS) by Method 625.1	WG2324634	1	07/17/24 09:31	07/19/24 15:22	XLY	Allen, TX

CASE NARRATIVE

All sample aliquots were received at the correct temperature, in the proper containers, with the appropriate preservatives, and within method specified holding times, unless qualified or notated within the report. Where applicable, all MDL (LOD) and RDL (LOQ) values reported for environmental samples have been corrected for the dilution factor used in the analysis. All Method and Batch Quality Control are within established criteria except where addressed in this case narrative, a non-conformance form or properly qualified within the sample results. By my digital signature below, I affirm to the best of my knowledge, all problems/anomalies observed by the laboratory as having the potential to affect the quality of the data have been identified by the laboratory, and no information or data have been knowingly withheld that would affect the quality of the data.

Dorothy P Roberts
Project Manager

Sample Delivery Group (SDG) Narrative

Analysis was filtered in the laboratory.

Lab Sample ID	Project Sample ID	Method
L1756836-01	OUTFALL 001	3500Cr-B

No extra volume received to perform Matrix Spike samples.

Lab Sample ID	Project Sample ID	Method
L1756836-01	OUTFALL 001	625.1

Calculated Results

Analyte	Result mg/l	Qualifier	MDL mg/l	RDL mg/l	Dilution	Analysis date / time	Batch
Chromium,Trivalent	U		0.000510	0.00300	1	07/26/2024 14:40	WG2329841
Organic Nitrogen	0.478		0.0280	0.100	1	07/22/2024 16:22	WG2327774

Gravimetric Analysis by Method 2540C

Analyte	Result mg/l	Qualifier	RDL mg/l	Dilution	Analysis date / time	Batch
Total Dissolved Solids	219	J3	25.0	1	07/18/2024 17:02	WG2325834

Gravimetric Analysis by Method 2540D

Analyte	Result mg/l	Qualifier	RDL mg/l	Dilution	Analysis date / time	Batch
Suspended Solids	ND		5.00	1	07/23/2024 07:41	WG2328064

Wet Chemistry by Method 1664A

Analyte	Result mg/l	Qualifier	MDL mg/l	RDL mg/l	Dilution	Analysis date / time	Batch
Oil & Grease (Hexane Extr)	U		0.350	5.00	1	07/19/2024 09:53	WG2324487

Wet Chemistry by Method 2120B

Analyte	Result units	Qualifier	RDL units	Dilution	Analysis date / time	Batch
Color	20.0		5.00	1	07/17/2024 13:58	WG2324656

Sample Narrative:

L1756836-01 WG2324656: 7

Wet Chemistry by Method 2320B

Analyte	Result mg/l	Qualifier	MDL mg/l	RDL mg/l	Dilution	Analysis date / time	Batch
Alkalinity	110		20.0	20.0	1	07/22/2024 12:47	WG2327704

Wet Chemistry by Method 300.0

Analyte	Result mg/l	Qualifier	MDL mg/l	RDL mg/l	Dilution	Analysis date / time	Batch
Bromide	0.116	J	0.0668	0.400	1	07/16/2024 17:30	WG2323759
Chloride	16.1	J5	1.62	4.00	5	07/16/2024 22:34	WG2323759
Fluoride	0.243	J	0.0947	0.500	1	07/16/2024 17:30	WG2323759
Nitrate	U		0.379	0.500	1	07/16/2024 17:30	WG2323759
Sulfate	27.3	V	1.06	3.50	5	07/16/2024 22:34	WG2323759

Wet Chemistry by Method 3500Cr-B

Analyte	Result mg/l	Qualifier	MDL mg/l	RDL mg/l	Dilution	Analysis date / time	Batch
Chromium,Hexavalent	U		0.00200	0.00300	1	07/17/2024 15:16	WG2324738

Sample Narrative:

L1756836-01 WG2324738: Sample preserved in lab w/in 24 hrs of collection

Wet Chemistry by Method 351.2

Analyte	Result mg/l	Qualifier	MDL mg/l	RDL mg/l	Dilution	Analysis date / time	Batch
Kjeldahl Nitrogen, TKN	0.478		0.140	0.250	1	07/19/2024 20:41	WG2326234

Wet Chemistry by Method 353.2

Analyte	Result	Qualifier	MDL	RDL	Dilution	Analysis	Batch
	mg/l		mg/l	mg/l		date / time	
Nitrate-Nitrite	U		0.0300	0.0500	1	07/18/2024 15:59	WG2325801

Wet Chemistry by Method 360.1

Analyte	Result	Qualifier	RDL	Dilution	Analysis	Batch
	mg/l		mg/l		date / time	
Dissolved Oxygen	7.77	T8	1	1	07/16/2024 14:05	WG2324067

Wet Chemistry by Method 4500Cl G-2011

Analyte	Result	Qualifier	MDL	RDL	Dilution	Analysis	Batch
	mg/l		mg/l	mg/l		date / time	
Chlorine,residual	0.0420	J T8	0.0260	0.100	1	07/18/2024 12:43	WG2325082

Wet Chemistry by Method 4500CN-E

Analyte	Result	Qualifier	MDL	RDL	Dilution	Analysis	Batch
	mg/l		mg/l	mg/l		date / time	
Cyanide	U		0.00430	0.0100	1	07/18/2024 18:49	WG2325383

Wet Chemistry by Method 4500CN-G

Analyte	Result	Qualifier	MDL	RDL	Dilution	Analysis	Batch
	mg/l		mg/l	mg/l		date / time	
Cyanide,amenable	U		0.00350	0.0100	1	07/23/2024 15:25	WG2328176

Wet Chemistry by Method 4500P-E

Analyte	Result	Qualifier	MDL	RDL	Dilution	Analysis	Batch
	mg/l		mg/l	mg/l		date / time	
Phosphorus,Total	0.0442	J	0.0152	0.0500	1	07/22/2024 16:34	WG2327473

Wet Chemistry by Method 4500-S2 D

Analyte	Result	Qualifier	MDL	RDL	Dilution	Analysis	Batch
	mg/l		mg/l	mg/l		date / time	
Sulfide	U		0.0230	0.100	1	07/17/2024 13:40	WG2324648

Wet Chemistry by Method 4500SO3 B-2011

Analyte	Result	Qualifier	MDL	RDL	Dilution	Analysis	Batch
	mg/l		mg/l	mg/l		date / time	
Sulfite	U	T8	1.19	3.00	1	07/23/2024 15:00	WG2328484

Wet Chemistry by Method 5210 B-2016

Analyte	Result	Qualifier	RDL	Dilution	Analysis	Batch
	mg/l		mg/l		date / time	
BOD	2.53		1.00	1	07/21/2024 11:53	WG2323729
CBOD	2.52		1.00	1	07/21/2024 13:30	WG2323730

Wet Chemistry by Method 5220D

Analyte	Result	Qualifier	MDL	RDL	Dilution	Analysis	Batch
	mg/l		mg/l	mg/l		date / time	
COD	22.2	J	16.1	35.0	1	07/17/2024 11:53	WG2324533

Wet Chemistry by Method 5310C

Analyte	Result	Qualifier	MDL	RDL	Dilution	Analysis	Batch
	mg/l		mg/l	mg/l		date / time	

Wet Chemistry by Method 5310C

Analyte	Result mg/l	Qualifier	MDL mg/l	RDL mg/l	Dilution	Analysis date / time	Batch
TOC (Total Organic Carbon)	5.34		0.540	1.40	2	07/16/2024 20:56	WG2323910

Wet Chemistry by Method 5540C

Analyte	Result mg/l	Qualifier	MDL mg/l	RDL mg/l	Dilution	Analysis date / time	Batch
MBAS	U	J5	0.360	0.500	1	07/17/2024 17:29	WG2324658

Wet Chemistry by Method SM 4500-H+B

Analyte	Result su	Qualifier	Dilution	Analysis date / time	Batch
pH	8.35	T8	1	07/18/2024 08:46	WG2325390

Sample Narrative:

L1756836-01 WG2325390: 8.35 at 23.6C

Wet Chemistry by Method SM4500NH3H

Analyte	Result mg/l	Qualifier	MDL mg/l	RDL mg/l	Dilution	Analysis date / time	Batch
Ammonia Nitrogen	U		0.0280	0.100	1	07/22/2024 16:22	WG2327774

Mercury by Method 245.1

Analyte	Result mg/l	Qualifier	MDL mg/l	RDL mg/l	Dilution	Analysis date / time	Batch
Mercury	0.0000450	J	0.0000450	0.000200	1	07/18/2024 17:47	WG2325148

Metals (ICP) by Method 200.7

Analyte	Result mg/l	Qualifier	MDL mg/l	RDL mg/l	Dilution	Analysis date / time	Batch
Boron	0.0702	J	0.0186	0.100	1	07/19/2024 10:56	WG2325465
Tin	U		0.00240	0.0250	1	07/19/2024 10:56	WG2325465
Titanium	U		0.00835	0.100	1	07/19/2024 10:56	WG2325465

Metals (ICPMS) by Method 200.8

Analyte	Result mg/l	Qualifier	MDL mg/l	RDL mg/l	Dilution	Analysis date / time	Batch
Aluminum	0.167		0.00186	0.00250	1	07/26/2024 14:40	WG2329841
Antimony	U		0.000580	0.00500	1	07/26/2024 14:40	WG2329841
Arsenic	0.00528		0.000100	0.000500	1	07/26/2024 14:40	WG2329841
Barium	0.0341		0.000440	0.00300	1	07/26/2024 14:40	WG2329841
Beryllium	0.0000927	J	0.0000600	0.000500	1	07/26/2024 14:40	WG2329841
Cadmium	U		0.000120	0.00100	1	07/26/2024 14:40	WG2329841
Chromium	U		0.000510	0.00300	1	07/26/2024 14:40	WG2329841
Cobalt	0.00305		0.0000400	0.000300	1	07/26/2024 14:40	WG2329841
Copper	0.00257		0.000900	0.00200	1	07/26/2024 14:40	WG2329841
Iron	0.153		0.00432	0.00700	1	07/26/2024 14:40	WG2329841
Lead	0.000221	J	0.000140	0.000500	1	07/26/2024 14:40	WG2329841
Magnesium	3.92	J6	0.0121	0.0200	1	07/26/2024 14:40	WG2329841
Manganese	0.0439		0.000330	0.000500	1	07/26/2024 14:40	WG2329841
Molybdenum	0.00174		0.000530	0.00100	1	07/26/2024 14:40	WG2329841
Nickel	0.00163	J	0.000640	0.00200	1	07/26/2024 14:40	WG2329841
Selenium	U		0.000740	0.00500	1	07/26/2024 14:40	WG2329841
Silver	U		0.0000800	0.000500	1	07/26/2024 14:40	WG2329841
Thallium	0.000894	B	0.000190	0.000500	1	07/26/2024 14:40	WG2329841

Metals (ICPMS) by Method 200.8

Analyte	Result mg/l	Qualifier	MDL mg/l	RDL mg/l	Dilution	Analysis date / time	Batch
Zinc	U		0.00265	0.00500	1	07/26/2024 14:40	WG2329841

Volatile Organic Compounds (GC/MS) by Method 624.1

Analyte	Result mg/l	Qualifier	MDL mg/l	RDL mg/l	Dilution	Analysis date / time	Batch
1,1,1-Trichloroethane	U		0.00335	0.00500	1	07/16/2024 22:36	WG2324214
1,1,2,2-Tetrachloroethane	U		0.000596	0.00500	1	07/16/2024 22:36	WG2324214
1,1,2-Trichloroethane	U		0.00145	0.00500	1	07/16/2024 22:36	WG2324214
1,1-Dichloroethene	U		0.00367	0.00500	1	07/16/2024 22:36	WG2324214
1,1-Dichloroethane	U		0.00292	0.00500	1	07/16/2024 22:36	WG2324214
1,2-Dibromoethane	U		0.000549	0.00200	1	07/16/2024 22:36	WG2324214
1,2-Dichlorobenzene	U		0.00172	0.00200	1	07/16/2024 22:36	WG2324214
1,2-Dichloroethane	U		0.00195	0.00500	1	07/16/2024 22:36	WG2324214
1,2-Dichloropropane	U		0.000804	0.00200	1	07/16/2024 22:36	WG2324214
1,3-Dichlorobenzene	U		0.00419	0.00500	1	07/16/2024 22:36	WG2324214
1,4-Dichlorobenzene	U		0.00173	0.00200	1	07/16/2024 22:36	WG2324214
2-Butanone (MEK)	U	J6	0.00822	0.0250	1	07/16/2024 22:36	WG2324214
2-Chloroethyl vinyl ether	U		0.00652	0.0100	1	07/16/2024 22:36	WG2324214
Acrolein	U		0.00544	0.0100	1	07/16/2024 22:36	WG2324214
Acrylonitrile	U		0.00709	0.0100	1	07/16/2024 22:36	WG2324214
Benzene	U		0.00207	0.00500	1	07/16/2024 22:36	WG2324214
Bromodichloromethane	U		0.00179	0.00200	1	07/16/2024 22:36	WG2324214
Bromoform	U		0.000960	0.0100	1	07/16/2024 22:36	WG2324214
Bromomethane	U		0.00347	0.00500	1	07/16/2024 22:36	WG2324214
Carbon tetrachloride	U		0.00159	0.00200	1	07/16/2024 22:36	WG2324214
Chlorobenzene	U		0.00276	0.0100	1	07/16/2024 22:36	WG2324214
Chloroethane	U		0.00296	0.00500	1	07/16/2024 22:36	WG2324214
Chloroform	U		0.00212	0.00500	1	07/16/2024 22:36	WG2324214
Chloromethane	U		0.00361	0.00500	1	07/16/2024 22:36	WG2324214
cis-1,3-Dichloropropene	U		0.00492	0.0100	1	07/16/2024 22:36	WG2324214
Dibromochloromethane	U		0.00327	0.00500	1	07/16/2024 22:36	WG2324214
Ethylbenzene	U		0.000401	0.00200	1	07/16/2024 22:36	WG2324214
Methylene Chloride	U		0.0117	0.0200	1	07/16/2024 22:36	WG2324214
Tetrachloroethene	U		0.00486	0.0100	1	07/16/2024 22:36	WG2324214
Toluene	U		0.00219	0.00500	1	07/16/2024 22:36	WG2324214
trans-1,2-Dichloroethene	U		0.00501	0.0100	1	07/16/2024 22:36	WG2324214
Trichloroethene	U		0.00262	0.00500	1	07/16/2024 22:36	WG2324214
Vinyl chloride	U		0.00466	0.00500	1	07/16/2024 22:36	WG2324214
(S) 1,2-Dichloroethane-d4	*101*			*70.0-130*		*07/16/2024 22:36*	WG2324214
(S) 4-Bromofluorobenzene	*101*			*70.0-130*		*07/16/2024 22:36*	WG2324214
(S) Toluene-d8	*100*			*70.0-130*		*07/16/2024 22:36*	WG2324214

Polychlorinated Biphenyls (GC) by Method EPA-608.3

Analyte	Result mg/l	Qualifier	MDL mg/l	RDL mg/l	Dilution	Analysis date / time	Batch
PCB 1016	U		0.000270	0.000500	1	07/19/2024 02:59	WG2325314
PCB 1221	U		0.000270	0.000500	1	07/19/2024 02:59	WG2325314
PCB 1232	U		0.000270	0.000500	1	07/19/2024 02:59	WG2325314
PCB 1242	U		0.000270	0.000500	1	07/19/2024 02:59	WG2325314
PCB 1248	U		0.000173	0.000500	1	07/19/2024 02:59	WG2325314
PCB 1254	U		0.000173	0.000500	1	07/19/2024 02:59	WG2325314
PCB 1260	U		0.000173	0.000500	1	07/19/2024 02:59	WG2325314
Total PCBs	U		0.000173	0.000500	1	07/19/2024 02:59	WG2325314
(S) Decachlorobiphenyl	*15.8*			*10.0-144*		*07/19/2024 02:59*	WG2325314
(S) Tetrachloro-m-xylene	*32.2*			*10.0-135*		*07/19/2024 02:59*	WG2325314

1 Cp
2 Tc
3 Ss
4 Cn
5 Sr
6 Qc
7 Gl
8 Al
9 Sc

Semi Volatile Organic Compounds (GC/MS) by Method 625.1

Analyte	Result	Qualifier	MDL	RDL	Dilution	Analysis	Batch
	mg/l		mg/l	mg/l		date / time	
1,2,4,5-Tetrachlorobenzene	U		0.000200	0.00200	1	07/19/2024 15:22	WG2324634
2,4,6-Trichlorophenol	U		0.000238	0.00200	1	07/19/2024 15:22	WG2324634
2,4-Dichlorophenol	U		0.000336	0.00400	1	07/19/2024 15:22	WG2324634
2,4-Dimethylphenol	U		0.000613	0.00200	1	07/19/2024 15:22	WG2324634
2,4-Dinitrophenol	U		0.00154	0.0100	1	07/19/2024 15:22	WG2324634
2-Chlorophenol	U		0.000307	0.00200	1	07/19/2024 15:22	WG2324634
2-Methylphenol	U		0.000238	0.00200	1	07/19/2024 15:22	WG2324634
2-Nitrophenol	U		0.000247	0.00200	1	07/19/2024 15:22	WG2324634
3&4-Methyl Phenol	U		0.000238	0.00200	1	07/19/2024 15:22	WG2324634
3,3-Dichlorobenzidine	U		0.000788	0.00400	1	07/19/2024 15:22	WG2324634
4,6-Dinitro-2-methylphenol	U		0.00202	0.0100	1	07/19/2024 15:22	WG2324634
4-Chloro-3-methylphenol	U		0.000217	0.00200	1	07/19/2024 15:22	WG2324634
4-Nitrophenol	U		0.00123	0.0100	1	07/19/2024 15:22	WG2324634
Anthracene	U		0.000168	0.00200	1	07/19/2024 15:22	WG2324634
Benzidine	U		0.000350	0.00400	1	07/19/2024 15:22	WG2324634
Benzo(a)anthracene	U		0.000307	0.00200	1	07/19/2024 15:22	WG2324634
Benzo(a)pyrene	U		0.000470	0.00200	1	07/19/2024 15:22	WG2324634
Bis(2-chloroethyl)ether	U		0.000168	0.00200	1	07/19/2024 15:22	WG2324634
Bis(2-Ethylhexyl)phthalate	U		0.00180	0.00200	1	07/19/2024 15:22	WG2324634
Chrysene	U		0.000257	0.00200	1	07/19/2024 15:22	WG2324634
Di-n-butyl phthalate	U		0.00160	0.00200	1	07/19/2024 15:22	WG2324634
Hexachloro-1,3-butadiene	U		0.000217	0.00200	1	07/19/2024 15:22	WG2324634
Hexachlorobenzene	U		0.000307	0.00200	1	07/19/2024 15:22	WG2324634
Hexachlorocyclopentadiene	U		0.000299	0.00200	1	07/19/2024 15:22	WG2324634
Hexachloroethane	U		0.000247	0.00200	1	07/19/2024 15:22	WG2324634
n-Nitrosodi-n-butylamine	U		0.00110	0.00200	1	07/19/2024 15:22	WG2324634
n-Nitrosodiethylamine	U		0.000696	0.00200	1	07/19/2024 15:22	WG2324634
Nitrobenzene	U		0.000314	0.00200	1	07/19/2024 15:22	WG2324634
Nonylphenol	U		0.000168	0.00200	1	07/19/2024 15:22	WG2324634
Pentachlorobenzene	U		0.000247	0.00200	1	07/19/2024 15:22	WG2324634
Pentachlorophenol	U		0.000283	0.00200	1	07/19/2024 15:22	WG2324634
Phenanthrene	U		0.000200	0.00200	1	07/19/2024 15:22	WG2324634
Phenol	U		0.000500	0.00200	1	07/19/2024 15:22	WG2324634
Pyridine	U		0.00174	0.00400	1	07/19/2024 15:22	WG2324634
Total Cresols	U		0.00153	0.00800	1	07/19/2024 15:22	WG2324634
(S) 2,4,6-Tribromophenol	*60.4*			*29.0-132*		*07/19/2024 15:22*	WG2324634
(S) 2-Fluorobiphenyl	*70.3*			*26.0-102*		*07/19/2024 15:22*	WG2324634
(S) 2-Fluorophenol	*64.8*			*10.0-66.0*		*07/19/2024 15:22*	WG2324634
(S) Nitrobenzene-d5	*74.7*			*15.0-106*		*07/19/2024 15:22*	WG2324634
(S) p-Terphenyl-d14	*87.9*			*10.0-120*		*07/19/2024 15:22*	WG2324634
(S) Phenol-D6	*57.1*	J1		*10.0-54.0*		*07/19/2024 15:22*	WG2324634

Method Blank (MB)

(MB) R4096041-1 07/18/24 17:02

Analyte	MB Result mg/l	MB Qualifier	MB MDL mg/l	MB RDL mg/l
Total Dissolved Solids	U		25.0	25.0

L1756796-01 Original Sample (OS) • Duplicate (DUP)

(OS) L1756796-01 07/18/24 17:02 • (DUP) R4096041-3 07/18/24 17:02

Analyte	Original Result mg/l	DUP Result mg/l	Dilution	DUP RPD %	DUP Qualifier	DUP RPD Limits %
Total Dissolved Solids	411	399	1	2.96		10

L1756836-01 Original Sample (OS) • Duplicate (DUP)

(OS) L1756836-01 07/18/24 17:02 • (DUP) R4096041-4 07/18/24 17:02

Analyte	Original Result mg/l	DUP Result mg/l	Dilution	DUP RPD %	DUP Qualifier	DUP RPD Limits %
Total Dissolved Solids	219	178	1	20.7	J3	10

Laboratory Control Sample (LCS)

(LCS) R4096041-2 07/18/24 17:02

Analyte	Spike Amount mg/l	LCS Result mg/l	LCS Rec. %	Rec. Limits %	LCS Qualifier
Total Dissolved Solids	2410	2500	104	85.0-115	

Method Blank (MB)

(MB) R4097307-1 07/23/24 07:41

Analyte	MB Result mg/l	MB Qualifier	MB MDL mg/l	MB RDL mg/l
Suspended Solids	U		2.50	2.50

L1756933-05 Original Sample (OS) • Duplicate (DUP)

(OS) L1756933-05 07/23/24 07:41 • (DUP) R4097307-3 07/23/24 07:41

Analyte	Original Result mg/l	DUP Result mg/l	Dilution	DUP RPD %	DUP Qualifier	DUP RPD Limits %
Suspended Solids	14300	14200	1	0.840		10

L1756933-06 Original Sample (OS) • Duplicate (DUP)

(OS) L1756933-06 07/23/24 07:41 • (DUP) R4097307-4 07/23/24 07:41

Analyte	Original Result mg/l	DUP Result mg/l	Dilution	DUP RPD %	DUP Qualifier	DUP RPD Limits %
Suspended Solids	14300	14100	1	1.83		10

Laboratory Control Sample (LCS)

(LCS) R4097307-2 07/23/24 07:41

Analyte	Spike Amount mg/l	LCS Result mg/l	LCS Rec. %	Rec. Limits %	LCS Qualifier
Suspended Solids	879	820	93.3	85.0-115	

Method Blank (MB)

(MB) R4096035-1 07/19/24 09:53

Analyte	MB Result mg/l	MB Qualifier	MB MDL mg/l	MB RDL mg/l
Oil & Grease (Hexane Extr)	U		0.350	5.00

Laboratory Control Sample (LCS) • Laboratory Control Sample Duplicate (LCSD)

(LCS) R4096035-2 07/19/24 09:53 • (LCSD) R4096035-3 07/19/24 09:53

Analyte	Spike Amount mg/l	LCS Result mg/l	LCSD Result mg/l	LCS Rec. %	LCSD Rec. %	Rec. Limits %	LCS Qualifier	LCSD Qualifier	RPD %	RPD Limits %
Oil & Grease (Hexane Extr)	40.0	35.3	36.2	88.3	90.5	78.0-114			2.52	18

L1756705-02 Original Sample (OS) • Matrix Spike (MS)

(OS) L1756705-02 07/19/24 09:53 • (MS) R4096035-4 07/19/24 09:53

Analyte	Spike Amount mg/l	Original Result mg/l	MS Result mg/l	MS Rec. %	Dilution	Rec. Limits %	MS Qualifier
Oil & Grease (Hexane Extr)	40.0	U	34.0	85.1	1	78.0-114	

Method Blank (MB)

(MB) R4094918-1 07/17/24 13:58

Analyte	MB Result units	MB Qualifier	MB MDL units	MB RDL units
Color	U		5.00	5.00

Sample Narrative:

BLANK: 7

L1756836-01 Original Sample (OS) • Duplicate (DUP)

(OS) L1756836-01 07/17/24 13:58 • (DUP) R4094918-2 07/17/24 13:58

Analyte	Original Result units	DUP Result units	Dilution	DUP RPD %	DUP Qualifier	DUP RPD Limits %
Color	20.0	20.0	1	0.000		20

Sample Narrative:

OS: 7

DUP: 7

Method Blank (MB)

(MB) R4096806-1 07/22/24 12:47

Analyte	MB Result mg/l	MB Qualifier	MB MDL mg/l	MB RDL mg/l
Alkalinity	U		20.0	20.0

L1756836-01 Original Sample (OS) • Duplicate (DUP)

(OS) L1756836-01 07/22/24 12:47 • (DUP) R4096806-3 07/22/24 12:47

Analyte	Original Result mg/l	DUP Result mg/l	Dilution	DUP RPD %	DUP Qualifier	DUP RPD Limits %
Alkalinity	110	112	1	1.80		20

Laboratory Control Sample (LCS)

(LCS) R4096806-2 07/22/24 12:47

Analyte	Spike Amount mg/l	LCS Result mg/l	LCS Rec. %	Rec. Limits %	LCS Qualifier
Alkalinity	250	240	96.0	90.0-110	

Method Blank (MB)

(MB) R4094668-1 07/16/24 16:19

Analyte	MB Result mg/l	MB Qualifier	MB MDL mg/l	MB RDL mg/l
Bromide	U		0.0668	0.400
Chloride	U		0.325	0.800
Fluoride	U		0.0947	0.500
Nitrate	U		0.379	0.500
Sulfate	U		0.211	0.700

Laboratory Control Sample (LCS)

(LCS) R4094668-2 07/16/24 16:37

Analyte	Spike Amount mg/l	LCS Result mg/l	LCS Rec. %	Rec. Limits %	LCS Qualifier
Bromide	5.00	5.38	108	90.0-110	
Chloride	5.00	5.19	104	90.0-110	
Fluoride	5.00	5.33	107	90.0-110	
Nitrate	5.00	5.17	103	90.0-110	
Sulfate	5.00	5.37	107	90.0-110	

L1756836-01 Original Sample (OS) • Matrix Spike (MS) • Matrix Spike Duplicate (MSD)

(OS) L1756836-01 07/16/24 17:30 • (MS) R4094668-3 07/16/24 21:58 • (MSD) R4094668-4 07/16/24 22:16

Analyte	Spike Amount mg/l	Original Result mg/l	MS Result mg/l	MSD Result mg/l	MS Rec. %	MSD Rec. %	Dilution	Rec. Limits %	MS Qualifier	MSD Qualifier	RPD %	RPD Limits %
Bromide	5.00	0.116	5.50	5.53	108	108	1	90.0-110			0.508	20
Fluoride	5.00	0.243	5.66	5.66	108	108	1	90.0-110			0.0689	20
Nitrate	5.00	U	5.24	5.25	105	105	1	90.0-110			0.286	20

L1756836-01 Original Sample (OS) • Matrix Spike (MS) • Matrix Spike Duplicate (MSD)

(OS) L1756836-01 07/16/24 22:34 • (MS) R4094668-5 07/16/24 22:52 • (MSD) R4094668-6 07/16/24 23:09

Analyte	Spike Amount mg/l	Original Result mg/l	MS Result mg/l	MSD Result mg/l	MS Rec. %	MSD Rec. %	Dilution	Rec. Limits %	MS Qualifier	MSD Qualifier	RPD %	RPD Limits %
Chloride	5.00	16.1	43.4	43.6	546	550	5	90.0-110	J5	J5	0.393	20
Sulfate	5.00	27.3	55.1	55.2	556	560	5	90.0-110	V	V	0.333	20

Method Blank (MB)

(MB) R4094993-1 07/17/24 15:16

Analyte	MB Result mg/l	MB Qualifier	MB MDL mg/l	MB RDL mg/l
Chromium,Hexavalent	U		0.00200	0.00300

Laboratory Control Sample (LCS)

(LCS) R4094993-2 07/17/24 15:16

Analyte	Spike Amount mg/l	LCS Result mg/l	LCS Rec. %	Rec. Limits %	LCS Qualifier
Chromium,Hexavalent	0.200	0.200	100	85.0-115	

L1754173-02 Original Sample (OS) • Matrix Spike (MS) • Matrix Spike Duplicate (MSD)

(OS) L1754173-02 07/17/24 15:16 • (MS) R4094993-3 07/17/24 15:16 • (MSD) R4094993-4 07/17/24 15:16

Analyte	Spike Amount mg/l	Original Result mg/l	MS Result mg/l	MSD Result mg/l	MS Rec. %	MSD Rec. %	Dilution	Rec. Limits %	MS Qualifier	MSD Qualifier	RPD %	RPD Limits %
Chromium,Hexavalent	0.200	0.00460	0.208	0.210	102	103	1	10.0-120			0.825	20

Sample Narrative:

OS: Sample preserved in lab w/in 24 hrs of collection

L1754768-01 Original Sample (OS) • Matrix Spike (MS) • Matrix Spike Duplicate (MSD)

(OS) L1754768-01 07/17/24 15:16 • (MS) R4094993-5 07/17/24 15:16 • (MSD) R4094993-6 07/17/24 15:16

Analyte	Spike Amount mg/l	Original Result mg/l	MS Result mg/l	MSD Result mg/l	MS Rec. %	MSD Rec. %	Dilution	Rec. Limits %	MS Qualifier	MSD Qualifier	RPD %	RPD Limits %
Chromium,Hexavalent	0.200	U	0.198	0.197	98.8	98.4	1	10.0-120			0.437	20

Method Blank (MB)

(MB) R4096223-1 07/19/24 20:26

Analyte	MB Result mg/l	MB Qualifier	MB MDL mg/l	MB RDL mg/l
Kjeldahl Nitrogen, TKN	U		0.140	0.250

Laboratory Control Sample (LCS)

(LCS) R4096223-2 07/19/24 20:29

Analyte	Spike Amount mg/l	LCS Result mg/l	LCS Rec. %	Rec. Limits %	LCS Qualifier
Kjeldahl Nitrogen, TKN	4.00	3.78	94.5	90.0-110	

L1754376-02 Original Sample (OS) • Matrix Spike (MS) • Matrix Spike Duplicate (MSD)

(OS) L1754376-02 07/19/24 20:31 • (MS) R4096223-3 07/19/24 20:59 • (MSD) R4096223-4 07/19/24 21:00

Analyte	Spike Amount mg/l	Original Result mg/l	MS Result mg/l	MSD Result mg/l	MS Rec. %	MSD Rec. %	Dilution	Rec. Limits %	MS Qualifier	MSD Qualifier	RPD %	RPD Limits %
Kjeldahl Nitrogen, TKN	20.0	76.7	104	97.3	137	103	10	90.0-110	E J5		6.66	20

L1754397-01 Original Sample (OS) • Matrix Spike (MS) • Matrix Spike Duplicate (MSD)

(OS) L1754397-01 07/19/24 20:33 • (MS) R4096223-5 07/19/24 21:01 • (MSD) R4096223-6 07/19/24 21:03

Analyte	Spike Amount mg/l	Original Result mg/l	MS Result mg/l	MSD Result mg/l	MS Rec. %	MSD Rec. %	Dilution	Rec. Limits %	MS Qualifier	MSD Qualifier	RPD %	RPD Limits %
Kjeldahl Nitrogen, TKN	20.0	27.6	50.1	47.0	113	97.0	10	90.0-110	J5		6.39	20

Method Blank (MB)

(MB) R4095809-1 07/18/24 15:56

Analyte	MB Result mg/l	MB Qualifier	MB MDL mg/l	MB RDL mg/l
Nitrate-Nitrite	U		0.0300	0.0500

Laboratory Control Sample (LCS)

(LCS) R4095809-2 07/18/24 15:57

Analyte	Spike Amount mg/l	LCS Result mg/l	LCS Rec. %	Rec. Limits %	LCS Qualifier
Nitrate-Nitrite	2.50	2.41	96.4	90.0-110	

L1755904-01 Original Sample (OS) • Matrix Spike (MS) • Matrix Spike Duplicate (MSD)

(OS) L1755904-01 07/18/24 15:57 • (MS) R4095809-3 07/18/24 16:05 • (MSD) R4095809-4 07/18/24 16:06

Analyte	Spike Amount mg/l	Original Result mg/l	MS Result mg/l	MSD Result mg/l	MS Rec. %	MSD Rec. %	Dilution	Rec. Limits %	MS Qualifier	MSD Qualifier	RPD %	RPD Limits %
Nitrate-Nitrite	2.50	0.934	3.24	3.23	92.2	91.8	1	90.0-110			0.309	20

L1756836-01 Original Sample (OS) • Duplicate (DUP)

(OS) L1756836-01 07/16/24 14:05 • (DUP) R4094367-1 07/16/24 14:05

Analyte	Original Result mg/l	DUP Result mg/l	Dilution	DUP RPD %	DUP Qualifier	DUP RPD Limits %
Dissolved Oxygen	7.77	8.25	1	5.99		10

Method Blank (MB)

(MB) R4095472-1 07/18/24 12:41

Analyte	MB Result mg/l	MB Qualifier	MB MDL mg/l	MB RDL mg/l
Chlorine,residual	U		0.0260	0.100

L1756487-01 Original Sample (OS) • Duplicate (DUP)

(OS) L1756487-01 07/18/24 12:42 • (DUP) R4095472-4 07/18/24 12:42

Analyte	Original Result mg/l	DUP Result mg/l	Dilution	DUP RPD %	DUP Qualifier	DUP RPD Limits %
Chlorine,residual	0.192	0.191	1	0.522		20

Laboratory Control Sample (LCS) • Laboratory Control Sample Duplicate (LCSD)

(LCS) R4095472-2 07/18/24 12:41 • (LCSD) R4095472-3 07/18/24 12:41

Analyte	Spike Amount mg/l	LCS Result mg/l	LCSD Result mg/l	LCS Rec. %	LCSD Rec. %	Rec. Limits %	LCS Qualifier	LCSD Qualifier	RPD %	RPD Limits %
Chlorine,residual	1.00	0.975	0.978	97.5	97.8	85.0-115			0.307	20

Method Blank (MB)

(MB) R4095810-1 07/18/24 18:49

Analyte	MB Result mg/l	MB Qualifier	MB MDL mg/l	MB RDL mg/l
Cyanide	U		0.00430	0.0100

Laboratory Control Sample (LCS)

(LCS) R4095810-2 07/18/24 18:49

Analyte	Spike Amount mg/l	LCS Result mg/l	LCS Rec. %	Rec. Limits %	LCS Qualifier
Cyanide	0.100	0.103	103	85.0-115	

L1757293-02 Original Sample (OS) • Matrix Spike (MS) • Matrix Spike Duplicate (MSD)

(OS) L1757293-02 07/18/24 18:49 • (MS) R4095810-3 07/18/24 18:49 • (MSD) R4095810-4 07/18/24 18:49

Analyte	Spike Amount mg/l	Original Result mg/l	MS Result mg/l	MSD Result mg/l	MS Rec. %	MSD Rec. %	Dilution	Rec. Limits %	MS Qualifier	MSD Qualifier	RPD %	RPD Limits %
Cyanide	0.100	U	0.0507	0.0507	50.7	50.7	1	85.0-115	J6	J6	0.000	20

L1757408-06 Original Sample (OS) • Matrix Spike (MS) • Matrix Spike Duplicate (MSD)

(OS) L1757408-06 07/18/24 18:49 • (MS) R4095810-5 07/18/24 18:49 • (MSD) R4095810-6 07/18/24 18:49

Analyte	Spike Amount mg/l	Original Result mg/l	MS Result mg/l	MSD Result mg/l	MS Rec. %	MSD Rec. %	Dilution	Rec. Limits %	MS Qualifier	MSD Qualifier	RPD %	RPD Limits %
Cyanide	0.100	0.00474	0.0900	0.0940	90.0	94.0	1	85.0-115			4.34	20

Method Blank (MB)

(MB) R4096931-1 07/22/24 16:34

Analyte	MB Result mg/l	MB Qualifier	MB MDL mg/l	MB RDL mg/l
Phosphorus,Total	U		0.0152	0.0500

Laboratory Control Sample (LCS)

(LCS) R4096931-2 07/22/24 16:34

Analyte	Spike Amount mg/l	LCS Result mg/l	LCS Rec. %	Rec. Limits %	LCS Qualifier
Phosphorus,Total	0.500	0.513	103	80.0-120	

L1757284-02 Original Sample (OS) • Matrix Spike (MS) • Matrix Spike Duplicate (MSD)

(OS) L1757284-02 07/22/24 16:34 • (MS) R4096931-3 07/22/24 16:35 • (MSD) R4096931-4 07/22/24 16:35

Analyte	Spike Amount mg/l	Original Result mg/l	MS Result mg/l	MSD Result mg/l	MS Rec. %	MSD Rec. %	Dilution	Rec. Limits %	MS Qualifier	MSD Qualifier	RPD %	RPD Limits %
Phosphorus,Total	0.500	0.164	0.686	0.666	104	100	1	80.0-120			3.01	20

1 Cp
2 Tc
3 Ss
4 Cn
5 Sr
6 Qc
7 Gl
8 Al
9 Sc

Method Blank (MB)

(MB) R4094911-1 07/17/24 13:38

Analyte	MB Result mg/l	MB Qualifier	MB MDL mg/l	MB RDL mg/l
Sulfide	U		0.0230	0.100

Laboratory Control Sample (LCS)

(LCS) R4094911-2 07/17/24 13:38

Analyte	Spike Amount mg/l	LCS Result mg/l	LCS Rec. %	Rec. Limits %	LCS Qualifier
Sulfide	0.800	0.877	110	80.0-120	

L1756950-02 Original Sample (OS) • Matrix Spike (MS) • Matrix Spike Duplicate (MSD)

(OS) L1756950-02 07/17/24 13:40 • (MS) R4094911-3 07/17/24 13:40 • (MSD) R4094911-4 07/17/24 13:40

Analyte	Spike Amount mg/l	Original Result mg/l	MS Result mg/l	MSD Result mg/l	MS Rec. %	MSD Rec. %	Dilution	Rec. Limits %	MS Qualifier	MSD Qualifier	RPD %	RPD Limits %
Sulfide	0.800	0.0269	0.591	0.567	70.5	67.5	1	80.0-120	J6	J6	4.07	20

Method Blank (MB)

(MB) R4097393-1 07/23/24 15:00

Analyte	MB Result mg/l	MB Qualifier	MB MDL mg/l	MB RDL mg/l
Sulfite	U		1.19	3.00

L1757021-02 Original Sample (OS) • Duplicate (DUP)

(OS) L1757021-02 07/23/24 15:00 • (DUP) R4097393-3 07/23/24 15:00

Analyte	Original Result mg/l	DUP Result mg/l	Dilution	DUP RPD %	DUP Qualifier	DUP RPD Limits %
Sulfite	6.50	6.50	1	0.000		20

Laboratory Control Sample (LCS)

(LCS) R4097393-2 07/23/24 15:00

Analyte	Spike Amount mg/l	LCS Result mg/l	LCS Rec. %	Rec. Limits %	LCS Qualifier
Sulfite	20.0	18.0	90.0	85.0-115	

L1757021-03 Original Sample (OS) • Matrix Spike (MS) • Matrix Spike Duplicate (MSD)

(OS) L1757021-03 07/23/24 15:00 • (MS) R4097393-4 07/23/24 15:00 • (MSD) R4097393-5 07/23/24 15:00

Analyte	Spike Amount mg/l	Original Result mg/l	MS Result mg/l	MSD Result mg/l	MS Rec. %	MSD Rec. %	Dilution	Rec. Limits %	MS Qualifier	MSD Qualifier	RPD %	RPD Limits %
Sulfite	20.0	U	17.5	18.0	87.5	90.0	1	85.0-115			2.82	20

Method Blank (MB)

(MB) R4096615-1 07/21/24 11:11

Analyte	MB Result mg/l	MB Qualifier	MB MDL mg/l	MB RDL mg/l
BOD	U		0.200	0.200

L1756776-01 Original Sample (OS) • Duplicate (DUP)

(OS) L1756776-01 07/21/24 11:42 • (DUP) R4096615-3 07/21/24 11:54

Analyte	Original Result mg/l	DUP Result mg/l	Dilution	DUP RPD %	DUP Qualifier	DUP RPD Limits %
BOD	7.12	7.08	1	0.563		20

L1756822-01 Original Sample (OS) • Duplicate (DUP)

(OS) L1756822-01 07/21/24 11:48 • (DUP) R4096615-4 07/21/24 11:59

Analyte	Original Result mg/l	DUP Result mg/l	Dilution	DUP RPD %	DUP Qualifier	DUP RPD Limits %
BOD	ND	ND	1	0		20

Laboratory Control Sample (LCS)

(LCS) R4096615-2 07/21/24 11:17

Analyte	Spike Amount mg/l	LCS Result mg/l	LCS Rec. %	Rec. Limits %	LCS Qualifier
BOD	198	194	98.1	85-115	

Method Blank (MB)

(MB) R4096616-1 07/21/24 12:45

Analyte	MB Result mg/l	MB Qualifier	MB MDL mg/l	MB RDL mg/l
CBOD	U		0.200	0.200

L1756689-01 Original Sample (OS) • Duplicate (DUP)

(OS) L1756689-01 07/21/24 12:55 • (DUP) R4096616-3 07/21/24 13:45

Analyte	Original Result mg/l	DUP Result mg/l	Dilution	DUP RPD %	DUP Qualifier	DUP RPD Limits %
CBOD	3.79	3.71	1	2.13		20

L1756933-01 Original Sample (OS) • Duplicate (DUP)

(OS) L1756933-01 07/21/24 13:39 • (DUP) R4096616-4 07/21/24 13:49

Analyte	Original Result mg/l	DUP Result mg/l	Dilution	DUP RPD %	DUP Qualifier	DUP RPD Limits %
CBOD	ND	ND	1	0		20

Laboratory Control Sample (LCS)

(LCS) R4096616-2 07/21/24 12:51

Analyte	Spike Amount mg/l	LCS Result mg/l	LCS Rec. %	Rec. Limits %	LCS Qualifier
CBOD	198	198	100	85-115	

Method Blank (MB)

(MB) R4094848-1 07/17/24 11:53

Analyte	MB Result mg/l	MB Qualifier	MB MDL mg/l	MB RDL mg/l
COD	U		16.1	35.0

Laboratory Control Sample (LCS)

(LCS) R4094848-2 07/17/24 11:53

Analyte	Spike Amount mg/l	LCS Result mg/l	LCS Rec. %	Rec. Limits %	LCS Qualifier
COD	500	516	103	80.0-120	

L1756038-04 Original Sample (OS) • Matrix Spike (MS) • Matrix Spike Duplicate (MSD)

(OS) L1756038-04 07/17/24 11:53 • (MS) R4094848-3 07/17/24 11:53 • (MSD) R4094848-4 07/17/24 11:53

Analyte	Spike Amount mg/l	Original Result mg/l	MS Result mg/l	MSD Result mg/l	MS Rec. %	MSD Rec. %	Dilution	Rec. Limits %	MS Qualifier	MSD Qualifier	RPD %	RPD Limits %
COD	500	28.5	518	531	98.0	100	1	80.0-120			2.39	20

L1756465-01 Original Sample (OS) • Matrix Spike (MS) • Matrix Spike Duplicate (MSD)

(OS) L1756465-01 07/17/24 11:53 • (MS) R4094848-5 07/17/24 11:53 • (MSD) R4094848-6 07/17/24 11:53

Analyte	Spike Amount mg/l	Original Result mg/l	MS Result mg/l	MSD Result mg/l	MS Rec. %	MSD Rec. %	Dilution	Rec. Limits %	MS Qualifier	MSD Qualifier	RPD %	RPD Limits %
COD	500	51.5	531	543	95.9	98.4	1	80.0-120			2.34	20

Method Blank (MB)

(MB) R4094841-1 07/16/24 15:35

Analyte	MB Result mg/l	MB Qualifier	MB MDL mg/l	MB RDL mg/l
TOC (Total Organic Carbon)	U		0.270	0.700

Laboratory Control Sample (LCS)

(LCS) R4094841-2 07/16/24 15:54

Analyte	Spike Amount mg/l	LCS Result mg/l	LCS Rec. %	Rec. Limits %	LCS Qualifier
TOC (Total Organic Carbon)	10.0	10.2	102	90.0-110	

L1756680-01 Original Sample (OS) • Matrix Spike (MS) • Matrix Spike Duplicate (MSD)

(OS) L1756680-01 07/16/24 17:14 • (MS) R4094841-3 07/16/24 18:08 • (MSD) R4094841-4 07/16/24 18:36

Analyte	Spike Amount mg/l	Original Result mg/l	MS Result mg/l	MSD Result mg/l	MS Rec. %	MSD Rec. %	Dilution	Rec. Limits %	MS Qualifier	MSD Qualifier	RPD %	RPD Limits %
TOC (Total Organic Carbon)	50.0	28.5	79.8	84.1	103	111	5	80.0-120			5.19	20

Method Blank (MB)

(MB) R4095086-1 07/17/24 17:29

Analyte	MB Result mg/l	MB Qualifier	MB MDL mg/l	MB RDL mg/l
MBAS	U		0.360	0.500

Laboratory Control Sample (LCS)

(LCS) R4095086-2 07/17/24 17:29

Analyte	Spike Amount mg/l	LCS Result mg/l	LCS Rec. %	Rec. Limits %	LCS Qualifier
MBAS	1.00	1.12	112	80.0-120	

L1756836-01 Original Sample (OS) • Matrix Spike (MS) • Matrix Spike Duplicate (MSD)

(OS) L1756836-01 07/17/24 17:29 • (MS) R4095086-3 07/17/24 17:29 • (MSD) R4095086-4 07/17/24 17:29

Analyte	Spike Amount mg/l	Original Result mg/l	MS Result mg/l	MSD Result mg/l	MS Rec. %	MSD Rec. %	Dilution	Rec. Limits %	MS Qualifier	MSD Qualifier	RPD %	RPD Limits %
MBAS	1.00	U	1.25	1.13	125	113	1	80.0-120	J5		10.4	20

L1756869-01 Original Sample (OS) • Duplicate (DUP)

(OS) L1756869-01 07/18/24 08:46 • (DUP) R4095234-2 07/18/24 08:46

Analyte	Original Result	DUP Result	Dilution	DUP RPD	DUP Qualifier	DUP RPD Limits
	su	su		%		%
pH	8.99	8.99	1	0.000		20

Sample Narrative:

OS: 8.99 at 21.7C

DUP: 8.99 at 21.6C

Laboratory Control Sample (LCS)

(LCS) R4095234-1 07/18/24 08:46

Analyte	Spike Amount	LCS Result	LCS Rec.	Rec. Limits	LCS Qualifier
	su	su	%	%	
pH	6.00	5.97	99.5	99.0-101	

Sample Narrative:

LCS: 5.97 at 21.2C

Method Blank (MB)

(MB) R4096965-1 07/22/24 15:38

Analyte	MB Result mg/l	MB Qualifier	MB MDL mg/l	MB RDL mg/l
Ammonia Nitrogen	U		0.0280	0.100

Laboratory Control Sample (LCS)

(LCS) R4096965-2 07/22/24 15:39

Analyte	Spike Amount mg/l	LCS Result mg/l	LCS Rec. %	Rec. Limits %	LCS Qualifier
Ammonia Nitrogen	5.00	5.04	101	80.0-120	

L1755609-01 Original Sample (OS) • Matrix Spike (MS) • Matrix Spike Duplicate (MSD)

(OS) L1755609-01 07/22/24 15:57 • (MS) R4096965-3 07/22/24 15:50 • (MSD) R4096965-4 07/22/24 15:52

Analyte	Spike Amount mg/l	Original Result mg/l	MS Result mg/l	MSD Result mg/l	MS Rec. %	MSD Rec. %	Dilution	Rec. Limits %	MS Qualifier	MSD Qualifier	RPD %	RPD Limits %
Ammonia Nitrogen	5.00	0.0469	4.91	4.90	97.3	97.1	1	80.0-120			0.204	20

L1756014-01 Original Sample (OS) • Matrix Spike (MS) • Matrix Spike Duplicate (MSD)

(OS) L1756014-01 07/22/24 15:59 • (MS) R4096965-5 07/22/24 15:53 • (MSD) R4096965-6 07/22/24 15:55

Analyte	Spike Amount mg/l	Original Result mg/l	MS Result mg/l	MSD Result mg/l	MS Rec. %	MSD Rec. %	Dilution	Rec. Limits %	MS Qualifier	MSD Qualifier	RPD %	RPD Limits %
Ammonia Nitrogen	5.00	0.120	4.96	4.98	96.8	97.2	1	80.0-120			0.402	20

QUALITY CONTROL SUMMARY

L1756836-01

Method Blank (MB)

(MB) R4095624-5 07/18/24 17:12

Analyte	MB Result mg/l	MB Qualifier	MB MDL mg/l	MB RDL mg/l
Mercury	U		0.0000450	0.000200

Laboratory Control Sample (LCS)

(LCS) R4095624-2 07/18/24 16:54

Analyte	Spike Amount mg/l	LCS Result mg/l	LCS Rec. %	Rec. Limits %	LCS Qualifier
Mercury	0.00250	0.00255	102	85.0-115	

L1756002-06 Original Sample (OS) • Matrix Spike (MS) • Matrix Spike Duplicate (MSD)

(OS) L1756002-06 07/18/24 16:56 • (MS) R4095624-3 07/18/24 16:58 • (MSD) R4095624-4 07/18/24 17:00

Analyte	Spike Amount mg/l	Original Result mg/l	MS Result mg/l	MSD Result mg/l	MS Rec. %	MSD Rec. %	Dilution	Rec. Limits %	MS Qualifier	MSD Qualifier	RPD %	RPD Limits %
Mercury	0.00250	0.000119	0.00246	0.00243	93.6	92.4	1	70.0-130			1.23	20

L1756002-04 Original Sample (OS) • Matrix Spike (MS) • Matrix Spike Duplicate (MSD)

(OS) L1756002-04 07/18/24 17:56 • (MS) R4095624-6 07/18/24 17:58 • (MSD) R4095624-7 07/18/24 18:00

Analyte	Spike Amount mg/l	Original Result mg/l	MS Result mg/l	MSD Result mg/l	MS Rec. %	MSD Rec. %	Dilution	Rec. Limits %	MS Qualifier	MSD Qualifier	RPD %	RPD Limits %
Mercury	0.00250	0.000237	0.00273	0.00270	99.7	98.5	1	70.0-130			1.10	20

Method Blank (MB)

(MB) R4095885-1 07/19/24 10:24

Analyte	MB Result mg/l	MB Qualifier	MB MDL mg/l	MB RDL mg/l
Boron	U		0.0186	0.100
Tin	U		0.00240	0.0250
Titanium	U		0.00835	0.100

Laboratory Control Sample (LCS)

(LCS) R4095885-2 07/19/24 10:28

Analyte	Spike Amount mg/l	LCS Result mg/l	LCS Rec. %	Rec. Limits %	LCS Qualifier
Boron	1.00	0.936	93.6	85.0-115	
Tin	1.00	0.994	99.4	85.0-115	
Titanium	1.00	0.979	97.9	85.0-115	

L1756433-03 Original Sample (OS) • Matrix Spike (MS) • Matrix Spike Duplicate (MSD)

(OS) L1756433-03 07/19/24 10:32 • (MS) R4095885-3 07/19/24 10:36 • (MSD) R4095885-4 07/19/24 10:40

Analyte	Spike Amount mg/l	Original Result mg/l	MS Result mg/l	MSD Result mg/l	MS Rec. %	MSD Rec. %	Dilution	Rec. Limits %	MS Qualifier	MSD Qualifier	RPD %	RPD Limits %
Boron	1.00	0.283	1.22	1.19	93.6	91.2	1	70.0-130			1.99	20
Tin	1.00	0.00980	0.974	0.964	96.4	95.4	1	70.0-130			1.10	20
Titanium	1.00	U	0.982	0.954	98.2	95.4	1	70.0-130			2.87	20

Method Blank (MB)

(MB) R4098986-1 07/26/24 14:22

Analyte	MB Result mg/l	MB Qualifier	MB MDL mg/l	MB RDL mg/l
Aluminum	0.00428		0.00186	0.00250
Antimony	U		0.000580	0.00500
Arsenic	0.000112	J	0.000100	0.000500
Barium	U		0.000440	0.00300
Beryllium	U		0.0000600	0.000500
Cadmium	U		0.000120	0.00100
Chromium	U		0.000510	0.00300
Cobalt	U		0.0000400	0.000300
Copper	U		0.000900	0.00200
Iron	0.00462	J	0.00432	0.00700
Lead	U		0.000140	0.000500
Magnesium	U		0.0121	0.0200
Manganese	U		0.000330	0.000500
Molybdenum	U		0.000530	0.00100
Nickel	U		0.000640	0.00200
Selenium	U		0.000740	0.00500
Silver	U		0.0000800	0.000500
Thallium	0.000202	J	0.000190	0.000500
Zinc	U		0.00265	0.00500

Laboratory Control Sample (LCS)

(LCS) R4098986-2 07/26/24 14:34

Analyte	Spike Amount mg/l	LCS Result mg/l	LCS Rec. %	Rec. Limits %	LCS Qualifier
Aluminum	1.00	1.03	103	85.0-115	
Antimony	0.100	0.0972	97.2	85.0-115	
Arsenic	0.100	0.103	103	85.0-115	
Barium	0.100	0.0943	94.3	85.0-115	
Beryllium	0.100	0.103	103	85.0-115	
Cadmium	0.100	0.106	106	85.0-115	
Chromium	0.100	0.105	105	85.0-115	
Cobalt	0.100	0.104	104	85.0-115	
Copper	0.100	0.105	105	85.0-115	
Iron	1.00	1.07	107	85.0-115	
Lead	0.100	0.104	104	85.0-115	
Magnesium	1.00	1.08	108	85.0-115	
Manganese	0.100	0.104	104	85.0-115	
Molybdenum	0.100	0.109	109	85.0-115	

Laboratory Control Sample (LCS)

(LCS) R4098986-2 07/26/24 14:34

Analyte	Spike Amount mg/l	LCS Result mg/l	LCS Rec. %	Rec. Limits %	LCS Qualifier
Nickel	0.100	0.103	103	85.0-115	
Selenium	0.100	0.105	105	85.0-115	
Silver	0.0500	0.0530	106	85.0-115	
Thallium	0.100	0.0980	98.0	85.0-115	
Zinc	0.100	0.103	103	85.0-115	

L1756836-01 Original Sample (OS) • Matrix Spike (MS) • Matrix Spike Duplicate (MSD)

(OS) L1756836-01 07/26/24 14:40 • (MS) R4098986-3 07/26/24 14:59 • (MSD) R4098986-4 07/26/24 15:05

Analyte	Spike Amount mg/l	Original Result mg/l	MS Result mg/l	MSD Result mg/l	MS Rec. %	MSD Rec. %	Dilution	Rec. Limits %	MS Qualifier	MSD Qualifier	RPD %	RPD Limits %
Aluminum	1.00	0.167	1.06	1.03	89.2	86.1	1	70.0-130			2.97	20
Antimony	0.100	U	0.0847	0.0830	84.7	83.0	1	70.0-130			2.08	20
Arsenic	0.100	0.00528	0.0963	0.0954	91.1	90.1	1	70.0-130			1.02	20
Barium	0.100	0.0341	0.112	0.111	78.2	76.5	1	70.0-130			1.50	20
Beryllium	0.100	0.0000927	0.0964	0.0966	96.3	96.5	1	70.0-130			0.186	20
Cadmium	0.100	U	0.0908	0.0898	90.8	89.8	1	70.0-130			1.12	20
Chromium	0.100	U	0.0915	0.0880	91.5	88.0	1	70.0-130			3.91	20
Cobalt	0.100	0.00305	0.0895	0.0877	86.5	84.6	1	70.0-130			2.06	20
Copper	0.100	0.00257	0.0935	0.0913	91.0	88.7	1	70.0-130			2.40	20
Iron	1.00	0.153	1.18	1.06	103	90.8	1	70.0-130			11.0	20
Lead	0.100	0.000221	0.0913	0.0896	91.1	89.4	1	70.0-130			1.90	20
Magnesium	1.00	3.92	4.50	4.29	58.9	37.8	1	70.0-130	J6	J6	4.79	20
Manganese	0.100	0.0439	0.129	0.124	85.0	79.8	1	70.0-130			4.12	20
Molybdenum	0.100	0.00174	0.0961	0.0951	94.4	93.4	1	70.0-130			1.04	20
Nickel	0.100	0.00163	0.0913	0.0889	89.7	87.3	1	70.0-130			2.60	20
Selenium	0.100	U	0.0974	0.0996	97.4	99.6	1	70.0-130			2.26	20
Silver	0.0500	U	0.0465	0.0465	93.0	93.0	1	70.0-130			0.0109	20
Thallium	0.100	0.000894	0.0919	0.0893	91.0	88.4	1	70.0-130			2.83	20
Zinc	0.100	U	0.0937	0.0896	93.7	89.6	1	70.0-130			4.46	20

Method Blank (MB)

(MB) R4095202-2 07/16/24 20:34

Analyte	MB Result mg/l	MB Qualifier	MB MDL mg/l	MB RDL mg/l
1,1,1-Trichloroethane	U		0.00335	0.00500
1,1,2,2-Tetrachloroethane	U		0.000596	0.00500
1,1,2-Trichloroethane	U		0.00145	0.00500
1,1-Dichloroethene	U		0.00367	0.00500
1,1-Dichloroethane	U		0.00292	0.00500
1,2-Dibromoethane	U		0.000549	0.00200
1,2-Dichlorobenzene	U		0.00172	0.00200
1,2-Dichloroethane	U		0.00195	0.00500
1,2-Dichloropropane	U		0.000804	0.00200
1,3-Dichlorobenzene	U		0.00419	0.00500
1,4-Dichlorobenzene	U		0.00173	0.00200
2-Butanone (MEK)	U		0.00822	0.0250
2-Chloroethyl vinyl ether	U		0.00652	0.0100
Acrolein	U		0.00544	0.0100
Acrylonitrile	U		0.00709	0.0100
Benzene	U		0.00207	0.00500
Bromodichloromethane	U		0.00179	0.00200
Bromoform	U		0.000960	0.0100
Bromomethane	U		0.00347	0.00500
Carbon tetrachloride	U		0.00159	0.00200
Chlorobenzene	U		0.00276	0.0100
Chloroethane	U		0.00296	0.00500
Chloroform	U		0.00212	0.00500
Chloromethane	U		0.00361	0.00500
cis-1,3-Dichloropropene	U		0.00492	0.0100
Dibromochloromethane	U		0.00327	0.00500
Ethylbenzene	U		0.000401	0.00200
Methylene Chloride	U		0.0118	0.0200
Tetrachloroethene	U		0.00486	0.0100
Toluene	U		0.00219	0.00500
trans-1,2-Dichloroethene	U		0.00501	0.0100
Trichloroethene	U		0.00262	0.00500
Vinyl chloride	U		0.00466	0.00500
(S) 1,2-Dichloroethane-d4	*101*			*70.0-130*
(S) 4-Bromofluorobenzene	*100*			*70.0-130*
(S) Toluene-d8	*100*			*70.0-130*

Laboratory Control Sample (LCS)

(LCS) R4095202-1 07/16/24 18:55

Analyte	Spike Amount mg/l	LCS Result mg/l	LCS Rec. %	Rec. Limits %	LCS Qualifier
1,1,1-Trichloroethane	0.0200	0.0208	104	70.0-130	
1,1,2,2-Tetrachloroethane	0.0200	0.0185	92.5	60.0-140	
1,1,2-Trichloroethane	0.0200	0.0203	102	70.0-130	
1,1-Dichloroethene	0.0200	0.0202	101	50.0-150	
1,1-Dichloroethane	0.0200	0.0195	97.5	70.0-130	
1,2-Dibromoethane	0.0200	0.0200	100	70.0-130	
1,2-Dichlorobenzene	0.0200	0.0204	102	65.0-135	
1,2-Dichloroethane	0.0200	0.0193	96.5	70.0-130	
1,2-Dichloropropane	0.0200	0.0194	97.0	35.0-165	
1,3-Dichlorobenzene	0.0200	0.0201	101	70.0-130	
1,4-Dichlorobenzene	0.0200	0.0197	98.5	65.0-135	
2-Butanone (MEK)	0.100	0.0999	99.9	70.0-130	
2-Chloroethyl vinyl ether	0.100	0.0974	97.4	1.00-225	
Acrolein	0.100	0.103	103	64.0-139	
Acrylonitrile	0.100	0.0991	99.1	67.0-136	
Benzene	0.0200	0.0199	99.5	65.0-135	
Bromodichloromethane	0.0200	0.0202	101	65.0-135	
Bromoform	0.0200	0.0189	94.5	70.0-130	
Bromomethane	0.0200	0.0235	117	15.0-185	
Carbon tetrachloride	0.0200	0.0197	98.5	70.0-130	
Chlorobenzene	0.0200	0.0199	99.5	65.0-135	
Chloroethane	0.0200	0.0195	97.5	40.0-160	
Chloroform	0.0200	0.0199	99.5	70.0-135	
Chloromethane	0.0200	0.0173	86.5	1.00-205	
cis-1,3-Dichloropropene	0.0200	0.0192	96.0	25.0-175	
Dibromochloromethane	0.0200	0.0196	98.0	70.0-135	
Ethylbenzene	0.0200	0.0200	100	60.0-140	
Methylene Chloride	0.0200	0.0197	98.5	60.0-140	J
Tetrachloroethene	0.0200	0.0197	98.5	70.0-130	
Toluene	0.0200	0.0196	98.0	70.0-130	
trans-1,2-Dichloroethene	0.0200	0.0202	101	70.0-130	
Trichloroethene	0.0200	0.0215	108	65.0-135	
Vinyl chloride	0.0200	0.0197	98.5	5.00-195	
(S) 1,2-Dichloroethane-d4			*107*	*70.0-130*	
(S) 4-Bromofluorobenzene			*100*	*70.0-130*	
(S) Toluene-d8			*101*	*70.0-130*	

L1756836-01 Original Sample (OS) • Matrix Spike (MS) • Matrix Spike Duplicate (MSD)

(OS) L1756836-01 07/16/24 22:36 • (MS) R4095202-3 07/16/24 23:00 • (MSD) R4095202-4 07/16/24 23:25

Analyte	Spike Amount mg/l	Original Result mg/l	MS Result mg/l	MSD Result mg/l	MS Rec. %	MSD Rec. %	Dilution	Rec. Limits %	MS Qualifier	MSD Qualifier	RPD %	RPD Limits %
1,1,1-Trichloroethane	0.0200	U	0.0217	0.0194	109	97.0	1	52.0-162			11.2	36
1,1,2,2-Tetrachloroethane	0.0200	U	0.0178	0.0174	89.0	87.0	1	46.0-157			2.27	61
1,1,2-Trichloroethane	0.0200	U	0.0198	0.0189	99.0	94.5	1	52.0-150			4.65	45
1,1-Dichloroethene	0.0200	U	0.0225	0.0206	113	103	1	1.00-234			8.82	32
1,2-Dibromoethane	0.0200	U	0.0187	0.0186	93.5	93.0	1	70.0-130			0.536	20
1,2-Dichlorobenzene	0.0200	U	0.0215	0.0199	108	99.5	1	18.0-190			7.73	57
1,2-Dichloroethane	0.0200	U	0.0200	0.0192	100	96.0	1	49.0-155			4.08	49
1,2-Dichloropropane	0.0200	U	0.0201	0.0183	101	91.5	1	1.00-210			9.37	55
1,3-Dichlorobenzene	0.0200	U	0.0208	0.0192	104	96.0	1	59.0-156			8.00	43
1,4-Dichlorobenzene	0.0200	U	0.0202	0.0198	101	99.0	1	18.0-190			2.00	57
2-Butanone (MEK)	0.100	U	0.0618	0.0625	61.8	62.5	1	70.0-130	J6	J6	1.13	20
2-Chloroethyl vinyl ether	0.100	U	0.0768	0.0713	76.8	71.3	1	1.00-305			7.43	71
Acrolein	0.100	U	0.0515	0.0489	51.5	48.9	1	4.00-172			5.18	20
Acrylonitrile	0.100	U	0.0908	0.0796	90.8	79.6	1	22.0-189			13.1	20
Benzene	0.0200	U	0.0215	0.0196	108	98.0	1	37.0-151			9.25	61
Bromodichloromethane	0.0200	U	0.0203	0.0184	102	92.0	1	35.0-155			9.82	56
Bromoform	0.0200	U	0.0171	0.0169	85.5	84.5	1	70.0-130			1.18	42
Bromomethane	0.0200	U	0.0199	0.0178	99.5	89.0	1	15.0-185			11.1	61
Carbon tetrachloride	0.0200	U	0.0212	0.0188	106	94.0	1	70.0-140			12.0	41
Chlorobenzene	0.0200	U	0.0201	0.0193	101	96.5	1	37.0-160			4.06	53
Chloroethane	0.0200	U	0.0169	0.0159	84.5	79.5	1	14.0-230			6.10	78
Chloroform	0.0200	U	0.0218	0.0199	109	99.5	1	51.0-138			9.11	54
Chloromethane	0.0200	U	0.0144	0.0140	72.0	70.0	1	1.00-273			2.82	20
cis-1,3-Dichloropropene	0.0200	U	0.0180	0.0174	90.0	87.0	1	1.00-227			3.39	58
Dibromochloromethane	0.0200	U	0.0190	0.0176	95.0	88.0	1	53.0-149			7.65	50
Ethylbenzene	0.0200	U	0.0210	0.0198	105	99.0	1	37.0-162			5.88	63
Methylene Chloride	0.0200	U	0.0185	0.0171	92.5	85.5	1	1.00-221	J	J	7.87	28
Tetrachloroethene	0.0200	U	0.0215	0.0201	108	101	1	64.0-148			6.73	39
Toluene	0.0200	U	0.0199	0.0193	99.5	96.5	1	47.0-150			3.06	41
trans-1,2-Dichloroethene	0.0200	U	0.0226	0.0204	113	102	1	54.0-156			10.2	45
Trichloroethene	0.0200	U	0.0229	0.0213	115	106	1	70.0-157			7.24	48
Vinyl chloride	0.0200	U	0.0177	0.0165	88.5	82.5	1	1.00-251			7.02	66
(S) 1,2-Dichloroethane-d4					*104*	*100*		*70.0-130*				
(S) 4-Bromofluorobenzene					*100*	*99.0*		*70.0-130*				
(S) Toluene-d8					*100*	*101*		*70.0-130*				

Method Blank (MB)

(MB) R4096010-1 07/19/24 02:11

Analyte	MB Result mg/l	MB Qualifier	MB MDL mg/l	MB RDL mg/l
PCB 1016	U		0.000270	0.000500
PCB 1221	U		0.000270	0.000500
PCB 1232	U		0.000270	0.000500
PCB 1242	U		0.000270	0.000500
PCB 1248	U		0.000173	0.000500
PCB 1254	U		0.000173	0.000500
PCB 1260	U		0.000173	0.000500
Total PCBs	U		0.000173	0.000500
(S) Decachlorobiphenyl	*22.5*			*10.0-144*
(S) Tetrachloro-m-xylene	*70.6*			*10.0-135*

Laboratory Control Sample (LCS)

(LCS) R4096010-5 07/19/24 02:30

Analyte	Spike Amount mg/l	LCS Result mg/l	LCS Rec. %	Rec. Limits %	LCS Qualifier
PCB 1016	0.00250	0.00282	113	50.0-140	
PCB 1260	0.00250	0.00247	98.8	8.00-140	
(S) Decachlorobiphenyl			*63.5*	*10.0-144*	
(S) Tetrachloro-m-xylene			*79.2*	*10.0-135*	

L1756962-01 Original Sample (OS) • Matrix Spike (MS) • Matrix Spike Duplicate (MSD)

(OS) L1756962-01 07/19/24 03:09 • (MS) R4096010-6 07/19/24 03:39 • (MSD) R4096010-7 07/19/24 03:48

Analyte	Spike Amount mg/l	Original Result mg/l	MS Result mg/l	MSD Result mg/l	MS Rec. %	MSD Rec. %	Dilution	Rec. Limits %	MS Qualifier	MSD Qualifier	RPD %	RPD Limits %
PCB 1016	0.00250	U	0.0152	0.0214	608	856	1	50.0-140	J5 P	J5	33.9	36
PCB 1260	0.00250	U	0.0165	0.0238	660	952	1	8.00-140	J5 P	J5	36.2	38
(S) Decachlorobiphenyl					*23.0*	*28.6*		*10.0-144*				
(S) Tetrachloro-m-xylene					*49.2*	*57.9*		*10.0-135*				

Method Blank (MB)

(MB) R4096164-1 07/19/24 12:54

Analyte	MB Result mg/l	MB Qualifier	MB MDL mg/l	MB RDL mg/l
1,2,4,5-Tetrachlorobenzene	U		0.000200	0.00200
2,4,6-Trichlorophenol	U		0.000238	0.00200
2,4-Dichlorophenol	U		0.000336	0.00400
2,4-Dimethylphenol	U		0.000613	0.00200
2,4-Dinitrophenol	U		0.00154	0.0100
2-Chlorophenol	U		0.000307	0.00200
2-Methylphenol	U		0.000238	0.00200
2-Nitrophenol	U		0.000247	0.00200
3&4-Methyl Phenol	U		0.000238	0.00200
3,3-Dichlorobenzidine	U		0.000788	0.00400
4,6-Dinitro-2-methylphenol	U		0.00202	0.0100
4-Chloro-3-methylphenol	U		0.000217	0.00200
4-Nitrophenol	U		0.00123	0.0100
Anthracene	U		0.000168	0.00200
Benzidine	U		0.000350	0.00400
Benzo(a)anthracene	U		0.000307	0.00200
Benzo(a)pyrene	U		0.000470	0.00200
Bis(2-chloroethyl)ether	U		0.000168	0.00200
Bis(2-Ethylhexyl)phthalate	U		0.00180	0.00200
Chrysene	U		0.000257	0.00200
Di-n-butyl phthalate	U		0.00160	0.00200
Hexachloro-1,3-butadiene	U		0.000217	0.00200
Hexachlorobenzene	U		0.000307	0.00200
Hexachlorocyclopentadiene	U		0.000299	0.00200
Hexachloroethane	U		0.000247	0.00200
n-Nitrosodi-n-butylamine	U		0.00110	0.00200
n-Nitrosodiethylamine	U		0.000696	0.00200
Nitrobenzene	U		0.000314	0.00200
Nonylphenol	U		0.000168	0.00200
Pentachlorobenzene	U		0.000247	0.00200
Pentachlorophenol	U		0.000283	0.00200
Phenanthrene	U		0.000200	0.00200
Phenol	U		0.000500	0.00200
Pyridine	U		0.00174	0.00400
Total Cresols	U		0.00153	0.00800
(S) 2,4,6-Tribromophenol	*54.0*			*29.0-132*
(S) 2-Fluorobiphenyl	*68.0*			*26.0-102*
(S) 2-Fluorophenol	*59.0*			*10.0-66.0*
(S) Nitrobenzene-d5	*70.0*			*15.0-106*
(S) p-Terphenyl-d14	*80.0*			*10.0-120*

QUALITY CONTROL SUMMARY

L1756836-01

Method Blank (MB)

(MB) R4096164-1 07/19/24 12:54

Analyte	MB Result mg/l	MB Qualifier	MB MDL mg/l	MB RDL mg/l
(S) Phenol-d6	*50.5*			*10.0-54.0*

Laboratory Control Sample (LCS)

(LCS) R4096164-2 07/19/24 13:23

Analyte	Spike Amount mg/l	LCS Result mg/l	LCS Rec. %	Rec. Limits %	LCS Qualifier
1,2,4,5-Tetrachlorobenzene	0.200	0.137	68.5	31.0-120	
2,4,6-Trichlorophenol	0.200	0.173	86.5	37.0-144	
2,4-Dichlorophenol	0.200	0.166	83.0	39.0-135	
2,4-Dimethylphenol	0.200	0.169	84.5	32.0-120	
2,4-Dinitrophenol	0.200	0.121	60.5	1.00-191	
2-Chlorophenol	0.200	0.168	84.0	23.0-134	
2-Methylphenol	0.200	0.174	87.0	26.0-120	
2-Nitrophenol	0.200	0.158	79.0	29.0-182	
3&4-Methyl Phenol	0.200	0.164	82.0	27.0-120	
3,3-Dichlorobenzidine	0.400	0.397	99.3	1.00-262	
4,6-Dinitro-2-methylphenol	0.200	0.159	79.5	1.00-181	
4-Chloro-3-methylphenol	0.200	0.174	87.0	22.0-147	
4-Nitrophenol	0.200	0.121	60.5	1.00-132	
Anthracene	0.200	0.179	89.5	27.0-133	
Benzidine	0.400	0.175	43.8	1.00-120	
Benzo(a)anthracene	0.200	0.184	92.0	33.0-143	
Benzo(a)pyrene	0.200	0.198	99.0	17.0-163	
Bis(2-chloroethyl)ether	0.200	0.162	81.0	33.0-185	
Bis(2-Ethylhexyl)phthalate	0.200	0.207	104	8.00-158	
Chrysene	0.200	0.173	86.5	17.0-168	
Di-n-butyl phthalate	0.200	0.196	98.0	1.00-120	
Hexachloro-1,3-butadiene	0.200	0.130	65.0	24.0-120	
Hexachlorobenzene	0.200	0.145	72.5	1.00-152	
Hexachlorocyclopentadiene	0.200	0.106	53.0	10.0-120	
Hexachloroethane	0.200	0.138	69.0	40.0-120	
n-Nitrosodi-n-butylamine	0.200	0.172	86.0	39.0-127	
n-Nitrosodiethylamine	0.200	0.167	83.5	10.0-142	
Nitrobenzene	0.200	0.166	83.0	35.0-180	
Nonylphenol	0.200	0.184	92.0	57.0-136	
Pentachlorobenzene	0.200	0.144	72.0	10.0-151	
Pentachlorophenol	0.200	0.158	79.0	14.0-176	
Phenanthrene	0.200	0.166	83.0	54.0-120	

Laboratory Control Sample (LCS)

(LCS) R4096164-2 07/19/24 13:23

Analyte	Spike Amount mg/l	LCS Result mg/l	LCS Rec. %	Rec. Limits %	LCS Qualifier
Phenol	0.200	0.125	62.5	5.00-120	
Pyridine	0.200	0.0435	21.7	10.0-120	
Total Cresols	0.400	0.338	84.5	36.0-110	
(S) 2,4,6-Tribromophenol			*71.0*	*29.0-132*	
(S) 2-Fluorobiphenyl			*80.5*	*26.0-102*	
(S) 2-Fluorophenol			*70.5*	*10.0-66.0*	J1
(S) Nitrobenzene-d5			*79.5*	*15.0-106*	
(S) p-Terphenyl-d14			*88.5*	*10.0-120*	
(S) Phenol-d6			*68.0*	*10.0-54.0*	J1

GLOSSARY OF TERMS

Guide to Reading and Understanding Your Laboratory Report

The information below is designed to better explain the various terms used in your report of analytical results from the Laboratory. This is not intended as a comprehensive explanation, and if you have additional questions please contact your project representative.

Results Disclaimer - Information that may be provided by the customer, and contained within this report, include Permit Limits, Project Name, Sample ID, Sample Matrix, Sample Preservation, Field Blanks, Field Spikes, Field Duplicates, On-Site Data, Sampling Collection Dates/Times, and Sampling Location. Results relate to the accuracy of this information provided, and as the samples are received.

Abbreviations and Definitions

MDL	Method Detection Limit.
ND	Not detected at the Reporting Limit (or MDL where applicable).
RDL	Reported Detection Limit.
Rec.	Recovery.
RPD	Relative Percent Difference.
SDG	Sample Delivery Group.
(S)	Surrogate (Surrogate Standard) - Analytes added to every blank, sample, Laboratory Control Sample/Duplicate and Matrix Spike/Duplicate; used to evaluate analytical efficiency by measuring recovery. Surrogates are not expected to be detected in all environmental media.
U	Not detected at the Reporting Limit (or MDL where applicable).
Analyte	The name of the particular compound or analysis performed. Some Analyses and Methods will have multiple analytes reported.
Dilution	If the sample matrix contains an interfering material, the sample preparation volume or weight values differ from the standard, or if concentrations of analytes in the sample are higher than the highest limit of concentration that the laboratory can accurately report, the sample may be diluted for analysis. If a value different than 1 is used in this field, the result reported has already been corrected for this factor.
Limits	These are the target % recovery ranges or % difference value that the laboratory has historically determined as normal for the method and analyte being reported. Successful QC Sample analysis will target all analytes recovered or duplicated within these ranges.
Original Sample	The non-spiked sample in the prep batch used to determine the Relative Percent Difference (RPD) from a quality control sample. The Original Sample may not be included within the reported SDG.
Qualifier	This column provides a letter and/or number designation that corresponds to additional information concerning the result reported. If a Qualifier is present, a definition per Qualifier is provided within the Glossary and Definitions page and potentially a discussion of possible implications of the Qualifier in the Case Narrative if applicable.
Result	The actual analytical final result (corrected for any sample specific characteristics) reported for your sample. If there was no measurable result returned for a specific analyte, the result in this column may state "ND" (Not Detected) or "BDL" (Below Detectable Levels). The information in the results column should always be accompanied by either an MDL (Method Detection Limit) or RDL (Reporting Detection Limit) that defines the lowest value that the laboratory could detect or report for this analyte.
Uncertainty (Radiochemistry)	Confidence level of 2 sigma.
Case Narrative (Cn)	A brief discussion about the included sample results, including a discussion of any non-conformances to protocol observed either at sample receipt by the laboratory from the field or during the analytical process. If present, there will be a section in the Case Narrative to discuss the meaning of any data qualifiers used in the report.
Quality Control Summary (Qc)	This section of the report includes the results of the laboratory quality control analyses required by procedure or analytical methods to assist in evaluating the validity of the results reported for your samples. These analyses are not being performed on your samples typically, but on laboratory generated material.
Sample Chain of Custody (Sc)	This is the document created in the field when your samples were initially collected. This is used to verify the time and date of collection, the person collecting the samples, and the analyses that the laboratory is requested to perform. This chain of custody also documents all persons (excluding commercial shippers) that have had control or possession of the samples from the time of collection until delivery to the laboratory for analysis.
Sample Results (Sr)	This section of your report will provide the results of all testing performed on your samples. These results are provided by sample ID and are separated by the analyses performed on each sample. The header line of each analysis section for each sample will provide the name and method number for the analysis reported.
Sample Summary (Ss)	This section of the Analytical Report defines the specific analyses performed for each sample ID, including the dates and times of preparation and/or analysis.

Qualifier	Description
B	The same analyte is found in the associated blank.
E	The analyte concentration exceeds the upper limit of the calibration range of the instrument established by the initial calibration (ICAL).
J	The identification of the analyte is acceptable; the reported value is an estimate.
J1	Surrogate recovery limits have been exceeded; values are outside upper control limits.
J3	The associated batch QC was outside the established quality control range for precision.
J5	The sample matrix interfered with the ability to make any accurate determination; spike value is high.
J6	The sample matrix interfered with the ability to make any accurate determination; spike value is low.
P	RPD between the primary and confirmatory analysis exceeded 40%.
T8	Sample(s) received past/too close to holding time expiration.
V	The sample concentration is too high to evaluate accurate spike recoveries.

ACCREDITATIONS & LOCATIONS

Pace Analytical National 12065 Lebanon Rd Mount Juliet, TN 37122

Alabama	40660	Nebraska	NE-OS-15-05
Alaska	17-026	Nevada	TN000032021-1
Arizona	AZ0612	New Hampshire	2975
Arkansas	88-0469	New Jersey–NELAP	TN002
California	2932	New Mexico [1]	TN00003
Colorado	TN00003	New York	11742
Connecticut	PH-0197	North Carolina	Env375
Florida	E87487	North Carolina [1]	DW21704
Georgia	NELAP	North Carolina [3]	41
Georgia [1]	923	North Dakota	R-140
Idaho	TN00003	Ohio–VAP	CL0069
Illinois	200008	Oklahoma	9915
Indiana	C-TN-01	Oregon	TN200002
Iowa	364	Pennsylvania	68-02979
Kansas	E-10277	Rhode Island	LA000356
Kentucky [1 6]	KY90010	South Carolina	84004002
Kentucky [2]	16	South Dakota	n/a
Louisiana	AI30792	Tennessee [1 4]	2006
Louisiana	LA018	Texas	T104704245-20-18
Maine	TN00003	Texas [5]	LAB0152
Maryland	324	Utah	TN000032021-11
Massachusetts	M-TN003	Vermont	VT2006
Michigan	9958	Virginia	110033
Minnesota	047-999-395	Washington	C847
Mississippi	TN00003	West Virginia	233
Missouri	340	Wisconsin	998093910
Montana	CERT0086	Wyoming	A2LA
A2LA – ISO 17025	1461.01	AIHA-LAP,LLC EMLAP	100789
A2LA – ISO 17025 [5]	1461.02	DOD	1461.01
Canada	1461.01	USDA	P330-15-00234
EPA–Crypto	TN00003		

Pace Analytical Services, LLC -Dallas 400 W. Bethany Drive Suite 190 Allen, TX 75013

Arkansas	88-0647	Kansas	E10388
Florida	E871118	Texas	T104704232-23-39
Iowa	408	Oklahoma	8727
Louisiana	30686		

[1] Drinking Water [2] Underground Storage Tanks [3] Aquatic Toxicity [4] Chemical/Microbiological [5] Mold [6] Wastewater n/a Accreditation not applicable

* Not all certifications held by the laboratory are applicable to the results reported in the attached report.

* Accreditation is only applicable to the test methods specified on each scope of accreditation held by Pace Analytical.

Company Name/Address:
Garland Power & Light

13835 County Rd 489
Nevada, TX 75173

Billing Information:
Michael Burr
13835 County Rd 489
Nevada, TX 75173

Pres Chk

Report to:
Jeff McClain

Email To: **mburr@gpltexas.org;jmcclain@gpltexas.org;gplenviron@gpltexas.org**

Project Description:
TPDES

City/State Collected:

Please Circle: PT MT CT ET

Phone: **972-485-6458**

Client Project #

Lab Project #
DSGARLWNTX-RENEWAL

Collected by (print):

Site/Facility ID #

P.O. #

Collected by (signature):

Immediately Packed on Ice N ____ Y ____

Rush? (Lab MUST Be Notified)
____ Same Day ____ Five Day
____ Next Day ____ 5 Day (Rad Only)
____ Two Day ____ 10 Day (Rad Only)
____ Three Day

Quote #

Date Results Needed

No. of Cntrs

Analysis / Container / Preservative

Sample ID	Comp/Grab	Matrix *	Depth	Date	Time	No. of Cntrs	608.3PCBONLY 100ml Amb NoPres	ALL625.1RV 100ml Amb NoPres	ALLCN 250mlHDPE-NaOH	ALLOGHEX 1L-Amb-Add HCl	ALLPHOS 500mlHDPE-Add H2SO4	ALLSULFIDE 500mlHDPE-NaOH+ZnAc	ALLTIICP 250mlHDPE HNO3	ALLTOC 250mlAmb-H2SO4	ALLTSS 1L-HDPE-NoPres	ALLV624.1NP 40mlClr-NoPres	Remarks	Sample # (lab only)
OUTFALL 001	G	WW		7/16/24	0518	24	X	X	X	X	X	X	X	X	X	X		01

Chain of Custody Page 6 of 8

Pace Analytical®
190 Allen, TX 75013

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SDG # L1756836

Table #

Acctnum: **DSGARLWNTX**

Template: **T256244**

Prelogin: **P1088417**

PM: **3565 - Dorothy P Roberts**

PB:

Shipped Via: **FedEx Priority**

* Matrix:
SS - Soil **AIR** - Air **F** - Filter
GW - Groundwater **B** - Bioassay
WW - WasteWater
DW - Drinking Water
OT - Other_____

Remarks: TABLES 1,2,3,6,8,9

pH _____ Temp _____

Flow _____ Other _____

Samples returned via:
__ UPS __ FedEx __ Courier _____

Tracking #

Sample Receipt Checklist

COC Seal Present/Intact:	__NP __Y __N
COC Signed/Accurate:	__Y __N
Bottles arrive intact:	__Y __N
Correct bottles used:	__Y __N
Sufficient volume sent:	__Y __N
If Applicable	
VOA Zero Headspace:	__Y __N
Preservation Correct/Checked:	__Y __N
RAD Screen <0.5 mR/hr:	__Y __N

Relinquished by : (Signature)	Date:	Time:	Received by: (Signature)	Trip Blank Received: Yes / No HCL / MeoH TBR
[signature]	7/16/24	0942	[signature] PACE	
Relinquished by : (Signature)	Date:	Time:	Received by: (Signature)	Temp: °C Bottles Received:
[signature] Alyssen Ramos	PACE 7/16/24	1700	FedEx	7/16/24 1700
Relinquished by : (Signature)	Date:	Time:	Received for lab by: (Signature)	Date: Time:
FedEx			[signature]	07-17-24 0900

If preservation required by Login: Date/Time

Hold: 5.5+0.3=5.8

Condition: NCF / OK

Company Name/Address:
Garland Power & Light

13835 County Rd 489
Nevada, TX 75173

Billing Information:
Michael Burr
13835 County Rd 489
Nevada, TX 75173

Pres Chk

Report to: **Jeff McClain**

Email To: mburr@gpltexas.org;jmcclain@gpltexas.org;gplenviron@gpltexas.org

Project Description: **TPDES**

City/State Collected:

Please Circle: PT MT CT ET

Phone: **972-485-6458**

Client Project #

Lab Project #: **DSGARLWNTX-RENEWAL**

Collected by (print):

Site/Facility ID #

P.O. #

Collected by (signature):

Immediately Packed on Ice N ____ Y ____

Rush? (Lab MUST Be Notified)
___ Same Day ___ Five Day
___ Next Day ___ 5 Day (Rad Only)
___ Two Day ___ 10 Day (Rad Only)
___ Three Day

Quote #

Date Results Needed

No. of Cntrs

Analysis / Container / Preservative

Sample ID	Comp/Grab	Matrix *	Depth	Date	Time	No. of Cntrs	BOD CBOD MBAS TDS 1L-HDPE NoPres	BOD CBOD MBAS TDS 1L-HDPE-NoPres	Metals site spec 250mlHDPE HNO3	PAN CHLORR 250mlHDPE-NoPres	PAN SULFITE 250mlHDPE-NoPres	PAN-SULFITE,CHLORR 250mlHDPE NoPres	WetChem COD NH3 N/N 250mlHDPE-H2SO4	WetChem anions, ALK 125mlHDPE-NoPres	WetChem,color CR6,DO 500mlHDPE-NoPres		Remarks	Sample # (lab only)
OUTFALL 001	G	WW		7/16/24	0818	24	X	X	X	X	X	X	X	X	X			01

Chain of Custody Page 1 of 1

Pace Analytical®
[redacted]
190 Allen, TX 75013

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SDG # L1756836

Table #

Acctnum: **DSGARLWNTX**

Template: **T256244**

Prelogin: **P1088417**

PM: **3565 - Dorothy P Roberts**

PB:

Shipped Via: **FedEx Priority**

* Matrix:
SS - Soil **AIR** - Air **F** - Filter
GW - Groundwater **B** - Bioassay
WW - WasteWater
DW - Drinking Water
OT - Other_____

Remarks:

pH _____ Temp _____

Flow _____ Other _____

Samples returned via:
__ UPS __ FedEx __ Courier _____

Tracking #

Sample Receipt Checklist

COC Seal Present/Intact:	__NP	__Y __N
COC Signed/Accurate:		__Y __N
Bottles arrive intact:		__Y __N
Correct bottles used:		__Y __N
Sufficient volume sent:		__Y __N
If Applicable		
VOA Zero Headspace:		__Y __N
Preservation Correct/Checked:		__Y __N
RAD Screen <0.5 mR/hr:		__Y __N

Relinquished by : (Signature)	Date: 7/16/24	Time: 0942	Received by: (Signature) PACE	Trip Blank Received: Yes / No HCL / MeoH TBR	
Relinquished by : (Signature) Aysen Ramos	Date: 7/16/24	Time: 1700	Received by: (Signature) FedEx	Temp: °C Bottles Received: 7/16/24 1700	If preservation required by Login: Date/Time
Relinquished by : (Signature) FedEx	Date:	Time:	Received for lab by: (Signature)	Date: 07-17-24 Time: 0900 5.5-0.5=5.0	Condition: NCF / OK

175e834

Pace ANALYTICAL SERVICES	DC#_Title: ENV-FRM-ALLE-0017 v15_Sample Condition Upon Receipt
	Effective Date: 12/18/2023

Sample Condition Upon Receipt

☐Dallas ☐Ft Worth ☐Corpus Christi ☐Austin

Client Name: Garland Power & Light Project Work order (place label):

Courier: FedEX ☐ UPS ☐ USPS ☐ Client ☑ LSO ☐ PACE ☐ Other: _____

Tracking #: _____

Custody Seal on Cooler/Box: Yes ☐ No ☑

Received on ice: Wet ☑ Blue ☐ No ice ☐

Receiving Lab 1 Thermometer Used: IR19 **Cooler Temp °C**: 3.3 (Recorded) +0.1 (Correction Factor) 3.4 (Actual)

Receiving Lab 2 Thermometer Used: _____ **Cooler Temp °C**: _____ (Recorded) _____ (Correction Factor) _____ (Actual)

Chain of Custody relinquished	Yes ☑ No ☐
Sampler name & signature on COC	Yes ☐ No ☑
Short HT analyses (<72 hrs)	Yes ☑ No ☐

Temperature should be above freezing to 6°C unless collected same day as receipt in which evidence of cooling is acceptable.

Triage Person: AG Date: 7/16/24

Sufficient Volume received	Yes ☑ No ☐
Correct Container used	Yes ☑ No ☐
Container Intact	Yes ☑ No ☐
Sample pH Acceptable pH Strips: 64022007	Yes ☑ No ☐ NA ☐
Residual Chlorine Present Cl Strips: 148210	Yes ☐ No ☑ NA ☐
Sulfide Present Lead Acetate Strips: 14842	Yes ☐ No ☑ NA ☐
Are soil samples (volatiles, TPH) received in 5035A Kits (not applicable to TCLP VOA or PST Program TPH)	Yes ☐ No ☐ NA ☑
Unpreserved 5035A soil frozen within 48 hrs	Yes ☐ No ☐ NA ☑
Headspace in VOA (>6mm)	Yes ☐ No ☑ NA ☐
Project sampled in USDA Regulated Area outside of Texas State Sampled: _____	Yes ☐ No ☐ NA ☑
Non-Conformance(s):	Yes ☐ No ☑

Login Person: JC Date: 7/16

Labeling Person (if different than log-in): _____ Date: _____

Company Name/Address:
Garland Power & Light

13835 County Rd 489
Nevada, TX 75173

Billing Information:
Michael Burr
13835 County Rd 489
Nevada, TX 75173

Pres Chk

Report to:
Jeff McClain

Email To: **mburr@gpltexas.org;jmcclain@gpltexas.org ;gplenviron@gpltexas.org**

Project Description:
TPDES

City/State Collected:

Please Circle: PT MT CT ET

Phone: **972-485-6458**

Client Project #

Lab Project #
DSGARLWNTX-RENEWAL

Collected by (print):
JEFFREY McCLAIN

Site/Facility ID #

P.O. #

Collected by (signature):

Immediately Packed on Ice N ____ Y ____

Rush? (Lab MUST Be Notified)
____ Same Day ____ Five Day
____ Next Day ____ 5 Day (Rad Only)
____ Two Day ____ 10 Day (Rad Only)
____ Three Day

Quote #

Date Results Needed

No. of Cntrs

Analysis / Container / Preservative

Sample ID	Comp/Grab	Matrix *	Depth	Date	Time	No. of Cntrs	608.3PCBONLY 100ml Amb NoPres	ALL625.1RV 100ml Amb NoPres	ALLCN 250mlHDPE-NaOH	ALLCNAM 250mlHDPE-NaOH	ALLOGHEX 1L-Amb-Add HCl	ALLPH 125mlHDPE-NoPres	ALLPHOS 500mlHDPE-Add H2SO4	ALLSULFIDE 500mlHDPE-NaOH+ZnAc	ALLTIICP 250mlHDPE HNO3	ALLTKN 250mlHDPE-H2SO4	Remarks	Sample # (lab only)
OUTFALL 001	G	WW		7/24/24	1358	27	X	X	X	X	X	X	X	X	X	X		01

Chain of Custody Page 1 of 3

Pace Analytical®
190 Allen, TX 75013

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SDG # L1726920

Table #

Acctnum: **DSGARLWNTX**

Template: **T256244**

Prelogin: **P1090746**

PM: **3565 - Dorothy P Roberts**

PB:

Shipped Via: **FedEX Priority**

* Matrix:
SS - Soil **AIR** - Air **F** - Filter
GW - Groundwater **B** - Bioassay
WW - WasteWater
DW - Drinking Water
OT - Other_____

Remarks:

pH _____ Temp _____

Flow _____ Other _____

Samples returned via:
__ UPS __ FedEx __ Courier _____

Tracking #

Sample Receipt Checklist

COC Seal Present/Intact:	__NP	__Y __N
COC Signed/Accurate:		__Y __N
Bottles arrive intact:		__Y __N
Correct bottles used:		__Y __N
Sufficient volume sent:		__Y __N
If Applicable		
VOA Zero Headspace:		__Y __N
Preservation Correct/Checked:		__Y __N
RAD Screen <0.5 mR/hr:		__Y __N

Relinquished by : (Signature)	Date:	Time:	Received by: (Signature)	Trip Blank Received: Yes / No HCL / MeoH TBR
	7/26/24	1540	PACE ATX	
Relinquished by : (Signature)	Date:	Time:	Received by: (Signature)	Temp: °C Bottles Received:
				If preservation required by Login: Date/Time
Relinquished by : (Signature)	Date:	Time:	Received for lab by: (Signature)	Date: Time:
				Hold: Condition: NCF / OK

Company Name/Address:
Garland Power & Light

13835 County Rd 489
Nevada, TX 75173

Billing Information:
Michael Burr
13835 County Rd 489
Nevada, TX 75173

Pres Chk

Report to:
Jeff McClain

Email To: **mburr@gpltexas.org;jmcclain@gpltexas.org ;gplenviron@gpltexas.org**

Project Description:
TPDES

City/State Collected:

Please Circle: PT MT CT ET

Phone: **972-485-6458**

Client Project #

Lab Project #
DSGARLWNTX-RENEWAL

Collected by (print):

Site/Facility ID #

P.O. #

Collected by (signature):

Immediately Packed on Ice N____ Y____

Rush? (Lab MUST Be Notified)
____ Same Day ____ Five Day
____ Next Day ____ 5 Day (Rad Only)
____ Two Day ____ 10 Day (Rad Only)
____ Three Day

Quote #

Date Results Needed

Sample ID	Comp/Grab	Matrix *	Depth	Date	Time	No. of Cntrs	Analysis / Container / Preservative											
							ALLTOC 250mlAmb-H2SO4	ALLTSS 1L-HDPE-NoPres	ALLV624.1NP 40mlClr-NoPres	BOD CBOD MBAS TDS 1L-HDPE NoPres	BOD CBOD MBAS TDS 1L-HDPE-NoPres	Metals site spec 250mlHDPE HNO3	PAN CHLORR 250mlHDPE-NoPres	PAN SULFITE 250mlHDPE-NoPres	PAN-SULFITE,CHLORR 250mlHDPE NoPres	WetChem COD NH3 N/N 250mlHDPE-H2SO4	Remarks	Sample # (lab only)
OUTFALL 001		**WW**				**27**	X	X	X	X	X	X	X	X	X	X		01

Chain of Custody Page 2 of 3

Pace Analytical®
190 Allen, TX 75013

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SDG # L1760920

Table #

Acctnum: **DSGARLWNTX**

Template: **T256244**

Prelogin: **P1090746**

PM: **3565 - Dorothy P Roberts**

PB:

Shipped Via: **FedEX Priority**

* Matrix:
SS - Soil **AIR** - Air **F** - Filter
GW - Groundwater **B** - Bioassay
WW - WasteWater
DW - Drinking Water
OT - Other_____

Remarks:

pH _____ Temp _____

Flow _____ Other _____

Samples returned via:
__ UPS __ FedEx __ Courier _____

Tracking #

Sample Receipt Checklist

COC Seal Present/Intact:	__NP __Y __N
COC Signed/Accurate:	__Y __N
Bottles arrive intact:	__Y __N
Correct bottles used:	__Y __N
Sufficient volume sent:	__Y __N
If Applicable	
VOA Zero Headspace:	__Y __N
Preservation Correct/Checked:	__Y __N
RAD Screen <0.5 mR/hr:	__Y __N

Relinquished by : (Signature)	Date:	Time:	Received by: (Signature)	Trip Blank Received: Yes / No HCL / MeoH TBR	
	7/22/21	1540	PACEATX		
Relinquished by : (Signature)	Date:	Time:	Received by: (Signature)	Temp: °C Bottles Received:	If preservation required by Login: Date/Time
Relinquished by : (Signature)	Date:	Time:	Received for lab by: (Signature)	Date: Time:	Hold: Condition: NCF / OK

Company Name/Address:
Garland Power & Light

13835 County Rd 489
Nevada, TX 75173

Billing Information:
Michael Burr
13835 County Rd 489
Nevada, TX 75173

Pres Chk

Report to:
Jeff McClain

Email To: **mburr@gpltexas.org;jmcclain@gpltexas.org ;gplenviron@gpltexas.org**

Project Description:
TPDES

City/State Collected:

Please Circle: PT MT CT ET

Phone: **972-485-6458**

Client Project #

Lab Project #
DSGARLWNTX-RENEWAL

Collected by (print):

Site/Facility ID #

P.O. #

Collected by (signature):

Immediately
Packed on Ice N____ Y____

Rush? (Lab MUST Be Notified)
____ Same Day ____ Five Day
____ Next Day ____ 5 Day (Rad Only)
____ Two Day ____ 10 Day (Rad Only)
____ Three Day

Quote #

Date Results Needed

Sample ID	Comp/Grab	Matrix *	Depth	Date	Time	No. of Cntrs	WetChem anions, ALK 125mlHDPE-NoPres	WetChem,color CR6,DO 500mlHDPE-NoPres	Remarks	Sample # (lab only)
OUTFALL 001		WW				27	X	X		01

Analysis / Container / Preservative

Chain of Custody Page 3 of 3

Pace Analytical®
190 Allen, TX 75013

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SDG # L1760920

Table #

Acctnum: **DSGARLWNTX**
Template: **T256244**
Prelogin: **P1090746**
PM: **3565 - Dorothy P Roberts**
PB:

Shipped Via: **FedEX Priority**

* Matrix:
SS - Soil **AIR** - Air **F** - Filter
GW - Groundwater **B** - Bioassay
WW - WasteWater
DW - Drinking Water
OT - Other_____

Remarks:

pH _____ Temp _____
Flow _____ Other _____

Samples returned via:
__ UPS __ FedEx __ Courier _____

Tracking #

Sample Receipt Checklist
COC Seal Present/Intact: __NP __Y __N
COC Signed/Accurate: __Y __N
Bottles arrive intact: __Y __N
Correct bottles used: __Y __N
Sufficient volume sent: __Y __N
If Applicable
VOA Zero Headspace: __Y __N
Preservation Correct/Checked: __Y __N
RAD Screen <0.5 mR/hr: __Y __N

Relinquished by : (Signature)	Date:	Time:	Received by: (Signature)	Trip Blank Received: Yes / No HCL / MeoH TBR	
	7/20/21	1540	PACEATX		
Relinquished by : (Signature)	Date:	Time:	Received by: (Signature)	Temp: °C Bottles Received:	If preservation required by Login: Date/Time
Relinquished by : (Signature)	Date:	Time:	Received for lab by: (Signature)	Date: Time:	Hold: / Condition: NCF / OK

Pace ANALYTICAL SERVICES	DC#_Title: ENV-FRM-ALLE-0017 v15_Sample Condition Upon Receipt
	Effective Date: 12/18/2023

Sample Condition Upon Receipt

☐Dallas ☐Ft Worth ☐Corpus Christi ☐Austin

Client Name: Garland Power & Light Project Work order (place label):

Courier: FedEX ☐ UPS ☐ USPS ☐ Client ☑ LSO ☐ PACE ☐ Other: _____

Tracking #: _____

Custody Seal on Cooler/Box: Yes ☐ No ☑

Received on ice: Wet ☑ Blue ☐ No ice ☐

Receiving Lab 1 Thermometer Used: IR19 **Cooler Temp °C:** 4.4 (Recorded) +0.1 (Correction Factor) 4.5 (Actual)

Receiving Lab 2 Thermometer Used: _____ **Cooler Temp °C:** _____(Recorded) _____(Correction Factor) _____(Actual)

Chain of Custody relinquished	Yes ☑ No ☐
Sampler name & signature on COC	Yes ☑ No ☐
Short HT analyses (<72 hrs)	Yes ☑ No ☐

Temperature should be above freezing to 6°C unless collected same day as receipt in which evidence of cooling is acceptable.

Triage Person: AG Date: 7/26/24

Sufficient Volume received	Yes ☑ No ☐
Correct Container used	Yes ☑ No ☐
Container Intact	Yes ☑ No ☐
Sample pH Acceptable pH Strips: 6402007	Yes ☑ No ☐ NA ☐
Residual Chlorine Present Cl Strips: 148860	Yes ☐ No ☑ NA ☐
Sulfide Present Lead Acetate Strips: 14862	Yes ☐ No ☑ NA ☐
Are soil samples (volatiles, TPH) received in 5035A Kits (not applicable to TCLP VOA or PST Program TPH)	Yes ☐ No ☐ NA ☑
Unpreserved 5035A soil frozen within 48 hrs	Yes ☐ No ☐ NA ☑
Headspace in VOA (>6mm)	Yes ☐ No ☑ NA ☐
Project sampled in USDA Regulated Area outside of Texas State Sampled: _____	Yes ☐ No ☐ NA ☑
Non-Conformance(s):	Yes ☐ No ☑

Login Person: JC Date: 7/26

Labeling Person (if different than log-in): _____ Date: _____

ANALYTICAL REPORT

August 14, 2024

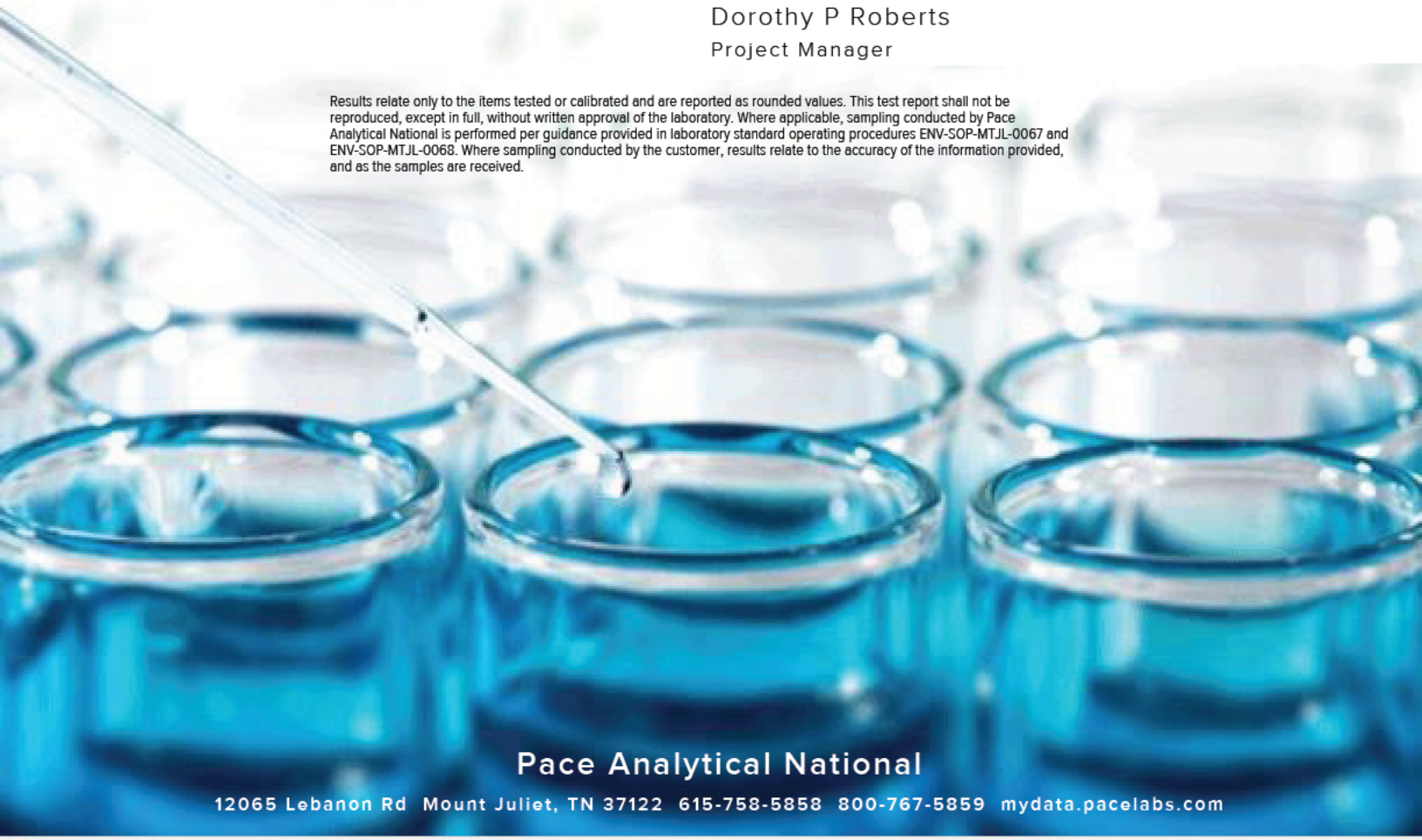
Garland Power & Light

Sample Delivery Group:	L1760920
Samples Received:	07/26/2024
Project Number:	
Description:	TPDES

Report To: Jeff McClain
13835 County Rd 489
Nevada, TX 75173

Entire Report Reviewed By: Dorothy P Roberts

Dorothy P Roberts
Project Manager



Pace Analytical National
12065 Lebanon Rd Mount Juliet, TN 37122 615-758-5858 800-767-5859 mydata.pacelabs.com

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SAMPLE SUMMARY

OUTFALL 001 L1760920-01 WW

Collected by: Jeffrey McClain
Collected date/time: 07/26/24 13:58
Received date/time: 07/26/24 15:40

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst	Location
Calculated Results	WG2331091	1	08/01/24 11:18	08/01/24 11:18	SMC	Allen, TX
Calculated Results	WG2332077	1	07/31/24 13:20	07/31/24 13:20	EIG	Allen, TX
Gravimetric Analysis by Method 2540C	WG2331171	1	07/27/24 11:24	07/27/24 13:35	QQT	Allen, TX
Gravimetric Analysis by Method 2540D	WG2334169	1	08/01/24 10:09	08/01/24 12:09	QQT	Allen, TX
Wet Chemistry by Method 1664A	WG2335365	1	08/05/24 09:15	08/05/24 19:10	TK	Allen, TX
Wet Chemistry by Method 2120B	WG2330919	1	07/26/24 18:12	07/26/24 18:12	EIG	Allen, TX
Wet Chemistry by Method 2320B	WG2331904	1	07/29/24 10:07	07/29/24 10:07	SEN	Allen, TX
Wet Chemistry by Method 300.0	WG2330911	1	07/30/24 18:30	07/30/24 18:30	SMC	Allen, TX
Wet Chemistry by Method 300.0	WG2330911	5	07/30/24 19:53	07/30/24 19:53	SMC	Allen, TX
Wet Chemistry by Method 300.0	WG2334986	1	08/02/24 10:16	08/02/24 10:16	SMC	Allen, TX
Wet Chemistry by Method 3500Cr-B	WG2334103	1	08/01/24 11:18	08/01/24 11:18	SMC	Allen, TX
Wet Chemistry by Method 351.2	WG2332467	1	07/30/24 11:45	07/31/24 13:20	EIG	Allen, TX
Wet Chemistry by Method 353.2	WG2334132	1	08/01/24 12:54	08/01/24 12:54	EIG	Allen, TX
Wet Chemistry by Method 360.1	WG2334936	1	08/02/24 08:57	08/02/24 08:57	SEN	Allen, TX
Wet Chemistry by Method 4500Cl G-2011	WG2331631	1	07/29/24 10:19	07/29/24 10:19	JAR	Mt. Juliet, TN
Wet Chemistry by Method 4500CN-E	WG2333312	1	07/31/24 10:00	07/31/24 16:58	KCM	Allen, TX
Wet Chemistry by Method 4500CN-G	WG2333312	1	07/31/24 16:58	07/31/24 16:58	KCM	Allen, TX
Wet Chemistry by Method 4500P-E	WG2331816	1	07/29/24 16:30	07/29/24 16:30	SMC	Allen, TX
Wet Chemistry by Method 4500-S2 D	WG2332666	1	07/30/24 15:43	07/30/24 15:43	EIG	Allen, TX
Wet Chemistry by Method 4500SO3 B-2011	WG2336387	1	08/06/24 12:40	08/06/24 12:40	JAS	Mt. Juliet, TN
Wet Chemistry by Method 5210 B-2016	WG2330512	1	07/26/24 17:11	07/31/24 13:16	SEN	Allen, TX
Wet Chemistry by Method 5210 B-2016	WG2331145	1	07/27/24 13:51	08/01/24 09:32	SEN	Allen, TX
Wet Chemistry by Method 5220D	WG2336401	1	08/05/24 10:39	08/05/24 13:31	JBS	Allen, TX
Wet Chemistry by Method 5310C	WG2332159	1	07/30/24 01:25	07/30/24 01:25	EIG	Allen, TX
Wet Chemistry by Method 5540C	WG2330916	1	07/26/24 17:28	07/26/24 17:42	EIG	Allen, TX
Wet Chemistry by Method SM 4500-H+B	WG2333276	1	07/31/24 08:43	07/31/24 08:43	JBS	Allen, TX
Wet Chemistry by Method SM4500NH3H	WG2332077	1	07/29/24 17:59	07/29/24 17:59	EIG	Allen, TX
Mercury by Method 245.1	WG2332780	1	07/30/24 16:58	07/31/24 14:33	TDM	Allen, TX
Metals (ICP) by Method 200.7	WG2331087	1	07/27/24 10:00	07/29/24 15:04	SKW	Allen, TX
Metals (ICPMS) by Method 200.8	WG2331091	1	07/27/24 09:11	07/30/24 19:08	NA	Allen, TX
Metals (ICPMS) by Method 200.8	WG2331091	1	07/27/24 09:11	07/31/24 14:50	NA	Allen, TX
Volatile Organic Compounds (GC/MS) by Method 624.1	WG2332271	1	07/29/24 17:20	07/29/24 17:20	NSR	Allen, TX
Volatile Organic Compounds (GC/MS) by Method 624.1	WG2332599	1	08/01/24 19:57	08/01/24 19:57	ZST	Allen, TX
Polychlorinated Biphenyls (GC) by Method EPA-608.3	WG2331033	1	07/27/24 06:54	07/27/24 19:52	HLA	Mt. Juliet, TN
Semi Volatile Organic Compounds (GC/MS) by Method 625.1	WG2334305	1	08/01/24 11:55	08/02/24 13:28	XLY	Allen, TX

CASE NARRATIVE

All sample aliquots were received at the correct temperature, in the proper containers, with the appropriate preservatives, and within method specified holding times, unless qualified or notated within the report. Where applicable, all MDL (LOD) and RDL (LOQ) values reported for environmental samples have been corrected for the dilution factor used in the analysis. All Method and Batch Quality Control are within established criteria except where addressed in this case narrative, a non-conformance form or properly qualified within the sample results. By my digital signature below, I affirm to the best of my knowledge, all problems/anomalies observed by the laboratory as having the potential to affect the quality of the data have been identified by the laboratory, and no information or data have been knowingly withheld that would affect the quality of the data.

Dorothy P Roberts
Project Manager

Sample Delivery Group (SDG) Narrative

No extra volume received to perform Matrix Spike samples.

Lab Sample ID	Project Sample ID	Method
L1760920-01	OUTFALL 001	625.1

Analysis was filtered in the laboratory.

Lab Sample ID	Project Sample ID	Method
L1760920-01	OUTFALL 001	3500Cr-B

Calculated Results

Analyte	Result mg/l	Qualifier	MDL mg/l	RDL mg/l	Dilution	Analysis date / time	Batch
Chromium,Trivalent	0.000783	J	0.000710	0.00300	1	08/01/2024 11:18	WG2331091
Organic Nitrogen	0.721		0.0280	0.100	1	07/31/2024 13:20	WG2332077

Gravimetric Analysis by Method 2540C

Analyte	Result mg/l	Qualifier	RDL mg/l	Dilution	Analysis date / time	Batch
Total Dissolved Solids	213		25.0	1	07/27/2024 13:35	WG2331171

Gravimetric Analysis by Method 2540D

Analyte	Result mg/l	Qualifier	RDL mg/l	Dilution	Analysis date / time	Batch
Suspended Solids	7.83		4.18	1	08/01/2024 12:09	WG2334169

Wet Chemistry by Method 1664A

Analyte	Result mg/l	Qualifier	MDL mg/l	RDL mg/l	Dilution	Analysis date / time	Batch
Oil & Grease (Hexane Extr)	0.490	J	0.350	5.00	1	08/05/2024 19:10	WG2335365

Wet Chemistry by Method 2120B

Analyte	Result units	Qualifier	RDL units	Dilution	Analysis date / time	Batch
Color	20.0		5.00	1	07/26/2024 18:12	WG2330919

Sample Narrative:

L1760920-01 WG2330919: 7

Wet Chemistry by Method 2320B

Analyte	Result mg/l	Qualifier	MDL mg/l	RDL mg/l	Dilution	Analysis date / time	Batch
Alkalinity	108		20.0	20.0	1	07/29/2024 10:07	WG2331904

Wet Chemistry by Method 300.0

Analyte	Result mg/l	Qualifier	MDL mg/l	RDL mg/l	Dilution	Analysis date / time	Batch
Bromide	5.16	J3 J6	0.0668	0.400	1	07/30/2024 18:30	WG2330911
Chloride	15.4	J5	1.62	4.00	5	07/30/2024 19:53	WG2330911
Fluoride	0.376	J	0.0947	0.500	1	08/02/2024 10:16	WG2334986
Nitrate	4.86	J3 J6 Q	0.379	0.500	1	07/30/2024 18:30	WG2330911
Sulfate	25.0	V	1.06	3.50	5	07/30/2024 19:53	WG2330911

Wet Chemistry by Method 3500Cr-B

Analyte	Result mg/l	Qualifier	MDL mg/l	RDL mg/l	Dilution	Analysis date / time	Batch
Chromium,Hexavalent	U		0.00200	0.00300	1	08/01/2024 11:18	WG2334103

Sample Narrative:

L1760920-01 WG2334103: Sample preserved in lab w/in 24hrs of collection.

Wet Chemistry by Method 351.2

Analyte	Result mg/l	Qualifier	MDL mg/l	RDL mg/l	Dilution	Analysis date / time	Batch
Kjeldahl Nitrogen, TKN	0.750	B	0.140	0.250	1	07/31/2024 13:20	WG2332467

Wet Chemistry by Method 353.2

Analyte	Result	Qualifier	MDL	RDL	Dilution	Analysis	Batch
	mg/l		mg/l	mg/l		date / time	
Nitrate-Nitrite	U		0.0300	0.0500	1	08/01/2024 12:54	WG2334132

Wet Chemistry by Method 360.1

Analyte	Result	Qualifier	RDL	Dilution	Analysis	Batch
	mg/l		mg/l		date / time	
Dissolved Oxygen	9.72	T8	1	1	08/02/2024 08:57	WG2334936

Wet Chemistry by Method 4500Cl G-2011

Analyte	Result	Qualifier	MDL	RDL	Dilution	Analysis	Batch
	mg/l		mg/l	mg/l		date / time	
Chlorine,residual	0.0390	J T8	0.0260	0.100	1	07/29/2024 10:19	WG2331631

Wet Chemistry by Method 4500CN-E

Analyte	Result	Qualifier	MDL	RDL	Dilution	Analysis	Batch
	mg/l		mg/l	mg/l		date / time	
Cyanide	U		0.00430	0.0100	1	07/31/2024 16:58	WG2333312

Wet Chemistry by Method 4500CN-G

Analyte	Result	Qualifier	MDL	RDL	Dilution	Analysis	Batch
	mg/l		mg/l	mg/l		date / time	
Cyanide,amenable	U		0.00430	0.0100	1	07/31/2024 16:58	WG2333312

Wet Chemistry by Method 4500P-E

Analyte	Result	Qualifier	MDL	RDL	Dilution	Analysis	Batch
	mg/l		mg/l	mg/l		date / time	
Phosphorus,Total	0.0348	J	0.0152	0.0500	1	07/29/2024 16:30	WG2331816

Wet Chemistry by Method 4500-S2 D

Analyte	Result	Qualifier	MDL	RDL	Dilution	Analysis	Batch
	mg/l		mg/l	mg/l		date / time	
Sulfide	U		0.0230	0.100	1	07/30/2024 15:43	WG2332666

Wet Chemistry by Method 4500SO3 B-2011

Analyte	Result	Qualifier	MDL	RDL	Dilution	Analysis	Batch
	mg/l		mg/l	mg/l		date / time	
Sulfite	U	T8	1.19	3.00	1	08/06/2024 12:40	WG2336387

Wet Chemistry by Method 5210 B-2016

Analyte	Result	Qualifier	RDL	Dilution	Analysis	Batch
	mg/l		mg/l		date / time	
BOD	2.34		1.00	1	08/01/2024 09:32	WG2331145
CBOD	1.48		1.00	1	07/31/2024 13:16	WG2330512

Wet Chemistry by Method 5220D

Analyte	Result	Qualifier	MDL	RDL	Dilution	Analysis	Batch
	mg/l		mg/l	mg/l		date / time	
COD	22.2	J	16.1	35.0	1	08/05/2024 13:31	WG2336401

Wet Chemistry by Method 5310C

Analyte	Result	Qualifier	MDL	RDL	Dilution	Analysis	Batch
	mg/l		mg/l	mg/l		date / time	

Wet Chemistry by Method 5310C

Analyte	Result	Qualifier	MDL	RDL	Dilution	Analysis	Batch
	mg/l		mg/l	mg/l		date / time	
TOC (Total Organic Carbon)	4.99		0.270	0.700	1	07/30/2024 01:25	WG2332159

Wet Chemistry by Method 5540C

Analyte	Result	Qualifier	MDL	RDL	Dilution	Analysis	Batch
	mg/l		mg/l	mg/l		date / time	
MBAS	U	J5	0.360	0.500	1	07/26/2024 17:42	WG2330916

Wet Chemistry by Method SM 4500-H+B

Analyte	Result	Qualifier	Dilution	Analysis	Batch
	su			date / time	
pH	8.40	T8	1	07/31/2024 08:43	WG2333276

Sample Narrative:

L1760920-01 WG2333276: 8.4 at 21.4C

Wet Chemistry by Method SM4500NH3H

Analyte	Result	Qualifier	MDL	RDL	Dilution	Analysis	Batch
	mg/l		mg/l	mg/l		date / time	
Ammonia Nitrogen	0.0292	J	0.0280	0.100	1	07/29/2024 17:59	WG2332077

Mercury by Method 245.1

Analyte	Result	Qualifier	MDL	RDL	Dilution	Analysis	Batch
	mg/l		mg/l	mg/l		date / time	
Mercury	U		0.0000450	0.000200	1	07/31/2024 14:33	WG2332780

Metals (ICP) by Method 200.7

Analyte	Result	Qualifier	MDL	RDL	Dilution	Analysis	Batch
	mg/l		mg/l	mg/l		date / time	
Boron	0.0785	J	0.0186	0.100	1	07/29/2024 15:04	WG2331087
Tin	U		0.00240	0.0250	1	07/29/2024 15:04	WG2331087
Titanium	U		0.00835	0.100	1	07/29/2024 15:04	WG2331087

Metals (ICPMS) by Method 200.8

Analyte	Result	Qualifier	MDL	RDL	Dilution	Analysis	Batch
	mg/l		mg/l	mg/l		date / time	
Aluminum	0.0728	B	0.00186	0.00250	1	07/31/2024 14:50	WG2331091
Antimony	U		0.000580	0.00500	1	07/31/2024 14:50	WG2331091
Arsenic	0.00521		0.000100	0.000500	1	07/31/2024 14:50	WG2331091
Barium	0.0385		0.000440	0.00300	1	07/31/2024 14:50	WG2331091
Beryllium	U		0.0000600	0.000500	1	07/31/2024 14:50	WG2331091
Cadmium	U		0.000120	0.00100	1	07/30/2024 19:08	WG2331091
Chromium	U		0.000510	0.00300	1	07/30/2024 19:08	WG2331091
Cobalt	0.000126	B J	0.0000400	0.000300	1	07/30/2024 19:08	WG2331091
Copper	0.00203		0.000900	0.00200	1	07/30/2024 19:08	WG2331091
Iron	0.0741		0.00432	0.00700	1	07/30/2024 19:08	WG2331091
Lead	U		0.000140	0.000500	1	07/30/2024 19:08	WG2331091
Magnesium	3.90		0.0121	0.0200	1	07/31/2024 14:50	WG2331091
Manganese	0.0309		0.000330	0.000500	1	07/30/2024 19:08	WG2331091
Molybdenum	0.000743	J	0.000530	0.00100	1	07/30/2024 19:08	WG2331091
Nickel	0.00144	J	0.000640	0.00200	1	07/30/2024 19:08	WG2331091
Selenium	U		0.000740	0.00500	1	07/30/2024 19:08	WG2331091
Silver	U		0.0000800	0.000500	1	07/30/2024 19:08	WG2331091
Thallium	U		0.000190	0.000500	1	07/30/2024 19:08	WG2331091

Metals (ICPMS) by Method 200.8

Analyte	Result mg/l	Qualifier	MDL mg/l	RDL mg/l	Dilution	Analysis date / time	Batch
Zinc	U		0.00265	0.00500	1	07/30/2024 19:08	WG2331091

Volatile Organic Compounds (GC/MS) by Method 624.1

Analyte	Result mg/l	Qualifier	MDL mg/l	RDL mg/l	Dilution	Analysis date / time	Batch
1,1,1-Trichloroethane	U		0.00335	0.00500	1	07/29/2024 17:20	WG2332271
1,1,2,2-Tetrachloroethane	U		0.000596	0.00500	1	07/29/2024 17:20	WG2332271
1,1,2-Trichloroethane	U		0.00145	0.00500	1	07/29/2024 17:20	WG2332271
1,1-Dichloroethene	U		0.00367	0.00500	1	07/29/2024 17:20	WG2332271
1,1-Dichloroethane	U		0.00292	0.00500	1	07/29/2024 17:20	WG2332271
1,2-Dibromoethane	U		0.000549	0.00200	1	07/29/2024 17:20	WG2332271
1,2-Dichlorobenzene	U		0.00172	0.00200	1	07/29/2024 17:20	WG2332271
1,2-Dichloroethane	U		0.00195	0.00500	1	07/29/2024 17:20	WG2332271
1,2-Dichloropropane	U		0.000804	0.00200	1	07/29/2024 17:20	WG2332271
1,3-Dichlorobenzene	U		0.00419	0.00500	1	07/29/2024 17:20	WG2332271
1,4-Dichlorobenzene	U		0.00173	0.00200	1	07/29/2024 17:20	WG2332271
2-Butanone (MEK)	U		0.00822	0.0250	1	08/01/2024 19:57	WG2332599
2-Chloroethyl vinyl ether	U		0.00652	0.0100	1	07/29/2024 17:20	WG2332271
Acrolein	U		0.00544	0.0100	1	07/29/2024 17:20	WG2332271
Acrylonitrile	U		0.00709	0.0100	1	07/29/2024 17:20	WG2332271
Benzene	U		0.00207	0.00500	1	07/29/2024 17:20	WG2332271
Bromodichloromethane	U		0.00179	0.00200	1	07/29/2024 17:20	WG2332271
Bromoform	U		0.000960	0.0100	1	07/29/2024 17:20	WG2332271
Bromomethane	U		0.00347	0.00500	1	07/29/2024 17:20	WG2332271
Carbon tetrachloride	U		0.00159	0.00200	1	07/29/2024 17:20	WG2332271
Chlorobenzene	U		0.00276	0.0100	1	07/29/2024 17:20	WG2332271
Chloroethane	U		0.00296	0.00500	1	07/29/2024 17:20	WG2332271
Chloroform	U		0.00212	0.00500	1	07/29/2024 17:20	WG2332271
Chloromethane	U		0.00361	0.00500	1	07/29/2024 17:20	WG2332271
cis-1,3-Dichloropropene	U		0.00492	0.0100	1	07/29/2024 17:20	WG2332271
Dibromochloromethane	U		0.00327	0.00500	1	07/29/2024 17:20	WG2332271
Ethylbenzene	U		0.000401	0.00200	1	07/29/2024 17:20	WG2332271
Methylene Chloride	U		0.0117	0.0200	1	07/29/2024 17:20	WG2332271
Tetrachloroethene	U		0.00486	0.0100	1	07/29/2024 17:20	WG2332271
Toluene	U		0.00219	0.00500	1	07/29/2024 17:20	WG2332271
trans-1,2-Dichloroethene	U		0.00501	0.0100	1	07/29/2024 17:20	WG2332271
Trichloroethene	U		0.00262	0.00500	1	07/29/2024 17:20	WG2332271
Vinyl chloride	U		0.00466	0.00500	1	07/29/2024 17:20	WG2332271
(S) 1,2-Dichloroethane-d4	*98.7*			*70.0-130*		*07/29/2024 17:20*	WG2332271
(S) 1,2-Dichloroethane-d4	*101*			*70.0-130*		*08/01/2024 19:57*	WG2332599
(S) 4-Bromofluorobenzene	*94.7*			*70.0-130*		*07/29/2024 17:20*	WG2332271
(S) 4-Bromofluorobenzene	*107*			*70.0-130*		*08/01/2024 19:57*	WG2332599
(S) Toluene-d8	*94.5*			*70.0-130*		*07/29/2024 17:20*	WG2332271
(S) Toluene-d8	*99.5*			*70.0-130*		*08/01/2024 19:57*	WG2332599

Polychlorinated Biphenyls (GC) by Method EPA-608.3

Analyte	Result mg/l	Qualifier	MDL mg/l	RDL mg/l	Dilution	Analysis date / time	Batch
PCB 1016	U		0.000270	0.000500	1	07/27/2024 19:52	WG2331033
PCB 1221	U		0.000270	0.000500	1	07/27/2024 19:52	WG2331033
PCB 1232	U		0.000270	0.000500	1	07/27/2024 19:52	WG2331033
PCB 1242	U		0.000270	0.000500	1	07/27/2024 19:52	WG2331033
PCB 1248	U		0.000173	0.000500	1	07/27/2024 19:52	WG2331033
PCB 1254	U		0.000173	0.000500	1	07/27/2024 19:52	WG2331033
PCB 1260	U		0.000173	0.000500	1	07/27/2024 19:52	WG2331033

Polychlorinated Biphenyls (GC) by Method EPA-608.3

Analyte	Result mg/l	Qualifier	MDL mg/l	RDL mg/l	Dilution	Analysis date / time	Batch
Total PCBs	U		0.000173	0.000500	1	07/27/2024 19:52	WG2331033
(S) Decachlorobiphenyl	*64.5*			*10.0-144*		*07/27/2024 19:52*	WG2331033
(S) Tetrachloro-m-xylene	*66.6*			*10.0-135*		*07/27/2024 19:52*	WG2331033

Semi Volatile Organic Compounds (GC/MS) by Method 625.1

Analyte	Result mg/l	Qualifier	MDL mg/l	RDL mg/l	Dilution	Analysis date / time	Batch
1,2,4,5-Tetrachlorobenzene	U		0.000200	0.00200	1	08/02/2024 13:28	WG2334305
2,4,6-Trichlorophenol	U		0.000238	0.00200	1	08/02/2024 13:28	WG2334305
2,4-Dichlorophenol	U		0.000336	0.00400	1	08/02/2024 13:28	WG2334305
2,4-Dimethylphenol	U		0.000613	0.00200	1	08/02/2024 13:28	WG2334305
2,4-Dinitrophenol	U		0.00154	0.0100	1	08/02/2024 13:28	WG2334305
2-Chlorophenol	U		0.000307	0.00200	1	08/02/2024 13:28	WG2334305
2-Methylphenol	U		0.000238	0.00200	1	08/02/2024 13:28	WG2334305
2-Nitrophenol	U		0.000247	0.00200	1	08/02/2024 13:28	WG2334305
3&4-Methyl Phenol	U		0.000238	0.00200	1	08/02/2024 13:28	WG2334305
3,3-Dichlorobenzidine	U		0.000788	0.00400	1	08/02/2024 13:28	WG2334305
4,6-Dinitro-2-methylphenol	U		0.00202	0.0100	1	08/02/2024 13:28	WG2334305
4-Chloro-3-methylphenol	U		0.000217	0.00200	1	08/02/2024 13:28	WG2334305
4-Nitrophenol	U		0.00123	0.0100	1	08/02/2024 13:28	WG2334305
Anthracene	U		0.000168	0.00200	1	08/02/2024 13:28	WG2334305
Benzidine	U		0.000350	0.00400	1	08/02/2024 13:28	WG2334305
Benzo(a)anthracene	U		0.000307	0.00200	1	08/02/2024 13:28	WG2334305
Benzo(a)pyrene	U		0.000470	0.00200	1	08/02/2024 13:28	WG2334305
Bis(2-chloroethyl)ether	U		0.000168	0.00200	1	08/02/2024 13:28	WG2334305
Bis(2-Ethylhexyl)phthalate	U		0.00180	0.00200	1	08/02/2024 13:28	WG2334305
Chrysene	U		0.000257	0.00200	1	08/02/2024 13:28	WG2334305
Di-n-butyl phthalate	U		0.00160	0.00200	1	08/02/2024 13:28	WG2334305
Hexachloro-1,3-butadiene	U		0.000217	0.00200	1	08/02/2024 13:28	WG2334305
Hexachlorobenzene	U		0.000307	0.00200	1	08/02/2024 13:28	WG2334305
Hexachlorocyclopentadiene	U		0.000299	0.00200	1	08/02/2024 13:28	WG2334305
Hexachloroethane	U		0.000247	0.00200	1	08/02/2024 13:28	WG2334305
n-Nitrosodi-n-butylamine	U		0.00110	0.00200	1	08/02/2024 13:28	WG2334305
n-Nitrosodiethylamine	U		0.000696	0.00200	1	08/02/2024 13:28	WG2334305
Nitrobenzene	U		0.000314	0.00200	1	08/02/2024 13:28	WG2334305
Nonylphenol	U		0.000168	0.00200	1	08/02/2024 13:28	WG2334305
Pentachlorobenzene	U		0.000247	0.00200	1	08/02/2024 13:28	WG2334305
Pentachlorophenol	U		0.000283	0.00200	1	08/02/2024 13:28	WG2334305
Phenanthrene	U		0.000200	0.00200	1	08/02/2024 13:28	WG2334305
Phenol	U		0.000500	0.00200	1	08/02/2024 13:28	WG2334305
Pyridine	U		0.00174	0.00400	1	08/02/2024 13:28	WG2334305
Total Cresols	U		0.00153	0.00800	1	08/02/2024 13:28	WG2334305
(S) 2,4,6-Tribromophenol	*57.1*			*29.0-132*		*08/02/2024 13:28*	WG2334305
(S) 2-Fluorobiphenyl	*78.0*			*26.0-102*		*08/02/2024 13:28*	WG2334305
(S) 2-Fluorophenol	*65.9*			*10.0-66.0*		*08/02/2024 13:28*	WG2334305
(S) Nitrobenzene-d5	*80.2*			*15.0-106*		*08/02/2024 13:28*	WG2334305
(S) p-Terphenyl-d14	*91.2*			*10.0-120*		*08/02/2024 13:28*	WG2334305
(S) Phenol-D6	*59.3*	J1		*10.0-54.0*		*08/02/2024 13:28*	WG2334305

Method Blank (MB)

(MB) R4100241-1 07/27/24 13:35

Analyte	MB Result mg/l	MB Qualifier	MB MDL mg/l	MB RDL mg/l
Total Dissolved Solids	U		25.0	25.0

L1760676-01 Original Sample (OS) • Duplicate (DUP)

(OS) L1760676-01 07/27/24 13:35 • (DUP) R4100241-3 07/27/24 13:35

Analyte	Original Result mg/l	DUP Result mg/l	Dilution	DUP RPD %	DUP Qualifier	DUP RPD Limits %
Total Dissolved Solids	21200	21300	1	0.801		10

L1760676-02 Original Sample (OS) • Duplicate (DUP)

(OS) L1760676-02 07/27/24 13:35 • (DUP) R4100241-4 07/27/24 13:35

Analyte	Original Result mg/l	DUP Result mg/l	Dilution	DUP RPD %	DUP Qualifier	DUP RPD Limits %
Total Dissolved Solids	21700	21400	1	1.35		10

Laboratory Control Sample (LCS)

(LCS) R4100241-2 07/27/24 13:35

Analyte	Spike Amount mg/l	LCS Result mg/l	LCS Rec. %	Rec. Limits %	LCS Qualifier
Total Dissolved Solids	2410	2410	100	85.0-115	

Method Blank (MB)

(MB) R4101923-1 08/01/24 12:09

Analyte	MB Result mg/l	MB Qualifier	MB MDL mg/l	MB RDL mg/l
Suspended Solids	U		2.50	2.50

L1762006-01 Original Sample (OS) • Duplicate (DUP)

(OS) L1762006-01 08/01/24 12:09 • (DUP) R4101923-3 08/01/24 12:09

Analyte	Original Result mg/l	DUP Result mg/l	Dilution	DUP RPD %	DUP Qualifier	DUP RPD Limits %
Suspended Solids	10300	10500	1	2.11		10

L1762006-02 Original Sample (OS) • Duplicate (DUP)

(OS) L1762006-02 08/01/24 12:09 • (DUP) R4101923-4 08/01/24 12:09

Analyte	Original Result mg/l	DUP Result mg/l	Dilution	DUP RPD %	DUP Qualifier	DUP RPD Limits %
Suspended Solids	11600	11400	1	1.91		10

Laboratory Control Sample (LCS)

(LCS) R4101923-2 08/01/24 12:09

Analyte	Spike Amount mg/l	LCS Result mg/l	LCS Rec. %	Rec. Limits %	LCS Qualifier
Suspended Solids	879	827	94.1	85.0-115	

Method Blank (MB)

(MB) R4103232-1 08/05/24 19:10

Analyte	MB Result mg/l	MB Qualifier	MB MDL mg/l	MB RDL mg/l
Oil & Grease (Hexane Extr)	U		0.350	5.00

Laboratory Control Sample (LCS) • Laboratory Control Sample Duplicate (LCSD)

(LCS) R4103232-2 08/05/24 19:10 • (LCSD) R4103232-3 08/05/24 19:10

Analyte	Spike Amount mg/l	LCS Result mg/l	LCSD Result mg/l	LCS Rec. %	LCSD Rec. %	Rec. Limits %	LCS Qualifier	LCSD Qualifier	RPD %	RPD Limits %
Oil & Grease (Hexane Extr)	40.0	36.7	35.9	91.8	89.8	78.0-114			2.20	18

L1759867-02 Original Sample (OS) • Matrix Spike (MS)

(OS) L1759867-02 08/05/24 19:10 • (MS) R4103232-4 08/05/24 19:10

Analyte	Spike Amount mg/l	Original Result mg/l	MS Result mg/l	MS Rec. %	Dilution	Rec. Limits %	MS Qualifier
Oil & Grease (Hexane Extr)	40.0	U	36.4	90.9	1	78.0-114	

Method Blank (MB)

(MB) R4100402-1 07/26/24 18:12

Analyte	MB Result units	MB Qualifier	MB MDL units	MB RDL units
Color	U		5.00	5.00

Sample Narrative:

BLANK: 7

L1760920-01 Original Sample (OS) • Duplicate (DUP)

(OS) L1760920-01 07/26/24 18:12 • (DUP) R4100402-2 07/26/24 18:12

Analyte	Original Result units	DUP Result units	Dilution	DUP RPD %	DUP Qualifier	DUP RPD Limits %
Color	20.0	20.0	1	0.000		20

Sample Narrative:

OS: 7

DUP: 7

Method Blank (MB)

(MB) R4099699-1 07/29/24 10:07

Analyte	MB Result mg/l	MB Qualifier	MB MDL mg/l	MB RDL mg/l
Alkalinity	U		20.0	20.0

L1760058-01 Original Sample (OS) • Duplicate (DUP)

(OS) L1760058-01 07/29/24 10:07 • (DUP) R4099699-3 07/29/24 10:07

Analyte	Original Result mg/l	DUP Result mg/l	Dilution	DUP RPD %	DUP Qualifier	DUP RPD Limits %
Alkalinity	260	250	1	3.92		20

Laboratory Control Sample (LCS)

(LCS) R4099699-2 07/29/24 10:07

Analyte	Spike Amount mg/l	LCS Result mg/l	LCS Rec. %	Rec. Limits %	LCS Qualifier
Alkalinity	250	236	94.4	90.0-110	

Method Blank (MB)

(MB) R4100710-1 07/30/24 18:06

Analyte	MB Result mg/l	MB Qualifier	MB MDL mg/l	MB RDL mg/l
Bromide	U		0.0668	0.400
Chloride	U		0.325	0.800
Nitrate	U		0.379	0.500
Sulfate	U		0.211	0.700

Laboratory Control Sample (LCS)

(LCS) R4100710-2 07/30/24 18:18

Analyte	Spike Amount mg/l	LCS Result mg/l	LCS Rec. %	Rec. Limits %	LCS Qualifier
Bromide	5.00	5.07	101	90.0-110	
Chloride	5.00	4.95	98.9	90.0-110	
Nitrate	5.00	4.88	97.5	90.0-110	
Sulfate	5.00	5.06	101	90.0-110	

L1760920-01 Original Sample (OS) • Matrix Spike (MS) • Matrix Spike Duplicate (MSD)

(OS) L1760920-01 07/30/24 18:30 • (MS) R4100710-3 07/30/24 18:42 • (MSD) R4100710-4 07/30/24 18:54

Analyte	Spike Amount mg/l	Original Result mg/l	MS Result mg/l	MSD Result mg/l	MS Rec. %	MSD Rec. %	Dilution	Rec. Limits %	MS Qualifier	MSD Qualifier	RPD %	RPD Limits %
Bromide	5.00	5.16	5.18	0.113	0.382	0.000	1	90.0-110	J6	J3 J6	191	20
Nitrate	5.00	4.86	4.88	U	0.426	0.000	1	90.0-110	J6	J3 J6	200	20

L1760920-01 Original Sample (OS) • Matrix Spike (MS) • Matrix Spike Duplicate (MSD)

(OS) L1760920-01 07/30/24 19:53 • (MS) R4100710-5 07/30/24 19:30 • (MSD) R4100710-6 07/30/24 19:42

Analyte	Spike Amount mg/l	Original Result mg/l	MS Result mg/l	MSD Result mg/l	MS Rec. %	MSD Rec. %	Dilution	Rec. Limits %	MS Qualifier	MSD Qualifier	RPD %	RPD Limits %
Chloride	5.00	15.4	39.9	40.0	490	491	5	90.0-110	J5	J5	0.193	20
Sulfate	5.00	25.0	49.8	49.8	496	497	5	90.0-110	V	V	0.102	20

Method Blank (MB)

(MB) R4102621-1 08/02/24 09:52

Analyte	MB Result mg/l	MB Qualifier	MB MDL mg/l	MB RDL mg/l
Fluoride	U		0.0947	0.500

Laboratory Control Sample (LCS)

(LCS) R4102621-2 08/02/24 10:04

Analyte	Spike Amount mg/l	LCS Result mg/l	LCS Rec. %	Rec. Limits %	LCS Qualifier
Fluoride	5.00	5.31	106	90.0-110	

L1760920-01 Original Sample (OS) • Matrix Spike (MS) • Matrix Spike Duplicate (MSD)

(OS) L1760920-01 08/02/24 10:16 • (MS) R4102621-3 08/02/24 10:28 • (MSD) R4102621-4 08/02/24 10:40

Analyte	Spike Amount mg/l	Original Result mg/l	MS Result mg/l	MSD Result mg/l	MS Rec. %	MSD Rec. %	Dilution	Rec. Limits %	MS Qualifier	MSD Qualifier	RPD %	RPD Limits %
Fluoride	5.00	0.376	5.44	5.55	101	104	1	90.0-110			2.13	20

Method Blank (MB)

(MB) R4101312-1 08/01/24 11:18

Analyte	MB Result mg/l	MB Qualifier	MB MDL mg/l	MB RDL mg/l
Chromium,Hexavalent	U		0.00200	0.00300

Laboratory Control Sample (LCS)

(LCS) R4101312-2 08/01/24 11:18

Analyte	Spike Amount mg/l	LCS Result mg/l	LCS Rec. %	Rec. Limits %	LCS Qualifier
Chromium,Hexavalent	0.200	0.190	94.8	85.0-115	

L1759345-01 Original Sample (OS) • Matrix Spike (MS) • Matrix Spike Duplicate (MSD)

(OS) L1759345-01 08/01/24 11:18 • (MS) R4101312-3 08/01/24 11:18 • (MSD) R4101312-4 08/01/24 11:18

Analyte	Spike Amount mg/l	Original Result mg/l	MS Result mg/l	MSD Result mg/l	MS Rec. %	MSD Rec. %	Dilution	Rec. Limits %	MS Qualifier	MSD Qualifier	RPD %	RPD Limits %
Chromium,Hexavalent	0.200	U	0.162	0.162	81.2	80.8	1	10.0-120			0.526	20

Sample Narrative:

OS: Sample preserved in lab w/in 24hrs of collection.

1 Cp
2 Tc
3 Ss
4 Cn
5 Sr
6 Qc
7 Gl
8 Al
9 Sc

Method Blank (MB)

(MB) R4100824-1 07/31/24 12:54

Analyte	MB Result mg/l	MB Qualifier	MB MDL mg/l	MB RDL mg/l
Kjeldahl Nitrogen, TKN	0.180	J	0.140	0.250

Laboratory Control Sample (LCS)

(LCS) R4100824-2 07/31/24 12:55

Analyte	Spike Amount mg/l	LCS Result mg/l	LCS Rec. %	Rec. Limits %	LCS Qualifier
Kjeldahl Nitrogen, TKN	4.00	4.36	109	90.0-110	

L1760222-02 Original Sample (OS) • Matrix Spike (MS) • Matrix Spike Duplicate (MSD)

(OS) L1760222-02 07/31/24 13:33 • (MS) R4100824-3 07/31/24 13:28 • (MSD) R4100824-4 07/31/24 13:29

Analyte	Spike Amount mg/l	Original Result mg/l	MS Result mg/l	MSD Result mg/l	MS Rec. %	MSD Rec. %	Dilution	Rec. Limits %	MS Qualifier	MSD Qualifier	RPD %	RPD Limits %
Kjeldahl Nitrogen, TKN	20.0	114	149	133	179	95.0	25	90.0-110	V		11.9	20

L1760222-03 Original Sample (OS) • Matrix Spike (MS) • Matrix Spike Duplicate (MSD)

(OS) L1760222-03 07/31/24 12:59 • (MS) R4100824-5 07/31/24 13:30 • (MSD) R4100824-6 07/31/24 13:32

Analyte	Spike Amount mg/l	Original Result mg/l	MS Result mg/l	MSD Result mg/l	MS Rec. %	MSD Rec. %	Dilution	Rec. Limits %	MS Qualifier	MSD Qualifier	RPD %	RPD Limits %
Kjeldahl Nitrogen, TKN	20.0	32.3	61.5	62.0	146	149	5	90.0-110	E J5	E J5	0.810	20

Method Blank (MB)

(MB) R4101468-1 08/01/24 12:48

Analyte	MB Result mg/l	MB Qualifier	MB MDL mg/l	MB RDL mg/l
Nitrate-Nitrite	U		0.0300	0.0500

Laboratory Control Sample (LCS)

(LCS) R4101468-2 08/01/24 12:49

Analyte	Spike Amount mg/l	LCS Result mg/l	LCS Rec. %	Rec. Limits %	LCS Qualifier
Nitrate-Nitrite	2.50	2.42	96.8	90.0-110	

L1760920-01 Original Sample (OS) • Matrix Spike (MS) • Matrix Spike Duplicate (MSD)

(OS) L1760920-01 08/01/24 12:54 • (MS) R4101468-3 08/01/24 12:58 • (MSD) R4101468-4 08/01/24 12:58

Analyte	Spike Amount mg/l	Original Result mg/l	MS Result mg/l	MSD Result mg/l	MS Rec. %	MSD Rec. %	Dilution	Rec. Limits %	MS Qualifier	MSD Qualifier	RPD %	RPD Limits %
Nitrate-Nitrite	2.50	U	2.50	2.50	100	100	1	90.0-110			0.000	20

L1760920-01 Original Sample (OS) • Duplicate (DUP)

(OS) L1760920-01 08/02/24 08:57 • (DUP) R4101780-1 08/02/24 08:57

Analyte	Original Result mg/l	DUP Result mg/l	Dilution	DUP RPD %	DUP Qualifier	DUP RPD Limits %
Dissolved Oxygen	9.72	9.65	1	0.723		10

Method Blank (MB)

(MB) R4099562-1 07/29/24 10:15

Analyte	MB Result mg/l	MB Qualifier	MB MDL mg/l	MB RDL mg/l
Chlorine,residual	U		0.0260	0.100

L1759562-01 Original Sample (OS) • Duplicate (DUP)

(OS) L1759562-01 07/29/24 10:16 • (DUP) R4099562-4 07/29/24 10:16

Analyte	Original Result mg/l	DUP Result mg/l	Dilution	DUP RPD %	DUP Qualifier	DUP RPD Limits %
Chlorine,residual	0.0530	0.0570	1	7.27	J	20

Laboratory Control Sample (LCS) • Laboratory Control Sample Duplicate (LCSD)

(LCS) R4099562-2 07/29/24 10:16 • (LCSD) R4099562-3 07/29/24 10:16

Analyte	Spike Amount mg/l	LCS Result mg/l	LCSD Result mg/l	LCS Rec. %	LCSD Rec. %	Rec. Limits %	LCS Qualifier	LCSD Qualifier	RPD %	RPD Limits %
Chlorine,residual	1.00	0.958	0.954	95.8	95.4	85.0-115			0.418	20

Method Blank (MB)

(MB) R4101035-1 07/31/24 16:58

Analyte	MB Result mg/l	MB Qualifier	MB MDL mg/l	MB RDL mg/l
Cyanide	U		0.00430	0.0100

Laboratory Control Sample (LCS)

(LCS) R4101035-2 07/31/24 16:58

Analyte	Spike Amount mg/l	LCS Result mg/l	LCS Rec. %	Rec. Limits %	LCS Qualifier
Cyanide	0.100	0.0940	94.0	85.0-115	

L1760432-02 Original Sample (OS) • Matrix Spike (MS) • Matrix Spike Duplicate (MSD)

(OS) L1760432-02 07/31/24 16:58 • (MS) R4101035-3 07/31/24 16:58 • (MSD) R4101035-4 07/31/24 16:58

Analyte	Spike Amount mg/l	Original Result mg/l	MS Result mg/l	MSD Result mg/l	MS Rec. %	MSD Rec. %	Dilution	Rec. Limits %	MS Qualifier	MSD Qualifier	RPD %	RPD Limits %
Cyanide	0.100	0.00533	0.102	0.101	102	101	1	85.0-115			0.734	20

L1761574-03 Original Sample (OS) • Matrix Spike (MS) • Matrix Spike Duplicate (MSD)

(OS) L1761574-03 07/31/24 16:58 • (MS) R4101035-5 07/31/24 16:58 • (MSD) R4101035-6 07/31/24 16:58

Analyte	Spike Amount mg/l	Original Result mg/l	MS Result mg/l	MSD Result mg/l	MS Rec. %	MSD Rec. %	Dilution	Rec. Limits %	MS Qualifier	MSD Qualifier	RPD %	RPD Limits %
Cyanide	0.100	U	U	U	0.000	0.000	1	85.0-115	J6	J6	0.000	20

Method Blank (MB)

(MB) R4099834-1 07/29/24 16:30

Analyte	MB Result mg/l	MB Qualifier	MB MDL mg/l	MB RDL mg/l
Phosphorus,Total	U		0.0152	0.0500

Laboratory Control Sample (LCS)

(LCS) R4099834-2 07/29/24 16:30

Analyte	Spike Amount mg/l	LCS Result mg/l	LCS Rec. %	Rec. Limits %	LCS Qualifier
Phosphorus,Total	0.500	0.517	103	80.0-120	

L1760717-02 Original Sample (OS) • Matrix Spike (MS) • Matrix Spike Duplicate (MSD)

(OS) L1760717-02 07/29/24 16:30 • (MS) R4099834-3 07/29/24 16:31 • (MSD) R4099834-4 07/29/24 16:31

Analyte	Spike Amount mg/l	Original Result mg/l	MS Result mg/l	MSD Result mg/l	MS Rec. %	MSD Rec. %	Dilution	Rec. Limits %	MS Qualifier	MSD Qualifier	RPD %	RPD Limits %
Phosphorus,Total	0.500	0.0180	0.529	0.532	102	103	1	80.0-120			0.632	20

Method Blank (MB)

(MB) R4100325-1 07/30/24 15:43

Analyte	MB Result mg/l	MB Qualifier	MB MDL mg/l	MB RDL mg/l
Sulfide	U		0.0230	0.100

Laboratory Control Sample (LCS)

(LCS) R4100325-2 07/30/24 15:43

Analyte	Spike Amount mg/l	LCS Result mg/l	LCS Rec. %	Rec. Limits %	LCS Qualifier
Sulfide	0.800	0.801	100	80.0-120	

L1761376-01 Original Sample (OS) • Matrix Spike (MS) • Matrix Spike Duplicate (MSD)

(OS) L1761376-01 07/30/24 15:43 • (MS) R4100325-3 07/30/24 15:43 • (MSD) R4100325-4 07/30/24 15:43

Analyte	Spike Amount mg/l	Original Result mg/l	MS Result mg/l	MSD Result mg/l	MS Rec. %	MSD Rec. %	Dilution	Rec. Limits %	MS Qualifier	MSD Qualifier	RPD %	RPD Limits %
Sulfide	0.800	U	0.695	0.660	86.9	82.5	1	80.0-120			5.18	20

Method Blank (MB)

(MB) R4103238-1 08/06/24 12:40

Analyte	MB Result mg/l	MB Qualifier	MB MDL mg/l	MB RDL mg/l
Sulfite	U		1.19	3.00

L1761461-01 Original Sample (OS) • Duplicate (DUP)

(OS) L1761461-01 08/06/24 12:40 • (DUP) R4103238-5 08/06/24 12:40

Analyte	Original Result mg/l	DUP Result mg/l	Dilution	DUP RPD %	DUP Qualifier	DUP RPD Limits %
Sulfite	U	U	1	0.000		20

Laboratory Control Sample (LCS)

(LCS) R4103238-2 08/06/24 12:40

Analyte	Spike Amount mg/l	LCS Result mg/l	LCS Rec. %	Rec. Limits %	LCS Qualifier
Sulfite	20.0	18.0	90.0	85.0-115	

L1760920-01 Original Sample (OS) • Matrix Spike (MS) • Matrix Spike Duplicate (MSD)

(OS) L1760920-01 08/06/24 12:40 • (MS) R4103238-3 08/06/24 12:40 • (MSD) R4103238-4 08/06/24 12:40

Analyte	Spike Amount mg/l	Original Result mg/l	MS Result mg/l	MSD Result mg/l	MS Rec. %	MSD Rec. %	Dilution	Rec. Limits %	MS Qualifier	MSD Qualifier	RPD %	RPD Limits %
Sulfite	20.0	U	17.0	18.0	85.0	90.0	1	85.0-115			5.71	20

Method Blank (MB)

(MB) R4100806-1 07/31/24 12:40

Analyte	MB Result mg/l	MB Qualifier	MB MDL mg/l	MB RDL mg/l
CBOD	U		0.200	0.200

L1760717-02 Original Sample (OS) • Duplicate (DUP)

(OS) L1760717-02 07/31/24 12:52 • (DUP) R4100806-3 07/31/24 13:20

Analyte	Original Result mg/l	DUP Result mg/l	Dilution	DUP RPD %	DUP Qualifier	DUP RPD Limits %
CBOD	ND	ND	1	0		20

Laboratory Control Sample (LCS)

(LCS) R4100806-2 07/31/24 12:45

Analyte	Spike Amount mg/l	LCS Result mg/l	LCS Rec. %	Rec. Limits %	LCS Qualifier
CBOD	198	195	98.2	85-115	

Method Blank (MB)

(MB) R4101266-1 08/01/24 09:23

Analyte	MB Result mg/l	MB Qualifier	MB MDL mg/l	MB RDL mg/l
BOD	U		0.200	0.200

L1761112-01 Original Sample (OS) • Duplicate (DUP)

(OS) L1761112-01 08/01/24 09:57 • (DUP) R4101266-3 08/01/24 10:08

Analyte	Original Result mg/l	DUP Result mg/l	Dilution	DUP RPD %	DUP Qualifier	DUP RPD Limits %
BOD	7.68	9.30	1	19.1	K9	20

L1761113-01 Original Sample (OS) • Duplicate (DUP)

(OS) L1761113-01 08/01/24 10:03 • (DUP) R4101266-4 08/01/24 10:11

Analyte	Original Result mg/l	DUP Result mg/l	Dilution	DUP RPD %	DUP Qualifier	DUP RPD Limits %
BOD	ND	ND	1	0		20

Laboratory Control Sample (LCS)

(LCS) R4101266-2 08/01/24 09:28

Analyte	Spike Amount mg/l	LCS Result mg/l	LCS Rec. %	Rec. Limits %	LCS Qualifier
BOD	198	190	96.2	85-115	

Method Blank (MB)

(MB) R4102740-1 08/05/24 13:31

Analyte	MB Result mg/l	MB Qualifier	MB MDL mg/l	MB RDL mg/l
COD	U		16.1	35.0

Laboratory Control Sample (LCS)

(LCS) R4102740-2 08/05/24 13:31

Analyte	Spike Amount mg/l	LCS Result mg/l	LCS Rec. %	Rec. Limits %	LCS Qualifier
COD	500	510	102	80.0-120	

L1759588-01 Original Sample (OS) • Matrix Spike (MS) • Matrix Spike Duplicate (MSD)

(OS) L1759588-01 08/05/24 13:31 • (MS) R4102740-3 08/05/24 13:31 • (MSD) R4102740-4 08/05/24 13:31

Analyte	Spike Amount mg/l	Original Result mg/l	MS Result mg/l	MSD Result mg/l	MS Rec. %	MSD Rec. %	Dilution	Rec. Limits %	MS Qualifier	MSD Qualifier	RPD %	RPD Limits %
COD	500	55.7	512	522	91.3	93.4	1	80.0-120			2.02	20

L1761126-01 Original Sample (OS) • Matrix Spike (MS) • Matrix Spike Duplicate (MSD)

(OS) L1761126-01 08/05/24 13:31 • (MS) R4102740-5 08/05/24 13:31 • (MSD) R4102740-6 08/05/24 13:31

Analyte	Spike Amount mg/l	Original Result mg/l	MS Result mg/l	MSD Result mg/l	MS Rec. %	MSD Rec. %	Dilution	Rec. Limits %	MS Qualifier	MSD Qualifier	RPD %	RPD Limits %
COD	500	22.2	510	508	97.5	97.1	1	80.0-120			0.411	20

Method Blank (MB)

(MB) R4100631-1 07/29/24 17:49

Analyte	MB Result mg/l	MB Qualifier	MB MDL mg/l	MB RDL mg/l
TOC (Total Organic Carbon)	U		0.270	0.700

Laboratory Control Sample (LCS)

(LCS) R4100631-2 07/29/24 18:09

Analyte	Spike Amount mg/l	LCS Result mg/l	LCS Rec. %	Rec. Limits %	LCS Qualifier
TOC (Total Organic Carbon)	10.0	10.0	100	90.0-110	

L1759581-01 Original Sample (OS) • Matrix Spike (MS) • Matrix Spike Duplicate (MSD)

(OS) L1759581-01 07/29/24 20:54 • (MS) R4100631-3 07/29/24 19:20 • (MSD) R4100631-4 07/29/24 19:43

Analyte	Spike Amount mg/l	Original Result mg/l	MS Result mg/l	MSD Result mg/l	MS Rec. %	MSD Rec. %	Dilution	Rec. Limits %	MS Qualifier	MSD Qualifier	RPD %	RPD Limits %
TOC (Total Organic Carbon)	10.0	6.10	14.8	15.0	87.2	89.4	1	80.0-120			1.47	20

L1759885-01 Original Sample (OS) • Matrix Spike (MS) • Matrix Spike Duplicate (MSD)

(OS) L1759885-01 07/29/24 21:13 • (MS) R4100631-5 07/29/24 20:03 • (MSD) R4100631-6 07/29/24 20:23

Analyte	Spike Amount mg/l	Original Result mg/l	MS Result mg/l	MSD Result mg/l	MS Rec. %	MSD Rec. %	Dilution	Rec. Limits %	MS Qualifier	MSD Qualifier	RPD %	RPD Limits %
TOC (Total Organic Carbon)	10.0	2.90	12.2	12.6	93.2	96.5	1	80.0-120			2.66	20

Method Blank (MB)

(MB) R4100406-1 07/26/24 17:42

Analyte	MB Result mg/l	MB Qualifier	MB MDL mg/l	MB RDL mg/l
MBAS	U		0.360	0.500

Laboratory Control Sample (LCS)

(LCS) R4100406-2 07/26/24 17:42

Analyte	Spike Amount mg/l	LCS Result mg/l	LCS Rec. %	Rec. Limits %	LCS Qualifier
MBAS	1.00	1.15	115	80.0-120	

L1760920-01 Original Sample (OS) • Matrix Spike (MS) • Matrix Spike Duplicate (MSD)

(OS) L1760920-01 07/26/24 17:42 • (MS) R4100406-3 07/26/24 17:42 • (MSD) R4100406-4 07/26/24 17:42

Analyte	Spike Amount mg/l	Original Result mg/l	MS Result mg/l	MSD Result mg/l	MS Rec. %	MSD Rec. %	Dilution	Rec. Limits %	MS Qualifier	MSD Qualifier	RPD %	RPD Limits %
MBAS	1.00	U	1.17	1.22	117	122	1	80.0-120		J5	3.96	20

L1761518-01 Original Sample (OS) • Duplicate (DUP)

(OS) L1761518-01 07/31/24 08:43 • (DUP) R4100664-2 07/31/24 08:43

Analyte	Original Result	DUP Result	Dilution	DUP RPD	DUP Qualifier	DUP RPD Limits
	su	su		%		%
pH	7.86	7.88	1	0.254		20

Sample Narrative:
OS: 7.86 at 22.4C
DUP: 7.88 at 22.3C

Laboratory Control Sample (LCS)

(LCS) R4100664-1 07/31/24 08:43

Analyte	Spike Amount	LCS Result	LCS Rec.	Rec. Limits	LCS Qualifier
	su	su	%	%	
pH	6.00	5.95	99.2	99.0-101	

Sample Narrative:
LCS: 5.95 at 23.1C

Method Blank (MB)

(MB) R4100180-1 07/29/24 17:07

Analyte	MB Result mg/l	MB Qualifier	MB MDL mg/l	MB RDL mg/l
Ammonia Nitrogen	U		0.0280	0.100

Laboratory Control Sample (LCS)

(LCS) R4100180-2 07/29/24 17:09

Analyte	Spike Amount mg/l	LCS Result mg/l	LCS Rec. %	Rec. Limits %	LCS Qualifier
Ammonia Nitrogen	5.00	5.25	105	80.0-120	

L1760087-01 Original Sample (OS) • Matrix Spike (MS) • Matrix Spike Duplicate (MSD)

(OS) L1760087-01 07/29/24 17:18 • (MS) R4100180-3 07/29/24 17:11 • (MSD) R4100180-4 07/29/24 17:13

Analyte	Spike Amount mg/l	Original Result mg/l	MS Result mg/l	MSD Result mg/l	MS Rec. %	MSD Rec. %	Dilution	Rec. Limits %	MS Qualifier	MSD Qualifier	RPD %	RPD Limits %
Ammonia Nitrogen	5.00	0.211	5.28	5.28	101	101	1	80.0-120			0.000	20

L1760106-01 Original Sample (OS) • Matrix Spike (MS) • Matrix Spike Duplicate (MSD)

(OS) L1760106-01 07/29/24 17:20 • (MS) R4100180-5 07/29/24 17:14 • (MSD) R4100180-6 07/29/24 17:16

Analyte	Spike Amount mg/l	Original Result mg/l	MS Result mg/l	MSD Result mg/l	MS Rec. %	MSD Rec. %	Dilution	Rec. Limits %	MS Qualifier	MSD Qualifier	RPD %	RPD Limits %
Ammonia Nitrogen	5.00	0.301	5.09	5.09	95.8	95.8	1	80.0-120			0.000	20

Method Blank (MB)

(MB) R4100874-1 07/31/24 14:18

Analyte	MB Result mg/l	MB Qualifier	MB MDL mg/l	MB RDL mg/l
Mercury	U		0.0000450	0.000200

Laboratory Control Sample (LCS)

(LCS) R4100874-2 07/31/24 14:20

Analyte	Spike Amount mg/l	LCS Result mg/l	LCS Rec. %	Rec. Limits %	LCS Qualifier
Mercury	0.00250	0.00238	95.2	85.0-115	

L1758363-02 Original Sample (OS) • Matrix Spike (MS) • Matrix Spike Duplicate (MSD)

(OS) L1758363-02 07/31/24 14:22 • (MS) R4100874-3 07/31/24 14:24 • (MSD) R4100874-4 07/31/24 14:27

Analyte	Spike Amount mg/l	Original Result mg/l	MS Result mg/l	MSD Result mg/l	MS Rec. %	MSD Rec. %	Dilution	Rec. Limits %	MS Qualifier	MSD Qualifier	RPD %	RPD Limits %
Mercury	0.00250	U	0.00222	0.00223	88.8	89.2	1	70.0-130			0.449	20

1 Cp
2 Tc
3 Ss
4 Cn
5 Sr
6 Qc
7 Gl
8 Al
9 Sc

Method Blank (MB)

(MB) R4099882-1 07/29/24 14:45

Analyte	MB Result mg/l	MB Qualifier	MB MDL mg/l	MB RDL mg/l
Boron	U		0.0186	0.100
Tin	U		0.00240	0.0250
Titanium	U		0.00835	0.100

Laboratory Control Sample (LCS)

(LCS) R4099882-2 07/29/24 14:49

Analyte	Spike Amount mg/l	LCS Result mg/l	LCS Rec. %	Rec. Limits %	LCS Qualifier
Boron	1.00	0.966	96.6	85.0-115	
Tin	1.00	1.02	102	85.0-115	
Titanium	1.00	1.01	101	85.0-115	

L1760812-05 Original Sample (OS) • Matrix Spike (MS) • Matrix Spike Duplicate (MSD)

(OS) L1760812-05 07/29/24 14:53 • (MS) R4099882-3 07/29/24 14:57 • (MSD) R4099882-4 07/29/24 15:01

Analyte	Spike Amount mg/l	Original Result mg/l	MS Result mg/l	MSD Result mg/l	MS Rec. %	MSD Rec. %	Dilution	Rec. Limits %	MS Qualifier	MSD Qualifier	RPD %	RPD Limits %
Boron	1.00	0.0234	0.988	0.990	96.4	96.7	1	70.0-130			0.293	20
Tin	1.00	U	1.02	1.02	102	102	1	70.0-130			0.392	20
Titanium	1.00	0.192	1.27	1.26	107	107	1	70.0-130			0.237	20

L1760920-01 Original Sample (OS) • Matrix Spike (MS) • Matrix Spike Duplicate (MSD)

(OS) L1760920-01 07/29/24 15:04 • (MS) R4099882-5 07/29/24 15:08 • (MSD) R4099882-6 07/29/24 15:12

Analyte	Spike Amount mg/l	Original Result mg/l	MS Result mg/l	MSD Result mg/l	MS Rec. %	MSD Rec. %	Dilution	Rec. Limits %	MS Qualifier	MSD Qualifier	RPD %	RPD Limits %
Boron	1.00	0.0785	1.04	1.04	95.9	96.1	1	70.0-130			0.193	20
Tin	1.00	U	1.02	1.02	102	102	1	70.0-130			0.589	20
Titanium	1.00	U	1.01	1.02	101	102	1	70.0-130			0.789	20

Method Blank (MB)

(MB) R4100601-1 07/30/24 17:47

Analyte	MB Result mg/l	MB Qualifier	MB MDL mg/l	MB RDL mg/l
Cadmium	U		0.000120	0.00100
Chromium	U		0.000510	0.00300
Cobalt	0.0000519	J	0.0000400	0.000300
Copper	U		0.000900	0.00200
Iron	0.00511	J	0.00432	0.00700
Lead	U		0.000140	0.000500
Manganese	U		0.000330	0.000500
Molybdenum	U		0.000530	0.00100
Nickel	U		0.000640	0.00200
Selenium	U		0.000740	0.00500
Silver	U		0.0000800	0.000500
Thallium	U		0.000190	0.000500
Zinc	U		0.00265	0.00500

Method Blank (MB)

(MB) R4100925-1 07/31/24 14:31

Analyte	MB Result mg/l	MB Qualifier	MB MDL mg/l	MB RDL mg/l
Aluminum	0.0128		0.00186	0.00250
Antimony	U		0.000580	0.00500
Arsenic	U		0.000100	0.000500
Barium	U		0.000440	0.00300
Beryllium	U		0.0000600	0.000500
Magnesium	0.0238		0.0121	0.0200

Laboratory Control Sample (LCS)

(LCS) R4100601-2 07/30/24 17:53

Analyte	Spike Amount mg/l	LCS Result mg/l	LCS Rec. %	Rec. Limits %	LCS Qualifier
Aluminum	1.00	0.860	86.0	85.0-115	
Cadmium	0.100	0.0929	92.9	85.0-115	
Chromium	0.100	0.0913	91.3	85.0-115	
Cobalt	0.100	0.0946	94.6	85.0-115	
Copper	0.100	0.0953	95.3	85.0-115	
Iron	1.00	0.910	91.0	85.0-115	
Lead	0.100	0.0931	93.1	85.0-115	
Manganese	0.100	0.0911	91.1	85.0-115	

Laboratory Control Sample (LCS)

(LCS) R4100601-2 07/30/24 17:53

Analyte	Spike Amount mg/l	LCS Result mg/l	LCS Rec. %	Rec. Limits %	LCS Qualifier
Molybdenum	0.100	0.100	100	85.0-115	
Nickel	0.100	0.0929	92.9	85.0-115	
Selenium	0.100	0.0895	89.5	85.0-115	
Silver	0.0500	0.0474	94.7	85.0-115	
Thallium	0.100	0.0910	91.0	85.0-115	
Zinc	0.100	0.0919	91.9	85.0-115	

Laboratory Control Sample (LCS)

(LCS) R4100925-2 07/31/24 14:38

Analyte	Spike Amount mg/l	LCS Result mg/l	LCS Rec. %	Rec. Limits %	LCS Qualifier
Antimony	0.100	0.0966	96.6	85.0-115	
Arsenic	0.100	0.100	100	85.0-115	
Barium	0.100	0.0968	96.8	85.0-115	
Beryllium	0.100	0.0945	94.5	85.0-115	
Magnesium	1.00	1.04	104	85.0-115	

L1760920-01 Original Sample (OS) • Matrix Spike (MS) • Matrix Spike Duplicate (MSD)

(OS) L1760920-01 07/30/24 19:08 • (MS) R4100601-3 07/30/24 19:14 • (MSD) R4100601-4 07/30/24 19:20

Analyte	Spike Amount mg/l	Original Result mg/l	MS Result mg/l	MSD Result mg/l	MS Rec. %	MSD Rec. %	Dilution	Rec. Limits %	MS Qualifier	MSD Qualifier	RPD %	RPD Limits %
Cadmium	0.100	U	0.0925	0.0920	92.5	92.0	1	70.0-130			0.528	20
Chromium	0.100	U	0.0924	0.0932	92.4	93.2	1	70.0-130			0.866	20
Cobalt	0.100	0.000126	0.0940	0.0930	93.9	92.9	1	70.0-130			1.08	20
Copper	0.100	0.00203	0.0959	0.0963	93.9	94.3	1	70.0-130			0.429	20
Iron	1.00	0.0741	1.01	1.03	93.3	95.6	1	70.0-130			2.32	20
Lead	0.100	U	0.0930	0.0939	93.0	93.9	1	70.0-130			0.931	20
Manganese	0.100	0.0309	0.122	0.122	91.6	90.7	1	70.0-130			0.731	20
Molybdenum	0.100	0.000743	0.101	0.0992	100	98.4	1	70.0-130			1.69	20
Nickel	0.100	0.00144	0.0946	0.0937	93.2	92.2	1	70.0-130			0.974	20
Selenium	0.100	U	0.0921	0.0930	92.1	93.0	1	70.0-130			0.965	20
Silver	0.0500	U	0.0472	0.0478	94.5	95.5	1	70.0-130			1.11	20
Thallium	0.100	U	0.0903	0.0908	90.3	90.8	1	70.0-130			0.557	20
Zinc	0.100	U	0.0942	0.0910	94.2	91.0	1	70.0-130			3.44	20

L1760920-01 Original Sample (OS) • Matrix Spike (MS) • Matrix Spike Duplicate (MSD)

(OS) L1760920-01 07/31/24 14:50 • (MS) R4100925-3 07/31/24 14:56 • (MSD) R4100925-4 07/31/24 15:03

Analyte	Spike Amount mg/l	Original Result mg/l	MS Result mg/l	MSD Result mg/l	MS Rec. %	MSD Rec. %	Dilution	Rec. Limits %	MS Qualifier	MSD Qualifier	RPD %	RPD Limits %
Aluminum	1.00	0.0728	1.05	1.07	97.8	99.4	1	70.0-130			1.55	20
Antimony	0.100	U	0.0931	0.0946	93.1	94.6	1	70.0-130			1.57	20
Arsenic	0.100	0.00521	0.103	0.105	97.8	99.7	1	70.0-130			1.83	20
Barium	0.100	0.0385	0.129	0.133	90.9	94.3	1	70.0-130			2.55	20
Beryllium	0.100	U	0.0958	0.0995	95.8	99.5	1	70.0-130			3.80	20
Magnesium	1.00	3.90	4.76	4.83	86.2	93.1	1	70.0-130			1.44	20

Method Blank (MB)

(MB) R4100132-2 07/29/24 16:56

Analyte	MB Result mg/l	MB Qualifier	MB MDL mg/l	MB RDL mg/l
1,1,1-Trichloroethane	U		0.00335	0.00500
1,1,2,2-Tetrachloroethane	U		0.000596	0.00500
1,1,2-Trichloroethane	U		0.00145	0.00500
1,1-Dichloroethene	U		0.00367	0.00500
1,1-Dichloroethane	U		0.00292	0.00500
1,2-Dibromoethane	U		0.000549	0.00200
1,2-Dichlorobenzene	U		0.00172	0.00200
1,2-Dichloroethane	U		0.00195	0.00500
1,2-Dichloropropane	U		0.000804	0.00200
1,3-Dichlorobenzene	U		0.00419	0.00500
1,4-Dichlorobenzene	U		0.00173	0.00200
2-Chloroethyl vinyl ether	U		0.00652	0.0100
Acrolein	U		0.00544	0.0100
Acrylonitrile	U		0.00709	0.0100
Benzene	U		0.00207	0.00500
Bromodichloromethane	U		0.00179	0.00200
Bromoform	U		0.000960	0.0100
Bromomethane	U		0.00347	0.00500
Carbon tetrachloride	U		0.00159	0.00200
Chlorobenzene	U		0.00276	0.0100
Chloroethane	U		0.00296	0.00500
Chloroform	U		0.00212	0.00500
Chloromethane	U		0.00361	0.00500
cis-1,3-Dichloropropene	U		0.00492	0.0100
Dibromochloromethane	U		0.00327	0.00500
Ethylbenzene	U		0.000401	0.00200
Methylene Chloride	U		0.0118	0.0200
Tetrachloroethene	U		0.00486	0.0100
Toluene	U		0.00219	0.00500
trans-1,2-Dichloroethene	U		0.00501	0.0100
Trichloroethene	U		0.00262	0.00500
Vinyl chloride	U		0.00466	0.00500
(S) 1,2-Dichloroethane-d4	*97.7*			*70.0-130*
(S) 4-Bromofluorobenzene	*80.6*			*70.0-130*
(S) Toluene-d8	*94.9*			*70.0-130*

Laboratory Control Sample (LCS)

(LCS) R4100132-1 07/29/24 16:02

Analyte	Spike Amount mg/l	LCS Result mg/l	LCS Rec. %	Rec. Limits %	LCS Qualifier
1,1,1-Trichloroethane	0.0199	0.0190	95.5	70.0-130	
1,1,2,2-Tetrachloroethane	0.0201	0.0176	87.6	60.0-140	
1,1,2-Trichloroethane	0.0199	0.0185	93.0	70.0-130	
1,1-Dichloroethene	0.0198	0.0232	117	50.0-150	
1,1-Dichloroethane	0.0200	0.0176	88.0	70.0-130	
1,2-Dibromoethane	0.0200	0.0184	92.0	70.0-130	
1,2-Dichlorobenzene	0.0200	0.0211	105	65.0-135	
1,2-Dichloroethane	0.0199	0.0197	99.0	70.0-130	
1,2-Dichloropropane	0.0199	0.0199	100	35.0-165	
1,3-Dichlorobenzene	0.0199	0.0209	105	70.0-130	
1,4-Dichlorobenzene	0.0200	0.0207	104	65.0-135	
2-Chloroethyl vinyl ether	0.100	0.0544	54.4	1.00-225	
Acrolein	0.100	0.0882	88.2	64.0-139	
Acrylonitrile	0.100	0.0826	82.6	67.0-136	
Benzene	0.0200	0.0168	84.0	65.0-135	
Bromodichloromethane	0.0199	0.0208	105	65.0-135	
Bromoform	0.0198	0.0196	99.0	70.0-130	
Bromomethane	0.0200	0.0197	98.5	15.0-185	
Carbon tetrachloride	0.0199	0.0192	96.5	70.0-130	
Chlorobenzene	0.0198	0.0202	102	65.0-135	
Chloroethane	0.0200	0.0204	102	40.0-160	
Chloroform	0.0198	0.0187	94.4	70.0-135	
Chloromethane	0.0200	0.0174	87.0	1.00-205	
cis-1,3-Dichloropropene	0.0200	0.0158	79.0	25.0-175	
Dibromochloromethane	0.0198	0.0205	104	70.0-135	
Ethylbenzene	0.0201	0.0192	95.5	60.0-140	
Methylene Chloride	0.0204	0.0166	81.4	60.0-140	J
Tetrachloroethene	0.0199	0.0207	104	70.0-130	
Toluene	0.0200	0.0190	95.0	70.0-130	
trans-1,2-Dichloroethene	0.0200	0.0188	94.0	70.0-130	
Trichloroethene	0.0200	0.0218	109	65.0-135	
Vinyl chloride	0.0200	0.0238	119	5.00-195	
(S) 1,2-Dichloroethane-d4			*101*	*70.0-130*	
(S) 4-Bromofluorobenzene			*88.0*	*70.0-130*	
(S) Toluene-d8			*97.3*	*70.0-130*	

L1760920-01 Original Sample (OS) • Matrix Spike (MS) • Matrix Spike Duplicate (MSD)

(OS) L1760920-01 07/29/24 17:20 • (MS) R4100132-3 07/29/24 17:45 • (MSD) R4100132-4 07/29/24 18:09

Analyte	Spike Amount mg/l	Original Result mg/l	MS Result mg/l	MSD Result mg/l	MS Rec. %	MSD Rec. %	Dilution	Rec. Limits %	MS Qualifier	MSD Qualifier	RPD %	RPD Limits %
1,1,1-Trichloroethane	0.0199	U	0.0210	0.0209	106	105	1	52.0-162			0.477	36
1,1,2,2-Tetrachloroethane	0.0201	U	0.0163	0.0169	81.1	84.1	1	46.0-157			3.61	61
1,1,2-Trichloroethane	0.0199	U	0.0167	0.0171	83.9	85.9	1	52.0-150			2.37	45
1,1-Dichloroethene	0.0198	U	0.0244	0.0250	123	126	1	1.00-234			2.43	32
1,1-Dichloroethane	0.0200	U	0.0177	0.0182	88.5	91.0	1	59.0-155			2.79	40
1,2-Dibromoethane	0.0200	U	0.0174	0.0171	87.0	85.5	1	70.0-130			1.74	20
1,2-Dichlorobenzene	0.0200	U	0.0199	0.0197	99.5	98.5	1	18.0-190			1.01	57
1,2-Dichloroethane	0.0199	U	0.0187	0.0185	94.0	93.0	1	49.0-155			1.08	49
1,2-Dichloropropane	0.0199	U	0.0174	0.0172	87.4	86.4	1	1.00-210			1.16	55
1,3-Dichlorobenzene	0.0199	U	0.0204	0.0203	103	102	1	59.0-156			0.491	43
1,4-Dichlorobenzene	0.0200	U	0.0201	0.0199	101	99.5	1	18.0-190			1.00	57
2-Chloroethyl vinyl ether	0.100	U	0.0398	0.0491	39.8	49.1	1	1.00-305			20.9	71
Acrolein	0.100	U	0.0819	0.0865	81.9	86.5	1	4.00-172			5.46	20
Acrylonitrile	0.100	U	0.0798	0.0815	79.8	81.5	1	22.0-189			2.11	20
Benzene	0.0200	U	0.0181	0.0170	90.5	85.0	1	37.0-151			6.27	61
Bromodichloromethane	0.0199	U	0.0188	0.0182	94.5	91.5	1	35.0-155			3.24	56
Bromoform	0.0198	U	0.0180	0.0187	90.9	94.4	1	70.0-130			3.81	42
Bromomethane	0.0200	U	0.0207	0.0211	104	105	1	15.0-185			1.91	61
Carbon tetrachloride	0.0199	U	0.0214	0.0205	108	103	1	70.0-140			4.30	41
Chlorobenzene	0.0198	U	0.0196	0.0197	99.0	99.5	1	37.0-160			0.509	53
Chloroethane	0.0200	U	0.0207	0.0214	104	107	1	14.0-230			3.33	78
Chloroform	0.0198	U	0.0184	0.0181	92.9	91.4	1	51.0-138			1.64	54
Chloromethane	0.0200	U	0.0175	0.0152	87.5	76.0	1	1.00-273			14.1	20
cis-1,3-Dichloropropene	0.0200	U	0.0146	0.0151	73.0	75.5	1	1.00-227			3.37	58
Dibromochloromethane	0.0198	U	0.0193	0.0193	97.5	97.5	1	53.0-149			0.000	50
Ethylbenzene	0.0201	U	0.0188	0.0186	93.5	92.5	1	37.0-162			1.07	63
Methylene Chloride	0.0204	U	0.0148	0.0150	72.5	73.5	1	1.00-221	J	J	1.34	28
Tetrachloroethene	0.0199	U	0.0209	0.0205	105	103	1	64.0-148			1.93	39
Toluene	0.0200	U	0.0173	0.0185	86.5	92.5	1	47.0-150			6.70	41
trans-1,2-Dichloroethene	0.0200	U	0.0196	0.0188	98.0	94.0	1	54.0-156			4.17	45
Trichloroethene	0.0200	U	0.0200	0.0187	100	93.5	1	70.0-157			6.72	48
Vinyl chloride	0.0200	U	0.0234	0.0203	117	102	1	1.00-251			14.2	66
(S) 1,2-Dichloroethane-d4					*107*	*99.4*		*70.0-130*				
(S) 4-Bromofluorobenzene					*86.5*	*87.7*		*70.0-130*				
(S) Toluene-d8					*94.9*	*94.9*		*70.0-130*				

Method Blank (MB)

(MB) R4101891-2 08/01/24 18:20

Analyte	MB Result mg/l	MB Qualifier	MB MDL mg/l	MB RDL mg/l
2-Butanone (MEK)	U		0.00822	0.0250
(S) 1,2-Dichloroethane-d4	*99.8*			*70.0-130*
(S) 4-Bromofluorobenzene	*107*			*70.0-130*
(S) Toluene-d8	*104*			*70.0-130*

Laboratory Control Sample (LCS)

(LCS) R4101891-1 08/01/24 17:30

Analyte	Spike Amount mg/l	LCS Result mg/l	LCS Rec. %	Rec. Limits %	LCS Qualifier
2-Butanone (MEK)	0.101	0.106	105	70.0-130	
(S) 1,2-Dichloroethane-d4			*113*	*70.0-130*	
(S) 4-Bromofluorobenzene			*103*	*70.0-130*	
(S) Toluene-d8			*105*	*70.0-130*	

Method Blank (MB)

(MB) R4099993-1 07/27/24 18:47

Analyte	MB Result mg/l	MB Qualifier	MB MDL mg/l	MB RDL mg/l
PCB 1016	U		0.000270	0.000500
PCB 1221	U		0.000270	0.000500
PCB 1232	U		0.000270	0.000500
PCB 1242	U		0.000270	0.000500
PCB 1248	U		0.000173	0.000500
PCB 1254	U		0.000173	0.000500
PCB 1260	U		0.000173	0.000500
Total PCBs	U		0.000173	0.000500
(S) Decachlorobiphenyl	*81.9*			*10.0-144*
(S) Tetrachloro-m-xylene	*95.7*			*10.0-135*

Laboratory Control Sample (LCS)

(LCS) R4099993-2 07/27/24 19:06

Analyte	Spike Amount mg/l	LCS Result mg/l	LCS Rec. %	Rec. Limits %	LCS Qualifier
PCB 1016	0.00250	0.00158	63.2	50.0-140	
PCB 1260	0.00250	0.000970	38.8	8.00-140	
(S) Decachlorobiphenyl			*13.3*	*10.0-144*	
(S) Tetrachloro-m-xylene			*63.4*	*10.0-135*	

Method Blank (MB)

(MB) R4102652-1 08/02/24 11:00

Analyte	MB Result mg/l	MB Qualifier	MB MDL mg/l	MB RDL mg/l
1,2,4,5-Tetrachlorobenzene	U		0.000200	0.00200
2,4,6-Trichlorophenol	U		0.000238	0.00200
2,4-Dichlorophenol	U		0.000336	0.00400
2,4-Dimethylphenol	U		0.000613	0.00200
2,4-Dinitrophenol	U		0.00154	0.0100
2-Chlorophenol	U		0.000307	0.00200
2-Methylphenol	U		0.000238	0.00200
2-Nitrophenol	U		0.000247	0.00200
3&4-Methyl Phenol	U		0.000238	0.00200
3,3-Dichlorobenzidine	U		0.000788	0.00400
4,6-Dinitro-2-methylphenol	U		0.00202	0.0100
4-Chloro-3-methylphenol	U		0.000217	0.00200
4-Nitrophenol	U		0.00123	0.0100
Anthracene	U		0.000168	0.00200
Benzidine	U		0.000350	0.00400
Benzo(a)anthracene	U		0.000307	0.00200
Benzo(a)pyrene	U		0.000470	0.00200
Bis(2-chloroethyl)ether	U		0.000168	0.00200
Bis(2-Ethylhexyl)phthalate	U		0.00180	0.00200
Chrysene	U		0.000257	0.00200
Di-n-butyl phthalate	U		0.00160	0.00200
Hexachloro-1,3-butadiene	U		0.000217	0.00200
Hexachlorobenzene	U		0.000307	0.00200
Hexachlorocyclopentadiene	U		0.000299	0.00200
Hexachloroethane	U		0.000247	0.00200
n-Nitrosodi-n-butylamine	U		0.00110	0.00200
n-Nitrosodiethylamine	U		0.000696	0.00200
Nitrobenzene	U		0.000314	0.00200
Nonylphenol	U		0.000168	0.00200
Pentachlorobenzene	U		0.000247	0.00200
Pentachlorophenol	U		0.000283	0.00200
Phenanthrene	U		0.000200	0.00200
Phenol	U		0.000500	0.00200
Pyridine	U		0.00174	0.00400
Total Cresols	U		0.00153	0.00800
(S) 2,4,6-Tribromophenol	*57.0*			*29.0-132*
(S) 2-Fluorobiphenyl	*83.5*			*26.0-102*
(S) 2-Fluorophenol	*67.5*	J1		*10.0-66.0*
(S) Nitrobenzene-d5	*87.0*			*15.0-106*
(S) p-Terphenyl-d14	*98.5*			*10.0-120*

Method Blank (MB)

(MB) R4102652-1 08/02/24 11:00

Analyte	MB Result mg/l	MB Qualifier	MB MDL mg/l	MB RDL mg/l
(S) Phenol-d6	*61.5*	J1		*10.0-54.0*

Laboratory Control Sample (LCS)

(LCS) R4102652-2 08/02/24 11:29

Analyte	Spike Amount mg/l	LCS Result mg/l	LCS Rec. %	Rec. Limits %	LCS Qualifier
1,2,4,5-Tetrachlorobenzene	0.200	0.158	79.0	31.0-120	
2,4,6-Trichlorophenol	0.200	0.196	98.0	37.0-144	
2,4-Dichlorophenol	0.200	0.180	90.0	39.0-135	
2,4-Dimethylphenol	0.200	0.190	95.0	32.0-120	
2,4-Dinitrophenol	0.200	0.133	66.5	1.00-191	
2-Chlorophenol	0.200	0.182	91.0	23.0-134	
2-Methylphenol	0.200	0.190	95.0	26.0-120	
2-Nitrophenol	0.200	0.177	88.5	29.0-182	
3&4-Methyl Phenol	0.200	0.180	90.0	27.0-120	
3,3-Dichlorobenzidine	0.400	0.429	107	1.00-262	
4,6-Dinitro-2-methylphenol	0.200	0.164	82.0	1.00-181	
4-Chloro-3-methylphenol	0.200	0.186	93.0	22.0-147	
4-Nitrophenol	0.200	0.131	65.5	1.00-132	
Anthracene	0.200	0.204	102	27.0-133	
Benzidine	0.400	0.229	57.3	1.00-120	
Benzo(a)anthracene	0.200	0.203	102	33.0-143	
Benzo(a)pyrene	0.200	0.218	109	17.0-163	
Bis(2-chloroethyl)ether	0.200	0.180	90.0	33.0-185	
Bis(2-Ethylhexyl)phthalate	0.200	0.233	117	8.00-158	
Chrysene	0.200	0.191	95.5	17.0-168	
Di-n-butyl phthalate	0.200	0.222	111	1.00-120	
Hexachloro-1,3-butadiene	0.200	0.151	75.5	24.0-120	
Hexachlorobenzene	0.200	0.161	80.5	1.00-152	
Hexachlorocyclopentadiene	0.200	0.131	65.5	10.0-120	
Hexachloroethane	0.200	0.164	82.0	40.0-120	
n-Nitrosodi-n-butylamine	0.200	0.195	97.5	39.0-127	
n-Nitrosodiethylamine	0.200	0.197	98.5	10.0-142	
Nitrobenzene	0.200	0.185	92.5	35.0-180	
Nonylphenol	0.200	0.212	106	57.0-136	
Pentachlorobenzene	0.200	0.157	78.5	10.0-151	
Pentachlorophenol	0.200	0.179	89.5	14.0-176	
Phenanthrene	0.200	0.189	94.5	54.0-120	

Laboratory Control Sample (LCS)

(LCS) R4102652-2 08/02/24 11:29

Analyte	Spike Amount mg/l	LCS Result mg/l	LCS Rec. %	Rec. Limits %	LCS Qualifier
Phenol	0.200	0.139	69.5	5.00-120	
Pyridine	0.200	0.0571	28.5	10.0-120	
Total Cresols	0.400	0.370	92.5	36.0-110	
(S) 2,4,6-Tribromophenol			*78.0*	*29.0-132*	
(S) 2-Fluorobiphenyl			*92.5*	*26.0-102*	
(S) 2-Fluorophenol			*77.0*	*10.0-66.0*	J1
(S) Nitrobenzene-d5			*92.0*	*15.0-106*	
(S) p-Terphenyl-d14			*97.5*	*10.0-120*	
(S) Phenol-d6			*75.0*	*10.0-54.0*	J1

GLOSSARY OF TERMS

Guide to Reading and Understanding Your Laboratory Report

The information below is designed to better explain the various terms used in your report of analytical results from the Laboratory. This is not intended as a comprehensive explanation, and if you have additional questions please contact your project representative.

Results Disclaimer - Information that may be provided by the customer, and contained within this report, include Permit Limits, Project Name, Sample ID, Sample Matrix, Sample Preservation, Field Blanks, Field Spikes, Field Duplicates, On-Site Data, Sampling Collection Dates/Times, and Sampling Location. Results relate to the accuracy of this information provided, and as the samples are received.

Abbreviations and Definitions

MDL	Method Detection Limit.
ND	Not detected at the Reporting Limit (or MDL where applicable).
RDL	Reported Detection Limit.
Rec.	Recovery.
RPD	Relative Percent Difference.
SDG	Sample Delivery Group.
(S)	Surrogate (Surrogate Standard) - Analytes added to every blank, sample, Laboratory Control Sample/Duplicate and Matrix Spike/Duplicate; used to evaluate analytical efficiency by measuring recovery. Surrogates are not expected to be detected in all environmental media.
U	Not detected at the Reporting Limit (or MDL where applicable).
Analyte	The name of the particular compound or analysis performed. Some Analyses and Methods will have multiple analytes reported.
Dilution	If the sample matrix contains an interfering material, the sample preparation volume or weight values differ from the standard, or if concentrations of analytes in the sample are higher than the highest limit of concentration that the laboratory can accurately report, the sample may be diluted for analysis. If a value different than 1 is used in this field, the result reported has already been corrected for this factor.
Limits	These are the target % recovery ranges or % difference value that the laboratory has historically determined as normal for the method and analyte being reported. Successful QC Sample analysis will target all analytes recovered or duplicated within these ranges.
Original Sample	The non-spiked sample in the prep batch used to determine the Relative Percent Difference (RPD) from a quality control sample. The Original Sample may not be included within the reported SDG.
Qualifier	This column provides a letter and/or number designation that corresponds to additional information concerning the result reported. If a Qualifier is present, a definition per Qualifier is provided within the Glossary and Definitions page and potentially a discussion of possible implications of the Qualifier in the Case Narrative if applicable.
Result	The actual analytical final result (corrected for any sample specific characteristics) reported for your sample. If there was no measurable result returned for a specific analyte, the result in this column may state "ND" (Not Detected) or "BDL" (Below Detectable Levels). The information in the results column should always be accompanied by either an MDL (Method Detection Limit) or RDL (Reporting Detection Limit) that defines the lowest value that the laboratory could detect or report for this analyte.
Uncertainty (Radiochemistry)	Confidence level of 2 sigma.
Case Narrative (Cn)	A brief discussion about the included sample results, including a discussion of any non-conformances to protocol observed either at sample receipt by the laboratory from the field or during the analytical process. If present, there will be a section in the Case Narrative to discuss the meaning of any data qualifiers used in the report.
Quality Control Summary (Qc)	This section of the report includes the results of the laboratory quality control analyses required by procedure or analytical methods to assist in evaluating the validity of the results reported for your samples. These analyses are not being performed on your samples typically, but on laboratory generated material.
Sample Chain of Custody (Sc)	This is the document created in the field when your samples were initially collected. This is used to verify the time and date of collection, the person collecting the samples, and the analyses that the laboratory is requested to perform. This chain of custody also documents all persons (excluding commercial shippers) that have had control or possession of the samples from the time of collection until delivery to the laboratory for analysis.
Sample Results (Sr)	This section of your report will provide the results of all testing performed on your samples. These results are provided by sample ID and are separated by the analyses performed on each sample. The header line of each analysis section for each sample will provide the name and method number for the analysis reported.
Sample Summary (Ss)	This section of the Analytical Report defines the specific analyses performed for each sample ID, including the dates and times of preparation and/or analysis.

Qualifier	Description
B	The same analyte is found in the associated blank.
E	The analyte concentration exceeds the upper limit of the calibration range of the instrument established by the initial calibration (ICAL).
J	The identification of the analyte is acceptable; the reported value is an estimate.
J1	Surrogate recovery limits have been exceeded; values are outside upper control limits.
J3	The associated batch QC was outside the established quality control range for precision.
J5	The sample matrix interfered with the ability to make any accurate determination; spike value is high.
J6	The sample matrix interfered with the ability to make any accurate determination; spike value is low.
K9	Test replicates show more than 30% difference between high and low values.
Q	Sample was prepared and/or analyzed past holding time as defined in the method. Concentrations should be considered minimum values.
T8	Sample(s) received past/too close to holding time expiration.

GLOSSARY OF TERMS

Qualifier	Description
V	The sample concentration is too high to evaluate accurate spike recoveries.

ACCREDITATIONS & LOCATIONS

Pace Analytical National 12065 Lebanon Rd Mount Juliet, TN 37122

Alabama	40660	Nebraska	NE-OS-15-05
Alaska	17-026	Nevada	TN000032021-1
Arizona	AZ0612	New Hampshire	2975
Arkansas	88-0469	New Jersey–NELAP	TN002
California	2932	New Mexico [1]	TN00003
Colorado	TN00003	New York	11742
Connecticut	PH-0197	North Carolina	Env375
Florida	E87487	North Carolina [1]	DW21704
Georgia	NELAP	North Carolina [3]	41
Georgia [1]	923	North Dakota	R-140
Idaho	TN00003	Ohio–VAP	CL0069
Illinois	200008	Oklahoma	9915
Indiana	C-TN-01	Oregon	TN200002
Iowa	364	Pennsylvania	68-02979
Kansas	E-10277	Rhode Island	LA000356
Kentucky [1 6]	KY90010	South Carolina	84004002
Kentucky [2]	16	South Dakota	n/a
Louisiana	AI30792	Tennessee [1 4]	2006
Louisiana	LA018	Texas	T104704245-20-18
Maine	TN00003	Texas [5]	LAB0152
Maryland	324	Utah	TN000032021-11
Massachusetts	M-TN003	Vermont	VT2006
Michigan	9958	Virginia	110033
Minnesota	047-999-395	Washington	C847
Mississippi	TN00003	West Virginia	233
Missouri	340	Wisconsin	998093910
Montana	CERT0086	Wyoming	A2LA
A2LA – ISO 17025	1461.01	AIHA-LAP,LLC EMLAP	100789
A2LA – ISO 17025 [5]	1461.02	DOD	1461.01
Canada	1461.01	USDA	P330-15-00234
EPA–Crypto	TN00003		

Pace Analytical Services, LLC -Dallas 400 W. Bethany Drive Suite 190 Allen, TX 75013

Arkansas	88-0647	Kansas	E10388
Florida	E871118	Texas	T104704232-23-39
Iowa	408	Oklahoma	8727
Louisiana	30686		

[1] Drinking Water [2] Underground Storage Tanks [3] Aquatic Toxicity [4] Chemical/Microbiological [5] Mold [6] Wastewater n/a Accreditation not applicable

* Not all certifications held by the laboratory are applicable to the results reported in the attached report.

* Accreditation is only applicable to the test methods specified on each scope of accreditation held by Pace Analytical.

Company Name/Address:
Garland Power & Light

13835 County Rd 489
Nevada, TX 75173

Billing Information:
Michael Burr
13835 County Rd 489
Nevada, TX 75173

Pres Chk

Report to:
Jeff McClain

Email To: **mburr@gpltexas.org;jmcclain@gpltexas.org ;gplenviron@gpltexas.org**

Project Description:
TPDES

City/State Collected:

Please Circle: PT MT CT ET

Phone: **972-485-6458**

Client Project #

Lab Project #
DSGARLWNTX-RENEWAL

Collected by (print):
JEFFREY McCLAIN

Site/Facility ID #

P.O. #

Collected by (signature):

Immediately Packed on Ice N ____ Y ____

Rush? (Lab MUST Be Notified)
____ Same Day ____ Five Day
____ Next Day ____ 5 Day (Rad Only)
____ Two Day ____ 10 Day (Rad Only)
____ Three Day

Quote #

Date Results Needed

No. of Cntrs

Analysis / Container / Preservative

Sample ID	Comp/Grab	Matrix *	Depth	Date	Time	No. of Cntrs	608.3PCBONLY 100ml Amb NoPres	ALL625.1RV 100ml Amb NoPres	ALLCN 250mlHDPE-NaOH	ALLCNAM 250mlHDPE-NaOH	ALLOGHEX 1L-Amb-Add HCl	ALLPH 125mlHDPE-NoPres	ALLPHOS 500mlHDPE-Add H2SO4	ALLSULFIDE 500mlHDPE-NaOH+ZnAc	ALLTIICP 250mlHDPE HNO3	ALLTKN 250mlHDPE-H2SO4	Remarks	Sample # (lab only)
OUTFALL 001	G	WW		7/24/24	1358	27	X	X	X	X	X	X	X	X	X	X		01

Chain of Custody Page 1 of 3

Pace Analytical®
190 Allen, TX 75013

Submitting a sample via this chain of custody constitutes acknowledgment and acceptance of the Pace Terms and Conditions found at: https://info.pacelabs.com/hubfs/pas-standard-terms.pdf

SDG # L1726920

Table #

Acctnum: **DSGARLWNTX**

Template: **T256244**

Prelogin: **P1090746**

PM: **3565 - Dorothy P Roberts**

PB:

Shipped Via: **FedEX Priority**

* Matrix:
SS - Soil **AIR** - Air **F** - Filter
GW - Groundwater **B** - Bioassay
WW - WasteWater
DW - Drinking Water
OT - Other_____

Remarks:

pH _____ Temp _____

Flow _____ Other _____

Samples returned via:
__ UPS __ FedEx __ Courier _____

Tracking #

Sample Receipt Checklist

COC Seal Present/Intact:	__NP	__Y __N
COC Signed/Accurate:		__Y __N
Bottles arrive intact:		__Y __N
Correct bottles used:		__Y __N
Sufficient volume sent:		__Y __N
If Applicable		
VOA Zero Headspace:		__Y __N
Preservation Correct/Checked:		__Y __N
RAD Screen <0.5 mR/hr:		__Y __N

Relinquished by : (Signature)	Date:	Time:	Received by: (Signature)	Trip Blank Received: Yes / No HCL / MeoH TBR
	7/26/24	1540	PACE ATX	
Relinquished by : (Signature)	Date:	Time:	Received by: (Signature)	Temp: °C Bottles Received:
				If preservation required by Login: Date/Time
Relinquished by : (Signature)	Date:	Time:	Received for lab by: (Signature)	Date: Time:
				Hold: Condition: NCF / OK

Company Name/Address:
Garland Power & Light

13835 County Rd 489
Nevada, TX 75173

Billing Information:
Michael Burr
13835 County Rd 489
Nevada, TX 75173

Pres Chk

Report to:
Jeff McClain

Email To: **mburr@gpltexas.org;jmcclain@gpltexas.org ;gplenviron@gpltexas.org**

Project Description:
TPDES

City/State Collected:

Please Circle: PT MT CT ET

Phone: **972-485-6458**

Client Project #

Lab Project #
DSGARLWNTX-RENEWAL

Collected by (print):

Site/Facility ID #

P.O. #

Collected by (signature):

Immediately Packed on Ice N____ Y____

Rush? (Lab MUST Be Notified)
____ Same Day ____ Five Day
____ Next Day ____ 5 Day (Rad Only)
____ Two Day ____ 10 Day (Rad Only)
____ Three Day

Quote #

Date Results Needed

Sample ID	Comp/Grab	Matrix *	Depth	Date	Time	No. of Cntrs	Analysis / Container / Preservative											
							ALLTOC 250mlAmb-H2SO4	ALLTSS 1L-HDPE-NoPres	ALLV624.1NP 40mlClr-NoPres	BOD CBOD MBAS TDS 1L-HDPE NoPres	BOD CBOD MBAS TDS 1L-HDPE-NoPres	Metals site spec 250mlHDPE HNO3	PAN CHLORR 250mlHDPE-NoPres	PAN SULFITE 250mlHDPE-NoPres	PAN-SULFITE,CHLORR 250mlHDPE NoPres	WetChem COD NH3 N/N 250mlHDPE-H2SO4	Remarks	Sample # (lab only)
OUTFALL 001		**WW**				**27**	X	X	X	X	X	X	X	X	X	X		01

Chain of Custody Page 2 of 3

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SDG # L1760920

Table #

Acctnum: **DSGARLWNTX**

Template: **T256244**

Prelogin: **P1090746**

PM: **3565 - Dorothy P Roberts**

PB:

Shipped Via: **FedEX Priority**

* Matrix:
SS - Soil **AIR** - Air **F** - Filter
GW - Groundwater **B** - Bioassay
WW - WasteWater
DW - Drinking Water
OT - Other_____

Remarks:

pH _____ Temp _____

Flow _____ Other _____

Samples returned via:
__ UPS __ FedEx __ Courier _____

Tracking #

Sample Receipt Checklist

COC Seal Present/Intact:	__NP __Y __N
COC Signed/Accurate:	__Y __N
Bottles arrive intact:	__Y __N
Correct bottles used:	__Y __N
Sufficient volume sent:	__Y __N
If Applicable	
VOA Zero Headspace:	__Y __N
Preservation Correct/Checked:	__Y __N
RAD Screen <0.5 mR/hr:	__Y __N

Relinquished by : (Signature)	Date:	Time:	Received by: (Signature)	Trip Blank Received: Yes / No HCL / MeoH TBR	
	7/22/21	1540	PACEATX		
Relinquished by : (Signature)	Date:	Time:	Received by: (Signature)	Temp: °C Bottles Received:	If preservation required by Login: Date/Time
Relinquished by : (Signature)	Date:	Time:	Received for lab by: (Signature)	Date: Time:	Hold: Condition: NCF / OK

Company Name/Address:
Garland Power & Light

13835 County Rd 489
Nevada, TX 75173

Billing Information:
Michael Burr
13835 County Rd 489
Nevada, TX 75173

Pres Chk

Report to:
Jeff McClain

Email To: **mburr@gpltexas.org;jmcclain@gpltexas.org ;gplenviron@gpltexas.org**

Project Description:
TPDES

City/State Collected:

Please Circle: PT MT CT ET

Phone: **972-485-6458**

Client Project #

Lab Project #
DSGARLWNTX-RENEWAL

Collected by (print):

Site/Facility ID #

P.O. #

Collected by (signature):

Immediately
Packed on Ice N____ Y____

Rush? (Lab MUST Be Notified)
____ Same Day ____ Five Day
____ Next Day ____ 5 Day (Rad Only)
____ Two Day ____ 10 Day (Rad Only)
____ Three Day

Quote #

Date Results Needed

Sample ID	Comp/Grab	Matrix *	Depth	Date	Time	No. of Cntrs	WetChem anions, ALK 125mlHDPE-NoPres	WetChem,color CR6,DO 500mlHDPE-NoPres	Remarks	Sample # (lab only)
OUTFALL 001		WW				27	X	X		01

Analysis / Container / Preservative

Chain of Custody Page 3 of 3

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190 Allen, TX 75013

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SDG # L1760920

Table #

Acctnum: **DSGARLWNTX**
Template: **T256244**
Prelogin: **P1090746**
PM: **3565 - Dorothy P Roberts**
PB:

Shipped Via: **FedEX Priority**

* Matrix:
SS - Soil **AIR** - Air **F** - Filter
GW - Groundwater **B** - Bioassay
WW - WasteWater
DW - Drinking Water
OT - Other_____

Remarks:

pH _____ Temp _____
Flow _____ Other _____

Samples returned via:
__ UPS __ FedEx __ Courier _____

Tracking #

Sample Receipt Checklist
COC Seal Present/Intact: __NP __Y __N
COC Signed/Accurate: __Y __N
Bottles arrive intact: __Y __N
Correct bottles used: __Y __N
Sufficient volume sent: __Y __N
If Applicable
VOA Zero Headspace: __Y __N
Preservation Correct/Checked: __Y __N
RAD Screen <0.5 mR/hr: __Y __N

Relinquished by : (Signature)	Date:	Time:	Received by: (Signature)	Trip Blank Received: Yes / No HCL / MeoH TBR	
	7/20/21	1540	PACEATX		
Relinquished by : (Signature)	Date:	Time:	Received by: (Signature)	Temp: °C Bottles Received:	If preservation required by Login: Date/Time
Relinquished by : (Signature)	Date:	Time:	Received for lab by: (Signature)	Date: Time:	Hold: / Condition: NCF / OK

Pace ANALYTICAL SERVICES	DC#_Title: ENV-FRM-ALLE-0017 v15_Sample Condition Upon Receipt
	Effective Date: 12/18/2023

Sample Condition Upon Receipt

☐Dallas ☐Ft Worth ☐Corpus Christi ☐Austin

Client Name: Garland Power & Light Project Work order (place label):

Courier: FedEX ☐ UPS ☐ USPS ☐ Client ☑ LSO ☐ PACE ☐ Other: _____

Tracking #: _____

Custody Seal on Cooler/Box: Yes ☐ No ☑

Received on ice: Wet ☑ Blue ☐ No ice ☐

Receiving Lab 1 Thermometer Used: IR19 **Cooler Temp °C:** 4.4 (Recorded) +0.1 (Correction Factor) 4.5 (Actual)

Receiving Lab 2 Thermometer Used: _____ **Cooler Temp °C:** _____(Recorded) _____(Correction Factor) _____(Actual)

Chain of Custody relinquished	Yes ☑ No ☐
Sampler name & signature on COC	Yes ☑ No ☐
Short HT analyses (<72 hrs)	Yes ☑ No ☐

Temperature should be above freezing to 6°C unless collected same day as receipt in which evidence of cooling is acceptable.

Triage Person: AG Date: 7/26/24

Sufficient Volume received	Yes ☑ No ☐
Correct Container used	Yes ☑ No ☐
Container Intact	Yes ☑ No ☐
Sample pH Acceptable pH Strips: 6402007	Yes ☑ No ☐ NA ☐
Residual Chlorine Present Cl Strips: 148860	Yes ☐ No ☑ NA ☐
Sulfide Present Lead Acetate Strips: 14862	Yes ☐ No ☑ NA ☐
Are soil samples (volatiles, TPH) received in 5035A Kits (not applicable to TCLP VOA or PST Program TPH)	Yes ☐ No ☐ NA ☑
Unpreserved 5035A soil frozen within 48 hrs	Yes ☐ No ☐ NA ☑
Headspace in VOA (>6mm)	Yes ☐ No ☑ NA ☐
Project sampled in USDA Regulated Area outside of Texas State Sampled: _____	Yes ☐ No ☐ NA ☑
Non-Conformance(s):	Yes ☐ No ☑

Login Person: JC Date: 7/26

Labeling Person (if different than log-in): _____ Date: _____

Company Name/Address:
Garland Power & Light

13835 County Rd 489
Nevada, TX 75173

Billing Information:
Michael Burr
13835 County Rd 489
Nevada, TX 75173

Pres Chk

Report to:
Jeff McClain

Email To: mburr@gpltexas.org;jmcclain@gpltexas.org;gplenviron@gpltexas.org

Project Description:
TPDES

City/State Collected:

Please Circle: PT MT CT ET

Phone: **972-485-6458**

Client Project #

Lab Project #
DSGARLWNTX-RENEWAL

Collected by (print):
JEFFREY McCLAIN

Site/Facility ID #

P.O. #

Collected by (signature):

Immediately Packed on Ice N ___ Y ___

Rush? (Lab MUST Be Notified)
___ Same Day ___ Five Day
___ Next Day ___ 5 Day (Rad Only)
___ Two Day ___ 10 Day (Rad Only)
___ Three Day

Quote #

Date Results Needed

No. of Cntrs

Analysis / Container / Preservative

Sample ID	Comp/Grab	Matrix *	Depth	Date	Time	No. of Cntrs	608.3PCBONLY 100ml Amb NoPres	ALL625.1RV 100ml Amb NoPres	ALLCN 250mlHDPE-NaOH	ALLCNAM 250mlHDPE-NaOH	ALLOGHEX 1L-Amb-Add HCl	ALLPH 125mlHDPE-NoPres	ALLPHOS 500mlHDPE-Add H2SO4	ALLSULFIDE 500mlHDPE-NaOH+ZnAc	ALLTIICP 250mlHDPE HNO3	ALLTKN 250mlHDPE-H2SO4	Remarks	Sample # (lab only)
OUTFALL 001	G	WW		7/24/24	1358	27	X	X	X	X	X	X	X	X	X	X		01

Chain of Custody Page 1 of 2

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[illegible] W. Bethany Drive Suite
190 Allen, TX 75013

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SDG # LTTE0920

Table #

Acctnum: DSGARLWNTX

Template: T256244

Prelogin: P1090746

PM: 3565 - Dorothy P Roberts

PB:

Shipped Via: FedEX Priority

* Matrix:
SS - Soil AIR - Air F - Filter
GW - Groundwater B - Bioassay
WW - WasteWater
DW - Drinking Water
OT - Other_____

Remarks:
Samuel 7-27-24 0900 EDA9 4.0+0.3=4.3

pH _____ Temp _____

Flow _____ Other _____

Samples returned via:
__ UPS __ FedEx __ Courier _____

Tracking #

Sample Receipt Checklist

COC Seal Present/Intact:	NP	Y N
COC Signed/Accurate:		Y N
Bottles arrive intact:		Y N
Correct bottles used:		Y N
Sufficient volume sent:		Y N
If Applicable		
VOA Zero Headspace:		Y N
Preservation Correct/Checked:		Y N
RAD Screen <0.5 mR/hr:		Y N

Relinquished by : (Signature)	Date:	Time:	Received by: (Signature)	Trip Blank Received: Yes / No HCL / MeoH TBR
[signature]	7/26/24	1540	[signature] PACE ATX	
Relinquished by : (Signature)	Date:	Time:	Received by: (Signature)	Temp: °C Bottles Received:
[signature] FedEx	7/26/24	1710	FedEx	7/26/24 1710
Relinquished by : (Signature)	Date:	Time:	Received for lab by: (Signature)	Date: Time:
FedEx				

If preservation required by Login: Date/Time

Hold:

Condition: NCF / OK

Company Name/Address:
Garland Power & Light

13835 County Rd 489
Nevada, TX 75173

Billing Information:
Michael Burr
13835 County Rd 489
Nevada, TX 75173

Pres Chk

Report to:
Jeff McClain

Email To: **mburr@gpltexas.org;jmcclain@gpltexas.org;gplenviron@gpltexas.org**

Project Description:
TPDES

City/State Collected:

Please Circle: PT MT CT ET

Phone: **972-485-6458**

Client Project #

Lab Project #
DSGARLWNTX-RENEWAL

Collected by (print):

Site/Facility ID #

P.O. #

Collected by (signature):

Immediately Packed on Ice N ____ Y ____

Rush? (Lab MUST Be Notified)
____ Same Day ____ Five Day
____ Next Day ____ 5 Day (Rad Only)
____ Two Day ____ 10 Day (Rad Only)
____ Three Day

Quote #

Date Results Needed

No. of Cntrs

Analysis / Container / Preservative

Sample ID	Comp/Grab	Matrix *	Depth	Date	Time	No. of Cntrs	ALLTOC 250mlAmb-H2SO4	ALLTSS 1L-HDPE-NoPres	ALLV624.1NP 40mlClr-NoPres	BOD CBOD MBAS TDS 1L-HDPE NoPres	BOD CBOD MBAS TDS 1L-HDPE-NoPres	Metals site spec 250mlHDPE HNO3	PAN CHLORR 250mlHDPE-NoPres	PAN SULFITE 250mlHDPE-NoPres	PAN-SULFITE,CHLORR 250mlHDPE NoPres	WetChem COD NH3 N/N 250mlHDPE-H2SO4	Remarks	Sample # (lab only)
OUTFALL 001		**WW**				**27**	X	X	X	X	X	X	X	X	X	X		01

Chain of Custody Page 2 of 3

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SDG # L1760920

Table #

Acctnum: **DSGARLWNTX**

Template: **T256244**

Prelogin: **P1090746**

PM: **3565 - Dorothy P Roberts**

PB:

Shipped Via: **FedEX Priority**

* Matrix:
SS - Soil **AIR** - Air **F** - Filter
GW - Groundwater **B** - Bioassay
WW - WasteWater
DW - Drinking Water
OT - Other_____

Remarks:

pH _____ Temp _____

Flow _____ Other _____

Samples returned via:
__ UPS __ FedEx __ Courier _____

Tracking #

Sample Receipt Checklist

COC Seal Present/Intact:	__NP	__Y __N
COC Signed/Accurate:		__Y __N
Bottles arrive intact:		__Y __N
Correct bottles used:		__Y __N
Sufficient volume sent:		__Y __N
If Applicable		
VOA Zero Headspace:		__Y __N
Preservation Correct/Checked:		__Y __N
RAD Screen <0.5 mR/hr:		__Y __N

Relinquished by : (Signature)	Date: 7/26/21	Time: 1540	Received by: (Signature) PACE TX	Trip Blank Received: Yes / No HCL / MeoH TBR	
Relinquished by : (Signature)	Date:	Time:	Received by: (Signature)	Temp: °C Bottles Received:	If preservation required by Login: Date/Time
Relinquished by : (Signature)	Date:	Time:	Received for lab by: (Signature)	Date: Time:	Hold: / Condition: NCF / OK

Company Name/Address:
Garland Power & Light

13835 County Rd 489
Nevada, TX 75173

Billing Information:
Michael Burr
13835 County Rd 489
Nevada, TX 75173

Pres Chk

Report to:
Jeff McClain

Email To: **mburr@gpltexas.org;jmcclain@gpltexas.org;gplenviron@gpltexas.org**

Project Description:
TPDES

City/State Collected:

Please Circle: PT MT CT ET

Phone: **972-485-6458**

Client Project #

Lab Project #
DSGARLWNTX-RENEWAL

Collected by (print):

Site/Facility ID #

P.O. #

Collected by (signature):

Immediately Packed on Ice N ____ Y ____

Rush? (Lab MUST Be Notified)
___ Same Day ___ Five Day
___ Next Day ___ 5 Day (Rad Only)
___ Two Day ___ 10 Day (Rad Only)
___ Three Day

Quote #

Date Results Needed

Sample ID	Comp/Grab	Matrix *	Depth	Date	Time	No. of Cntrs	WetChem anions, ALK 125mlHDPE-NoPres	WetChem,color CR6,DO 500mlHDPE-NoPres								Remarks	Sample # (lab only)
OUTFALL 001		WW				27	X	X									01

Analysis / Container / Preservative

Chain of Custody Page 3 of 3

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190 Allen, TX 75013

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SDG # L1760920

Table #

Acctnum: **DSGARLWNTX**

Template: **T256244**

Prelogin: **P1090746**

PM: **3665 - Dorothy P Roberts**

PB:

Shipped Via: **FedEX Priority**

* Matrix:
SS - Soil AIR - Air F - Filter
GW - Groundwater B - Bioassay
WW - WasteWater
DW - Drinking Water
OT - Other_____

Remarks:

pH _____ Temp _____

Flow _____ Other _____

Samples returned via:
__ UPS __ FedEx __ Courier _____

Tracking #

Sample Receipt Checklist

COC Seal Present/Intact:	__NP	__Y __N
COC Signed/Accurate:		__Y __N
Bottles arrive intact:		__Y __N
Correct bottles used:		__Y __N
Sufficient volume sent:		__Y __N
If Applicable		
VOA Zero Headspace:		__Y __N
Preservation Correct/Checked:		__Y __N
RAD Screen <0.5 mR/hr:		__Y __N

Relinquished by : (Signature)	Date: 7/26/21	Time: 1540	Received by: (Signature) C. PACEATX	Trip Blank Received: Yes / No HCL / MeoH TBR	
Relinquished by : (Signature)	Date:	Time:	Received by: (Signature)	Temp: °C Bottles Received:	If preservation required by Login: Date/Time
Relinquished by : (Signature)	Date:	Time:	Received for lab by: (Signature)	Date: Time:	Hold: / Condition: NCF / OK

Pace ANALYTICAL SERVICES	DC#_Title: ENV-FRM-ALLE-0017 v15_Sample Condition Upon Receipt
	Effective Date: 12/18/2023

Sample Condition Upon Receipt

☐Dallas ☐Ft Worth ☐Corpus Christi ☐Austin

Client Name: Garland Power & Light Project Work order (place label):

Courier: FedEX ☐ UPS ☐ USPS ☐ Client ☑ LSO ☐ PACE ☐ Other: _____

Tracking #: _____

Custody Seal on Cooler/Box: Yes ☐ No ☑

Received on ice: Wet ☑ Blue ☐ No ice ☐

Receiving Lab 1 Thermometer Used: IR19 **Cooler Temp °C**: 4.4 (Recorded) +0.1 (Correction Factor) 4.5 (Actual)

Receiving Lab 2 Thermometer Used: _____ **Cooler Temp °C**: _____ (Recorded) _____ (Correction Factor) _____ (Actual)

Chain of Custody relinquished	Yes ☑ No ☐
Sampler name & signature on COC	Yes ☑ No ☐
Short HT analyses (<72 hrs)	Yes ☑ No ☐

Temperature should be above freezing to 6°C unless collected same day as receipt in which evidence of cooling is acceptable.

Triage Person: AG Date: 7/26/24

Sufficient Volume received	Yes ☑ No ☐
Correct Container used	Yes ☑ No ☐
Container Intact	Yes ☑ No ☐
Sample pH Acceptable pH Strips: 6402007	Yes ☑ No ☐ NA ☐
Residual Chlorine Present Cl Strips: 148260	Yes ☐ No ☑ NA ☐
Sulfide Present Lead Acetate Strips: 148262	Yes ☐ No ☑ NA ☐
Are soil samples (volatiles, TPH) received in 5035A Kits (not applicable to TCLP VOA or PST Program TPH)	Yes ☐ No ☐ NA ☑
Unpreserved 5035A soil frozen within 48 hrs	Yes ☐ No ☐ NA ☑
Headspace in VOA (>6mm)	Yes ☐ No ☑ NA ☐
Project sampled in USDA Regulated Area outside of Texas State Sampled: _____	Yes ☐ No ☐ NA ☑
Non-Conformance(s):	Yes ☐ No ☑

Login Person: JE Date: 7/26

Labeling Person (if different than log-in): _____ Date: _____

ATTACHMENT TR-5

Cooling Water System Data

Worksheet 11.0
Cooling Water Intake Information
Section 1.b. Cooling Water System Data

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

A description of ROPP and the cooling-water system of the facility is provided in the facility PIC (GP&L, 2006). ROPP is a 420-megawatt peaking, gas-fired facility consisting of four generating units. The power plant is located on the southeast shore of Lake Lavon in Collin County (Figures 1 and 2). Units 1, 2, and 3 use Lake Lavon water for once-through condenser cooling. Unit 4 is a gas turbine that uses an average of 0.0006 mgd of reservoir water for contact cooling; then it is discharged to evaporation ponds. Units 1, 2, and 3 each have two circulating-water (CW) pumps. The CW pumps for Unit 1 are each rated at 30,000 gallons per minute (gpm). The CW pumps for Unit 2 are each rated at 35,000 gpm. The CW pumps for Unit 3 are each rated at 54,000 gpm. Each CW pump is served by a single traveling-water screen (screen) with ⅜- inch square steel mesh. The facility's maximum design cooling-water withdrawal volume (flow) is 248,000 gpm (357 mgd). One screen wash pump per unit also withdraws small volumes of water from Lake Lavon.

Figure 3 shows the 5-year flow history for ROPP. In general, the facility withdraws more cooling water during summer, followed by winter and less water during fall and spring. In the 5-year flow history, the facility has not operated at design capacity. As shown in Figure 3, the facility withdraws less than the design capacity most of the time. The annual cooling water utilization capacity over the past 5 years was about 43% of the design capacity.

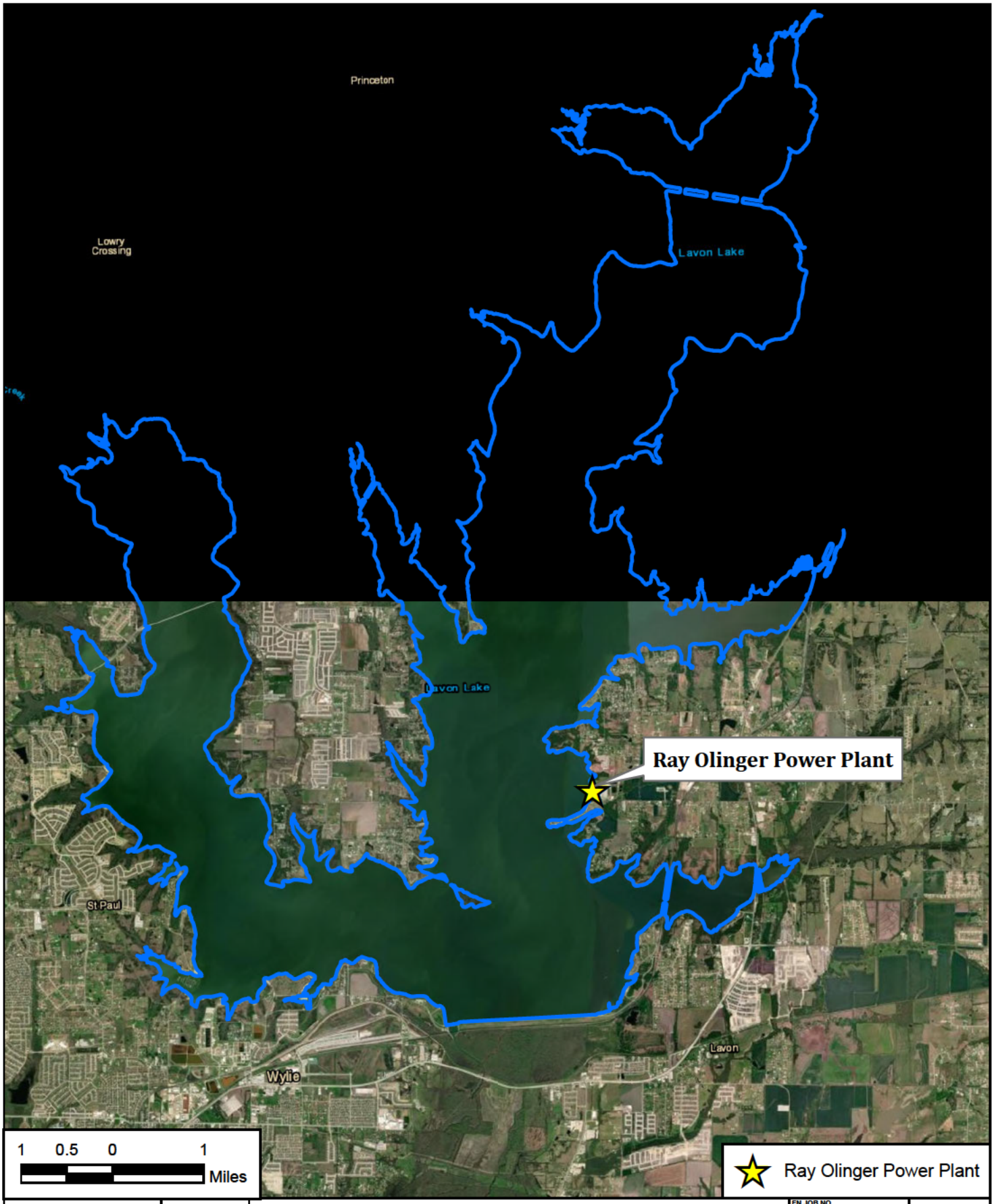
Normal operating reservoir pool elevation (reservoir elevation) is 492.0 feet (ft) mean sea level [msl]). The minimum operating reservoir elevation is 483.3 ft msl. The wetted screen depth at normal reservoir elevation is 32 ft. The CW pumps are either off, with zero flow, or operating at design flow. Screen velocities (velocity) vary among units due to the different CW pump capacities. In addition, velocity varies with varying wetted screen area, resulting in changes in reservoir elevation.

Cooling water is withdrawn from the rear of a 700-foot-long excavated intake canal. However, the distance to the main body of the reservoir is approximately 2,500 ft. The shallowest depth of the canal is approximately 25 ft.

Screens are usually washed once per 8-hour shift when the units are in operation. The length of time the screen wash operates varies depending on the differential pressure loss. On occasion, the screens may be washed several times during a single day. Screen-wash water from each unit is transported through a sluice, then to a debris sump and basket, and then returned to the reservoir near the CWIS. The cooling water system is described below in Table 1.

Table 1. ROPP CWIS Configuration.

	Unit 1	Unit 2	Unit 3	Facility
Number of circulating water pumps	2	2	2	
Circulating water pump capacity (mgd) per pump	43.2	50.4	77.8	
Number of service water pumps	1	1	1	
Service water pump capacity (mgd)	4.32	4.32	5.76	
Number of screens	2	2	2	
Screen type	Traveling	Traveling	Traveling	
Screen mesh size (inch)	0.38	0.38	0.38	
Through-screen velocity (fps)	0.84	0.98	1.51	
Design flow (mgd)				357
Percent reservoir volume pumped/day at design				0.2
Megawatt rating (Units 1-3)				420
24-month capacity utilization (June 2022 – June 2024)	0.0%	3.4%	3.9%	3.6%



FREESE AND NICHOLS
FREESE AND NICHOLS, INC
801 Cherry Street, Suite 2800
Fort Worth, TX 76102
Phone - (817) 735 - 7300

N W E S

City of Garland

Ray Olinger Power Plant

Lake Lavon

FN JOB NO	GPL24350
FILE NAME	GP&L TPDES Renewal.mxd
DATE	7/16/2024
SCALE	1:90,000
DESIGNED	CLV
DRAFTED	08245

5

FIGURE

Path: H:\ENVIRONMENTAL\Working\GP&L TPDES Renewal\GP&L TPDES Renewal.aprx

NAD 1983 StatePlane Texas South Central FIPS 4204 Feet

FREESE AND NICHOLS
FREESE AND NICHOLS, INC
801 Cherry Street, Suite 2800
Fort Worth, TX 76102
Phone - (817) 735 - 7300

N W E S

City of Garland

Ray Olinger Power Plant

Power Plant Facilities

FN JOB NO	GPL24350
FILE NAME	GP&L TPDES Renewal.mxd
DATE	7/16/2024
SCALE	1:7,372
DESIGNED	CLV
DRAFTED	08245

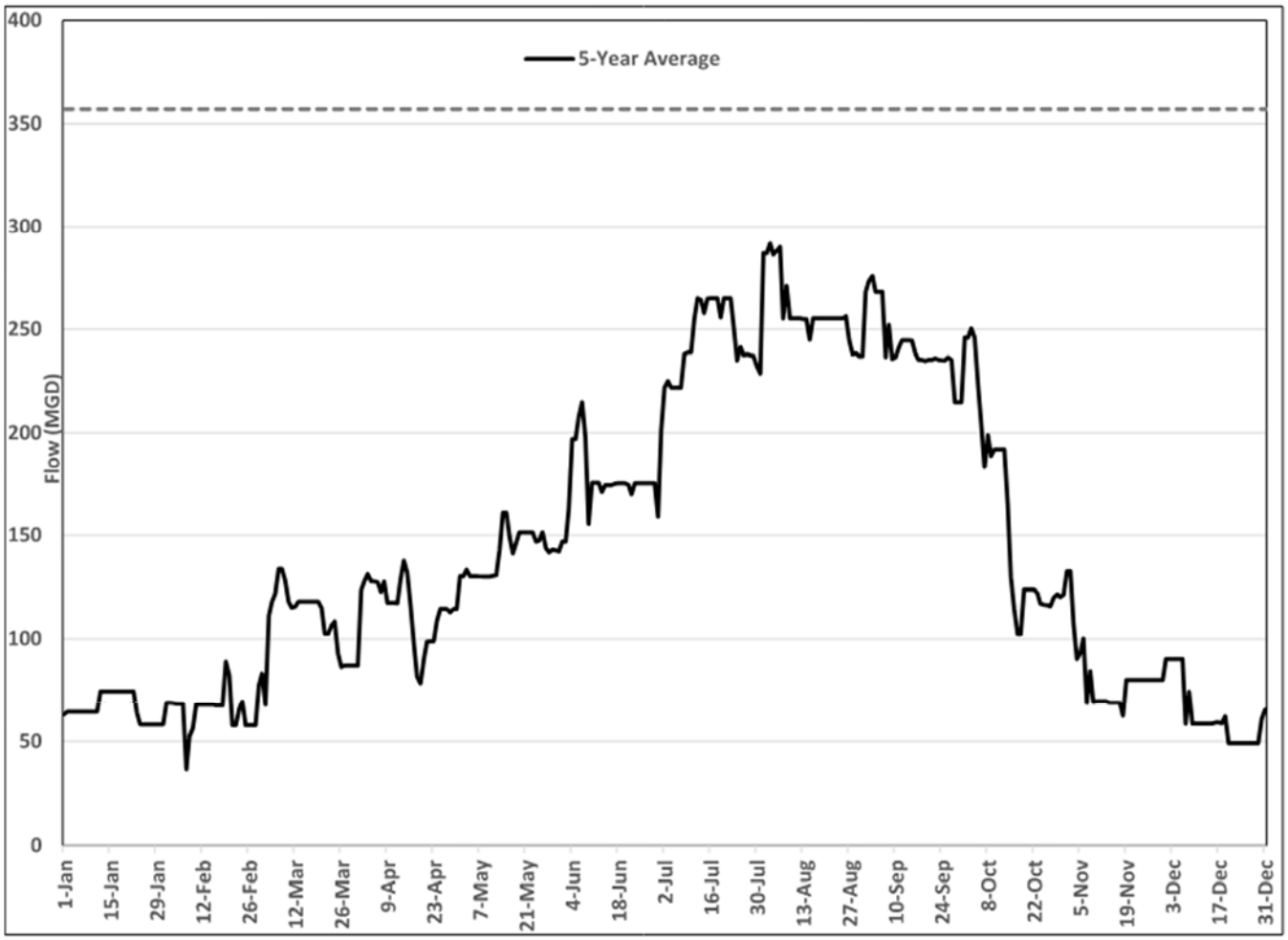
5

FIGURE

Path: H:\ENVIRONMENTAL\Working\GP&L TPDES Renewal\GP&L TPDES Renewal.aprx

NAD 1983 StatePlane Texas South Central FIPS 4204 Feet

Figure 3. 5-year Flow History for ROPP



Section 1.b. Cooling Water System Data

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.

Figures 1 and 2 provide aerial views of the CWIS and associated power plant facilities. The CWIS geographic location is at: 33° 03' 55.37" N, 96° 27' 11.30" W. The CWIS withdraws from the rear of an excavated channel that is approximately 34-feet deep at the CWIS. The floor of the CWIS is at 458.0 ft- msl. Normal pool elevation of Lake Lavon is 492.0 ft-msl. The traveling screens span from the floor of the CWIS to the top deck, allowing vertical integration of the water column. However, the CW pumps are vertical-shaft turbines with the impellers near the floor of the CWIS, and, therefore, a higher proportion of flow is generally from near the bottom.

3. A description of water reuse activities, if applicable.

ROPP utilizes once-through cooling water from Lake Lavon. While cooling water is circulated within the reservoir, there is no reuse, such as reclaimed effluent to offset the use of surface water.

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

DIF is the compilation of all circulating and service water pump capacities (assumed zero head differential). AIF is the average discharge monitoring reported flows for the past 3 years (June 2021 – June 2024). Intake flow use percentage is the proportion of the reported flow for each use to the AIF. The proportion of contact cooling was derived from a 3-year average that is presented in the water balance. There is no process use of water at ROPP.

Section 1.b. Cooling Water System Data

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

Table 4. Ray Olinger Power Plant actual intake flow, January 2023 – December 2023.

Day	January	February	March	April	May	June	July	August	September	October	November	December
1	6.48	57.6	54.721	213.12	213.12	216	268.56	268.56	268.56	268.56	113.04	7.2
2	7.2	57.6	56.041	213.12	213.12	216	268.56	268.56	268.56	268.56	113.04	7.2
3	7.2	57.6	57.6	222	222	188.64	279.75	279.75	279.75	279.75	49.98	7.5
4	7.2	57.6	137.52	213.12	213.12	213.12	268.56	268.56	268.56	268.56	7.2	7.2
5	7.2	57.6	134.64	213.12	213.12	213.12	268.56	268.56	268.56	264.27	7.2	7.2
6	7.2	57.6	154.8	213.12	213.12	213.12	268.56	268.56	268.56	242.82	7.2	7.2
7	7.2	57.6	213.12	213.12	213.12	213.12	268.56	268.56	268.56	268.56	7.2	7.2
8	7.2	57.6	213.12	213.12	213.12	167.76	268.56	268.56	268.44	268.56	7.29	7.2
9	7.2	57.6	135.36	213.12	213.12	61.14	268.56	268.56	266.52	268.56	8.28	7.2
10	7.2	57.6	57.6	213.48	213.12	110.88	268.56	268.56	268.56	268.56	9.36	7.2
11	7.2	57.6	42.9	213.12	214.32	110.88	268.56	268.56	268.56	268.56	9.36	7.2
12	57.6	57.6	45	213.12	216	110.88	268.56	268.56	268.56	268.56	9.36	7.2
13	57.6	57.6	57.6	213.12	216	110.88	264.24	268.56	268.56	268.56	9.27	7.2
14	57.6	57.6	57.6	213.12	216	110.88	232.92	268.56	268.56	190.8	7.2	7.2
15	57.6	57.6	57.6	213.12	216	110.88	268.56	268.56	268.56	113.04	7.2	7.2
16	57.6	54.721	57.6	213.12	216	110.88	268.56	268.56	268.56	113.04	7.2	7.2
17	57.6	54.721	57.6	213.12	216	110.88	268.56	268.56	268.56	113.04	7.2	7.2
18	57.6	54.721	57.6	213.12	243.3	110.88	268.56	268.56	268.56	113.04	7.2	7.2
19	57.6	54.721	57.6	213.12	266.4	110.88	268.56	268.56	267.48	113.04	7.2	7.2
20	57.6	54.721	57.6	213.12	266.4	110.88	268.56	268.56	268.56	113.04	7.2	7.2
21	57.6	54.721	57.6	213.12	266.4	108.96	268.56	268.56	268.56	113.04	7.2	7.2
22	57.6	54.721	57.6	213.12	266.4	97.44	268.56	268.56	268.56	113.04	7.2	7.2
23	57.6	54.721	57.6	213.12	266.4	110.88	268.56	268.56	268.56	113.04	7.2	7.2
24	57.6	54.721	57.6	213.12	266.4	110.88	268.56	268.56	268.56	113.04	7.2	7.2
25	57.6	54.721	57.6	213.12	266.4	110.88	268.56	268.56	268.56	113.04	7.2	7.2
26	57.6	54.721	55.98	213.12	266.4	110.88	268.56	268.56	268.56	113.04	7.2	7.2
27	57.6	54.721	57.6	213.12	266.4	110.88	268.56	268.56	268.56	111.6	7.2	7.2
28	57.6	54.721	57.6	213.12	266.4	110.88	268.56	268.56	268.56	107.521	7.2	7.2
29	57.6		57.6	213.12	266.4	110.88	268.56	268.56	268.56	111.12	7.2	7.2
30	57.6		57.6	213.12	266.4	110.88	268.56	268.56	268.56	108.001	7.2	7.2
31	57.6		57.6		266.4		268.56	268.56		110.641		7.2
AVG	**39.6929**	**56.26332**	**77.26458**	**213.428**	**237.3194**	**133.838**	**267.6319**	**268.921**	**268.825**	**179.6324**	**16.006**	**7.209677**

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.

There have been no technologies or operational measures recently employed to specifically reduce impingement mortality or entrainment at ROPP. From November 2006 through November 2007, biweekly impingement sampling was conducted at ROPP (Impingement Mortality Characterization Study, Ray Olinger Power Plant conducted by PBS&J, 2007). Over the course of that study, a total of 387 fish impinged, of which 88% were Threadfin (*Dorosoma petenense*) and Gizzard (*D. cepedianum*) shad, followed by Largemouth Bass (*Micropterus salmoides*) [5%], and Golden Shiner (*Notemigonus crysoleucas*) [3%]. The cooling water capacity factor (AIF/DIF x 100) was 43% during the study. Total impingement for the entire year was estimated at approximately 4,800, with the overwhelming majority of fish consisting of fragile (shad) [40 FCR 125.92(m)] or exotic (Golden Shiner) species.

The number of fish not considered fragile or exotic expected to be impinged at ROPP is exceptionally low (up to a few hundred annually) and the facility might qualify for the de minimis alternative (40 CFR 125.94[11]) to meet impingement mortality compliance standard. The low impingent rate results from the CWIS location and design. The U.S. Environmental Protection Agency's 2004 Final Regulations to Establish Requirements for Cooling Water Intake Structures at Phase II Existing Facilities Rule defines a "baseline" CWIS configuration as one that is oriented parallel to the shore and is absent impingement or entrainment control measures (otherwise, worst-case scenario). The CWIS at ROPP is located at the rear of a man-made, excavated canal that is 32-feet deep at normal reservoir pool elevation. The CWIS employs vertical-shaft turbine pumps that withdraw from near the floor of the CWIS (deep water), which is not the most biologically productive zone. In addition, screen velocities are relatively low, ranging from 0.8 (Unit 1) to 1.5 (Unit 3) fps at normal reservoir pool elevation. Therefore, the location and operation of the CWIS aids in reducing impingement mortality. It is also important to note that cooling water capacity is generally low, with a recent 3-year (2016-2018) average of 41%, indicating that current and likely future CWIS operations for ROPP would likely result in low impingement.

Entrainment has not been monitored at ROPP. Peak spawning (and juvenile life stage abundance) in Lake Lavon occurs in the spring and early summer. As indicated in Figure 3, power plant operations are greatly reduced in the spring, during spawning season. In addition, the CWIS is located at the rear of a deep, excavated channel which presumably has little, if any littoral habitat for spawning. As a result of this operational pattern and the location of the CWIS, entrainment at ROPP is expected to be low.

ATTACHMENT TR-6

Cooling Water Intake Structure(s) Data

Worksheet 11.0
Cooling Water Intake Information

Section 2.b. Cooling Water Intake Structure Data

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.**

   ROPP has a single CWIS which is divided into bays which serve each of the units' CW pumps. Each unit has two circulating-water (CW) pumps. The Cooling Water Intake Structure(s) Data Table describes the components of the CWIS. Each CW pump is served by a single traveling-water screen (screen) with ⅜-inch square steel mesh. Screens are usually washed once per 8-hour shift when the units are in operation. The length of time the screen wash operates varies depending on the differential pressure loss. On occasion the screens may be washed several times during a single day. Screen-wash water from each unit is transported through a sluice, then to a debris sump and basket, and then returned to the reservoir near the CWIS.

   Figure 3 shows the 5-year flow history for ROPP. In general, the facility withdraws more cooling water during summer followed by winter and less water during fall and spring. In the 5-year flow history, the facility had not operated at design capacity. As shown on Figure 3, the facility withdraws less than design capacity during most of the time. The annual cooling water utilization capacity over the past 5 years was about 43% of design capacity

   Cooling water is withdrawn from the rear of a 700-foot-long excavated intake canal. However, the distance to the main body of the reservoir is approximately 2,500 ft. The shallowest depth of the canal is approximately 25 ft; however, the depth in the vicinity of the CWIS is approximately 32 feet under normal reservoir pool elevation. The CW pumps are vertical-shaft turbines with the impellers near the floor of the CWIS. Therefore, a higher proportion of flow is generally from near the bottom (deeper water).

2. **Engineering calculations for each CWIS.**

   There is only one CWIS at ROPP. CWIS information is listed in the ROPP CWIS Configuration Table in Attachment TR-5 and The Cooling Water Intake Structure(s) Data Table (Worksheet 11.0 2.a). DIF is 357 mgd and is the compilation of all circulating and service water pump capacities (assumed zero head differential). AIF is the average reported flows for the past 3 years (June 2021 – June 2024). Intake flow uses percentage is the proportion of the reported flow for each use to the AIF.

ATTACHMENT TR-7

Source Water Physical Data

Worksheet 11.0
Cooling Water Intake Information

Section 3.b. Source Water Physical Data

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

   ROPP uses cooling water from Lake Lavon. The facility utilizes a single CWIS located at the rear of a 700-foot-long excavated intake canal (see Figure 4). The distance to the main body of the reservoir is approximately 2,500 ft. The depth at the CWIS is approximately 32 ft under conservation pool elevation. Lake Lavon is a man-made impoundment constructed on the East Fork Trinity River, Texas Commission on Environmental Quality Segment No. 0821. At normal operating reservoir pool elevation of 492.0 ft msl, total surface area of Lake Lavon is 20,559 acres with a storage capacity of approximately 409,360 acre-feet. The reservoir and power plant are located in the Navarro and Taylor geologic groups (Bureau of Economic Geology http://www.jsg.utexas.edu/news/files/Geologic-map-of-Texas.jpg).

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

   Lake Lavon is a fresh water impoundment used for flood control, water supply, and recreation. The reservoir fishery is stocked and managed by the Texas Parks and Wildlife Department. Water quality was monitored for 1 year during the ROPP impingement study (Ray Olinger Impingement Mortality Study, PBS&J,2007). Temperature ranged from 7°C in February to 31°C in September 2007. Salinity remained below 0.5 parts per thousand during the study.

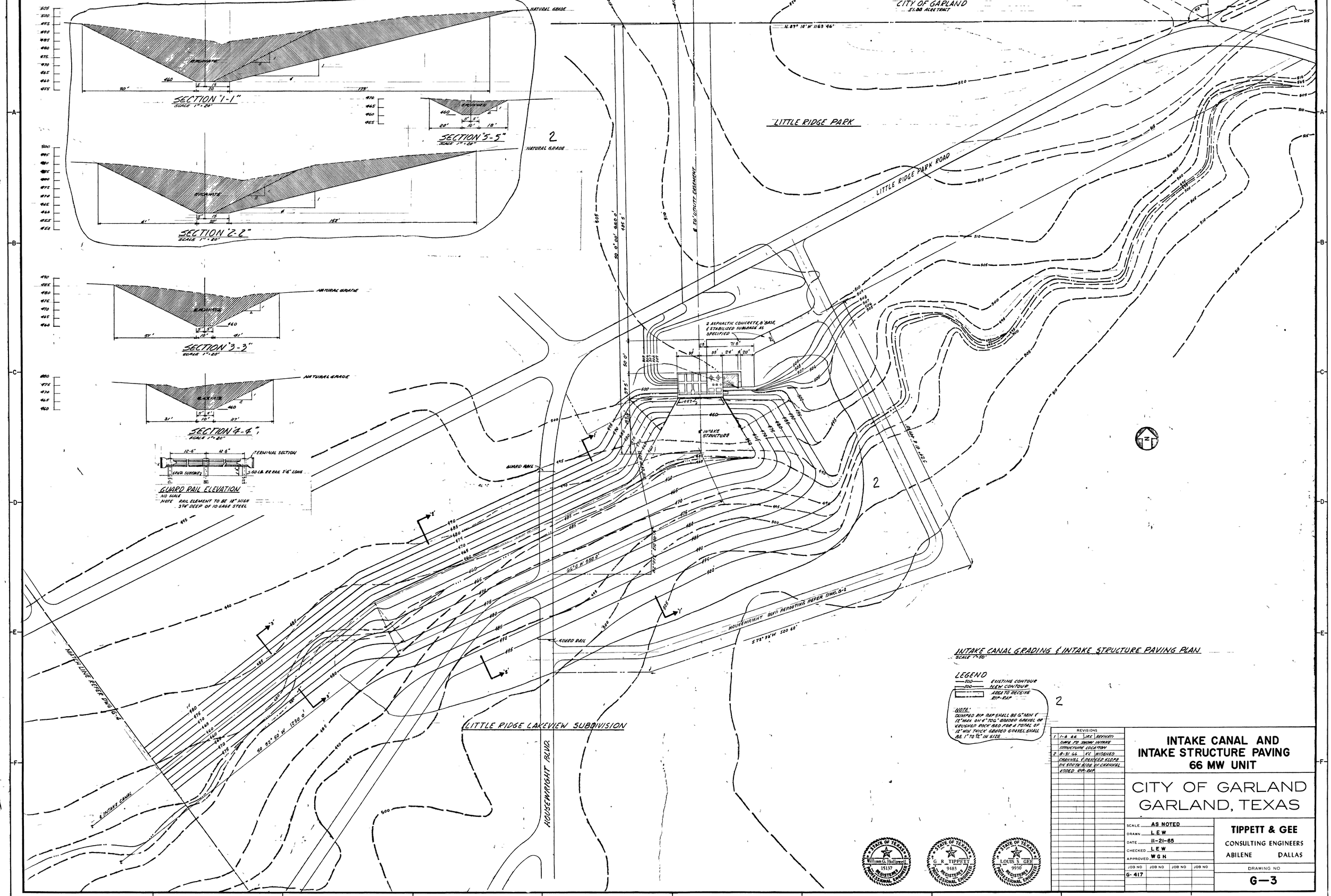
3. **Scaled drawings showing the physical configuration of all source water bodies used by the facility, including the source waterbody's hydrological and geomorphological features. Note: The source waterbody's hydrological and geomorphological features may be included on the map submitted for item 1.b.ii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

   See Figure 4.

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.**

   There have been no studies that describe the zone of influence associated with cooling water withdrawal by the facility.

GUARD RAIL ELEVATION
NO SCALE
NOTE RAIL ELEMENT TO BE 18" HIGH
3/16" DEEP OF 10 GAGE STEEL



INTAKE CANAL GRADING & INTAKE STRUCTURE PAVING PLAN
SCALE 1"=50'

LEGEND
500 EXISTING CONTOUR
500 NEW CONTOUR
AREA TO RECEIVE RIP-RAP

NOTE:
DUMPED RIP RAP SHALL BE 6" MIN. & 12" MAX. ON 4" TOG. GRADED GRAVEL OR CRUSHED ROCK BED FOR A TOTAL OF 18" MIN. THICK. GRADED GRAVEL SHALL BE 1" TO 12" IN SIZE

REVISIONS		
1	1-6-66	JRS REVISED DWG TO SHOW INTAKE STRUCTURE LOCATION
2	9-21-66	VC WIDENED CHANNEL & REVISED SLOPE ON SOUTH SIDE W/ CHANNEL & ADDED RIP-RAP

INTAKE CANAL AND INTAKE STRUCTURE PAVING 66 MW UNIT

CITY OF GARLAND
GARLAND, TEXAS

SCALE	AS NOTED
DRAWN	L E W
DATE	11-21-65
CHECKED	L E W
APPROVED	W G H

JOB NO.	JOB NO.	JOB NO.	JOB NO.
G-417			

TIPPETT & GEE
CONSULTING ENGINEERS
ABILENE DALLAS

DRAWING NO.
G—3

William G. Hollowell 15137 REGISTERED PROFESSIONAL ENGINEER
G. R. TIPPETT 9483 REGISTERED PROFESSIONAL ENGINEER
LOUIS S. GEE 9930 REGISTERED PROFESSIONAL ENGINEER

ATTACHMENT TR-8

Operational Status

Worksheet 11.0
Cooling Water Intake Information
Section 4.a. Operational Status

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.**

   ROPP Unit 1 was constructed in 1967, Unit 2 in 1971, and Unit 3 in 1975. Each unit remains in service, although operating intermittently and at a very low utilization capacity. Over the past 5 years (October 2018 – June 2024), the capacity utilization rate for the power plant was 2.3% (Table 5).

Table 5. Ray Olinger Power Plant 5-Year Monthly Capacity Utilization Rate by Unit.

DATE	UNIT 1	UNIT 2	UNIT 3	DATE	UNIT 1	UNIT 2	UNIT 3
Oct-18	0.0%	0.0%	0.0%	Jan-22	0.0%	1.4%	0.0%
Nov-18	0.0%	0.0%	2.1%	Feb-22	0.0%	3.7%	2.8%
Dec-18	0.0%	0.0%	0.0%	Mar-22	0.0%	2.2%	1.9%
Jan-19	0.0%	0.0%	0.0%	Apr-22	0.0%	0.3%	0.0%
Feb-19	0.0%	0.0%	0.0%	May-22	0.0%	1.7%	9.3%
Mar-19	0.2%	1.5%	0.0%	Jun-22	0.0%	7.6%	0.4%
Apr-19	0.0%	0.0%	0.0%	Jul-22	0.0%	10.9%	8.6%
May-19	0.0%	0.0%	0.0%	Aug-22	0.0%	6.3%	8.7%
Jun-19	0.5%	2.4%	5.3%	Sep-22	0.0%	3.0%	3.9%
Jul-19	1.4%	7.5%	12.2%	Oct-22	0.0%	1.4%	0.0%
Aug-19	7.7%	28.2%	36.9%	Nov-22	0.0%	0.0%	0.0%
Sep-19	2.9%	10.0%	28.4%	Dec-22	0.0%	0.0%	0.0%
Oct-19	0.7%	3.0%	5.9%	Jan-23	0.0%	0.2%	0.0%
Nov-19	0.0%	0.0%	0.7%	Feb-23	0.0%	0.3%	0.0%
Dec-19	0.0%	0.0%	1.8%	Mar-23	0.0%	3.0%	0.2%
Jan-20	0.0%	0.0%	0.0%	Apr-23	0.0%	2.6%	2.7%
Feb-20	0.0%	0.0%	0.0%	May-23	0.0%	3.8%	3.3%
Mar-20	0.0%	0.0%	0.0%	Jun-23	0.0%	7.9%	7.0%
Apr-20	0.0%	1.0%	0.7%	Jul-23	0.0%	6.5%	4.8%
May-20	0.0%	0.2%	0.7%	Aug-23	0.0%	15.3%	29.3%
Jun-20	0.0%	1.0%	0.4%	Sep-23	0.0%	5.2%	12.1%
Jul-20	0.2%	0.6%	2.1%	Oct-23	0.0%	0.0%	6.6%
Aug-20	0.9%	6.1%	7.9%	Nov-23	0.0%	0.0%	5.6%
Sep-20	0.0%	0.3%	0.3%	Dec-23	0.0%	0.4%	0.0%
Oct-20	0.0%	0.0%	0.0%	Jan-24	0.0%	2.1%	3.0%
Nov-20	0.0%	0.0%	0.0%	Feb-24	0.0%	0.0%	0.0%
Dec-20	0.0%	0.0%	0.0%	Mar-24	0.0%	0.5%	0.0%
Jan-21	0.0%	0.0%	0.0%	Apr-24	0.0%	2.4%	0.0%
Feb-21	0.0%	0.0%	22.4%	May-24	0.0%	2.3%	0.0%
Mar-21	0.0%	0.0%	0.0%	Jun-24	0.0%	2.4%	1.4%

Apr-21	0.0%	0.4%	0.0%	
May-21	0.0%	0.0%	0.0%	
Jun-21	0.0%	2.3%	4.1%	
Jul-21	0.0%	6.4%	6.9%	
Aug-21	0.0%	6.4%	7.7%	
Sep-21	0.0%	1.1%	3.1%	
Oct-21	0.0%	0.0%	15.5%	
Nov-21	0.0%	0.3%	3.1%	
Dec-21	0.0%	1.5%	0.0%	

In the most recent 24-month contiguous block (June 2022 – June 2024), none of the units operated in February 2024. The highest periods of utilization capacity were July 2022 and August 2023, at 10.9% and 15.3%, respectively. Over this period, Unit 1 ran the least at 0.0%, and Unit 2 ran the most at 3.4% average utilization capacity. In general, the units rarely operate in the spring and fall.

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

There have been no significant facility modifications or extended outages in the past 15 years nor are there any major outages planned in the near future. However, the facility operates at a very low electric utilization capacity; therefore, impingement and entrainment impacts are minimized due to normal plant operations.

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).

Units 1, 2, and 3 each have capacity utilization rates of less than 8% over a recent, contiguous 24-month period, June 2022 – June 2024 (see Table 6). The average capacity utilization rate for Unit 1 was 0.8%, Unit 2 was 1.9%, and Unit 3 was 1.4%. The total facility average capacity utilization rate during this period was 1.4%.

Table 6. Ray Olinger Power Plant Electric Capacity Utilization Rate from June 2022 – June 2024.

Electric Capacity Utilization by Month			
Date	**ROP 1 MW**	**ROP 2 MW**	**ROP3 MW**
Jun-22	0.0%	7.6%	0.4%
Jul-22	0.0%	10.9%	8.6%
Aug-22	0.0%	6.3%	8.7%
Sep-22	0.0%	3.0%	3.9%
Oct-22	0.0%	1.4%	0.0%
Nov-22	0.0%	0.0%	0.0%
Dec-22	0.0%	0.0%	0.0%
Jan-23	0.0%	0.2%	0.0%
Feb-23	0.0%	0.3%	0.0%
Mar-23	0.0%	3.0%	0.2%
Apr-23	0.0%	2.6%	2.7%
May-23	0.0%	3.8%	3.3%

Jun-23	0.0%	7.9%	7.0%
Jul-23	0.0%	6.5%	4.8%
Aug-23	0.0%	15.3%	29.3%
Sep-23	0.0%	5.2%	12.1%
Oct-23	0.0%	0.0%	6.6%
Nov-23	0.0%	0.0%	5.6%
Dec-23	0.0%	0.4%	0.0%
Jan-24	0.0%	2.1%	3.0%
Feb-24	0.0%	0.0%	0.0%
Mar-24	0.0%	0.5%	0.0%
Apr-24	0.0%	2.4%	0.0%
May-24	0.0%	2.3%	0.0%
Jun-24	0.0%	2.4%	1.4%
24-Month Average	**0.0%**	**3.4%**	**3.9%**

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.

There have been no significant facility modifications the past 15 years nor are there any major modifications planned in the near future.

ATTACHMENT TR-9

TPWD Fisheries Management Report

PERFORMANCE REPORT

As Required by

FEDERAL AID IN SPORT FISH RESTORATION ACT

TEXAS

FEDERAL AID PROJECT F-221-M-5

INLAND FISHERIES DIVISION MONITORING AND MANAGEMENT PROGRAM

2014 Fisheries Management Survey Report

Lavon Reservoir

Prepared by:

Bruce Hysmith, District Management Supervisor
and
John H. Moczygemba, Assistant District Management Supervisor

Inland Fisheries Division
Denison District
Pottsboro, Texas

Carter Smith
Executive Director

Craig Bonds
Director, Inland Fisheries

July 31, 2015

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SURVEY AND MANAGEMENT SUMMARY

Fish populations in Lavon Reservoir were surveyed in 2014 using electrofishing and trap netting and in 2015 using gill netting. Historical data are presented with the 2014-2015 data for comparison. This report summarizes the results of the surveys and contains a management plan for the reservoir based on those findings.

- **Reservoir description:** Lavon Reservoir is a 21,400-acre impoundment located on the East Fork Trinity River approximately 8 miles east of McKinney. Since July 2011 water level has fluctuated 13 feet above and below conservation elevation (492 feet above mean sea level). However, water level began dropping July 2012 and continued dropping until January 2015. Lavon Reservoir has moderate productivity. Habitat features consisted mainly of riprap along the dam and railroad bridges, dead trees and stumps, and rocky shoreline. Standing dead timber was an important habitat feature.

- **Management history:** Important sport fishes include White Bass, Largemouth Bass, White and Black Crappie, and Blue and Channel Catfish. The management plan from the 2011 survey report included requesting the TPWD Webmaster include a statement about the improving sport fishery, especially Blue and Channel Catfish, and Largemouth Bass. We cooperated with USACOE in posting signage warning lake visitors of the potential of zebra mussel infestation. Advised, educated, and provided signage and invasive species literature to marina owners. Utilizing media outlets and speaking engagements, we provided our constituents and user groups this same information. Monitored existing inter-basin water transfers. Monitored Portland samplers deployed in the reservoir for zebra mussel colonization.

- **Fish community**

  - **Prey species:** Threadfin Shad continued to be present, but showed a decline in abundance. While showing a large decline in numbers, the electrofishing catch of Gizzard Shad was still high and most (95%) were available as prey to most sportfishes. The electrofishing catch of prey-size Bluegill declined in numbers, but was still above the district average.

  - **Catfishes:** Gill net catch of Blue Catfish declined, but 100% of the population was legal size and in good condition. Recruitment was low, but they continue to out-number Channel Catfish in abundance. Gill net catch of Channel Catfish declined. No Flathead Catfish were collected.

  - **White Bass:** Gill net catch of White Bass increased and no Striped Bass were collected.

  - **Largemouth Bass:** The electrofishing catch of Largemouth Bass declined, but recruitment was good and relative weights were fair for legal-size fish. Over one-half of the Largemouth Bass sample population was legally harvestable.

  - **Crappies:** The trap netting catch of White Crappie increased, body condition and recruitment was good, and over one-half of the sample population was legal size and larger. The trap netting catch of Black Crappie was at an all-time high and the fish were in good condition. We predict a bright future for Black Crappie.

- **Management strategies:** Conduct general monitoring with electrofisher, trap nets, and gill nets in 2018-2019. Publicize improvements to sport fishes in the reservoir to anglers. Inform the Lavon Reservoir U.S. Army Corps of Engineers personnel about new exotic species threats to Texas waters, and work with them to display appropriate signage, educate constituents, and understand appropriate enforcement actions. Continue to monitor immigration of invasive species into Lavon Reservoir.

INTRODUCTION

This document is a summary of fisheries data collected from Lavon Reservoir in 2014-2015. Sampling of fishes was done by electrofishing and trap netting in 2014 and in 2015 by gill netting. The purpose of the document is to provide fisheries information and make management recommendations to protect and improve the sport fishery. While information on other species of fishes was collected, this report deals primarily with major sport fishes and important prey species. Historical data are presented with the 2014-2015 data for comparison.

Reservoir Description

Lavon Reservoir is a 21,400-acre impoundment constructed in 1953 on the East Fork Trinity River. It is located in Collin County approximately 8 miles east of McKinney and is operated and controlled by the U.S. Army Corps of Engineers (USACOE). The original dam impounded 11,080 acres of water. In 1974 the dam was raised 12 feet and increased the surface area of the reservoir to 21,400 acres. Primary project purposes are municipal and industrial water supply, flood control, and recreation. To augment municipal and industrial water, Lavon Reservoir receives inter-basin transfers from Cooper and Tawakoni Reservoirs and the East Fork Raw Water Supply Project near Seagoville, TX. The inter-basin transfer of Texoma Reservoir water via Sister Grove Creek has been converted to a direct pipeline transfer from Texoma Reservoir to the North Texas Municipal Water District water treatment facility at Wylie, TX. Lavon Reservoir also receives outfall from a regional sewage treatment facility. Lavon Reservoir was mesotrophic with a mean TSI chl-*a* of 39.30 (Texas Commission on Environmental Quality 2011). Habitat at time of sampling consisted of dead trees, rocks and boulders, riprap, but mostly rocky interspersed with bare soil shoreline. There were isolated patches of native submerged and emergent vegetation. Native aquatic plants present were pondweed, water willow, and buttonbush. Water level has been low and unstable since July 2011 (Figure 1). With the exception of July 2011, most of the reservoir was 8 to 12 feet below conservation throughout this study period Other descriptive characteristics for Lavon Reservoir are in Table 1.

Angler Access

Lavon Reservoir has 16 public boat ramps (Table 2). During the period July 2011 through spring 2015 access via these boat ramps was limited to the period January 2012 to July 2013. Early in this period access was denied because of low water and late in this period access was denied because of high water. Boat ramp characteristics appear in detail in Table 2. Bank fishing access has been compromised due to large expanses of exposed flats and shallow inshore water. Despite this there are still potential sites available at USACOE recreation areas and to a lesser extent from public roads. Shoreline access to Lavon Reservoir is unlimited unless posted because it is U.S. Army Corps of Engineers property; hence, public.

Management History

Previous management strategies and actions: Management strategies and actions from the previous survey report (Hysmith and Moczygemba 2011) included:

1. Recommended incorporating improvements in the sport fishery on the TPWD web site.
   Action: Sport fish survey data were forwarded to the TPWD webmaster in Austin.
2. Recommended cooperating with reservoir controlling authority and marinas to inform and educate the public about invasive species.
   Action: Posted appropriate signage at reservoir access points, informed marina owners regarding invasive species, provided printed material, used media and internet, tracked any and all inter basin transfers, and monitored Portland samplers in the reservoir.

Harvest regulation history: Sportfishes in Lavon Reservoir are currently managed with statewide regulations (Table 3).

Stocking history: Lavon Reservoir was last stocked in 2007 and 2008 with Striped Bass at 13/acre. The complete stocking history is in Table 4.

Vegetation/habitat history: Historically, Lavon Reservoir (Hysmith and Moczygemba 1980) supported diverse aquatic vegetation, and consisted of narrow leaved cattail, black willow, smartweed, water willow, knotgrass, duckweed, and water primrose native pondweed, buttonbush, and water willow. There was no aquatic vegetation to sample in 2014, however, in 2010 aquatic vegetation consisted of pondweed, buttonbush, and water willow (Hysmith and Moczygemba 2011).

Water Transfer: Lavon Reservoir is primarily used for municipal water supply, recreation, and to a lesser extent, flood control. Water is pumped into Lavon Reservoir from Cooper Reservoir, Tawakoni Reservoir, and the East Fork Raw Water Supply Project Seagoville, TX. Until 2009, water was pumped from Texoma Reservoir to Sister Grove Creek, a tributary of Lavon Reservoir. Water is pumped out of Lavon Reservoir by North Texas Municipal Water District.

METHODS

Fishes were collected by electrofishing (2 hours at 24 5-min stations), gill netting (15 net nights at 15 stations), and trap netting (15 net nights at 15 stations). Catch per unit effort (CPUE) for electrofishing was recorded as the number of fish caught per hour (fish/h) of actual electrofishing and, for gill and trap nets, as the number of fish caught per net night (fish/nn). Survey sites were randomly selected and all surveys were conducted according to the Fishery Assessment Procedures (TPWD, Inland Fisheries Division, unpublished manual revised 2014).

A structural habitat survey was conducted in 2014. Vegetation surveys were conducted in 2002, 2006, 2010, and 2014. Aquatic vegetation was not present in 2006 and 2014. Habitat was assessed using a modified digital shapefile method (TPWD, Inland Fisheries Division, unpublished manual revised 2014).

Sampling statistics (CPUE for various length categories) and structural indices [Proportional Size Distribution (PSD)] as defined by Guy et al. (2007) and condition indices [relative weight (Wr)] were calculated for target fishes according to Anderson and Neumann (1996). Index of vulnerability (IOV) was calculated for Gizzard Shad (DiCenzo et al. 1996). Relative standard error (RSE = 100 X SE of the estimate/estimate) was calculated for all CPUE statistics and SE was calculated for structural indices and IOV. Ages for Channel Catfish, Largemouth Bass, and White and Black Crappie were determined using Category 2 protocol according to the Fishery Assessment Procedures (TPWD, Inland Fisheries Division, unpublished manual revised 2014). The manual specifies Largemouth Bass, but we adapted the protocol to include Channel Catfish and White and Black Crappie. Source for water level data was the United States Geological Survey (USGS 2015).

Genetic analysis of Largemouth Bass was conducted according to the Fishery Assessment Procedures (TPWD, Inland Fisheries Division, unpublished manual revised 2014). Micro-satellite DNA analysis was used to determine genetic composition of individual fish from 2005 through 2012 and by electrophoresis for previous years.

RESULTS AND DISCUSSION

Habitat: Littoral zone habitat consisted primarily of rocky shoreline and dead timber with some native aquatic vegetation (Tables 5 and 6).

Prey species: Electrofishing CPUE of Gizzard Shad and Bluegill were 405.5/h and 88.5/h, respectively (Figures 2 and 3). Catches of both species were lower than for 2010. While not as good as 2011, the current IOV of 95 indicated an abundance of prey-size Gizzard Shad. Over half the sample population of Bluegill was $\leq$ 4 inches, ideal prey-size. Longear Sunfish were almost as abundant as Bluegill (Appendix A) and because of their small average size, provided excellent prey. The electrofishing CPUE for Threadfin Shad (14.0/h) was a record low (Appendix A).

Catfishes: The gill net CPUE of Blue Catfish was 2.5/nn in 2015, well below estimates of relative abundance in 2007 (Figure 4). The multiyear relative abundance has averaged 10.7/nn since 1996 (Appendix C). Relative weight ranged from 80 to 115, increasing with size; a trend repeated from 2011 (Figure 4). The trophy component (≥ 30 inches) of the population remained strong, repeating results of 2011 (Figure 4). All of the Blue Catfish sample population was ≥12 inches.

The gill net CPUE of Channel Catfish was 3.5/nn in 2015, second highest on record (Figure 5 and Appendix C). Recruitment of sub-stock fish was good and body condition was fair with relative weights ranging from 80 to almost 90. Channel Catfish grew to 12 inches in 5 years (N = 11; range = 5 to 6 years). Sixty-three percent of the sample population was ≥ 12 inches.

White Bass: The gill net CPUE of White Bass was 6.0/nn in 2015 (Figure 6), second highest CPUE for this reservoir (Appendix C). Relative weight of White Bass ranged from 95 to 105. Eighty-eight percent of the sample population was ≥ 10 inches.

Largemouth Bass: The electrofishing CPUE of Largemouth Bass was 35.0/h in 2015 (Figure 7), well below the all-time high CPUE in 2010 (Figure 7, Appendix C). There was excellent recruitment of sub-stock fish. A high average relative weight of 90 indicated a majority of the Largemouth Bass were in good condition, especially sub-stock fish which showed average relative weight ranging between 100 and 120 (Figure 7). Growth was excellent with fish reaching legal size in 2 years (N = 13; range 2 to 3 years). Fifty-four percent of the sample population was ≥ 14 inches. Genetic analysis of Largemouth Bass collected by electrofishing indicated Florida Largemouth Bass allele's at 39.0% which is a decrease from 42.0% in 2006 (Table 7).

Crappies: The trap net CPUE of White Crappie was 34.8/nn in 2015 (Figure 8), more than double the reservoir average (Appendix C). There was excellent recruitment of sub-stock fish. A high average relative weight of 100 % indicated a majority of the White Crappie were in good condition. Twenty-eight percent of the sample population was ≥ 10 inches and they reached legal size in 1 year (N = 13; range = 1 to 2 years).

Trap netting CPUE of Black Crappie was 3.4/nn (Figure 9). They were first collected in 2006 when one specimen was caught in a trap net during standard sampling (Hysmith and Moczygemba 2007). Thirteen individuals were collected during routine trap net sampling in 2010. There was excellent recruitment of sub-stock fish. High relative weight (>90) indicated a majority of the Black Crappie were in good condition. Thirty-seven percent of the sample population was ≥ 10 inches and they reached legal size in 2 years (N=13; range = 2 to 3 years).

Fisheries management plan for Lavon Reservoir, Texas

Prepared – July 2015.

ISSUE 1: The sport fishery in Lavon Reservoir, especially blue and Channel Catfish, and Largemouth Bass has continued to improve.

MANAGEMENT STRATEGY

1. Incorporate these improvements on the TPWD web site.

ISSUE 2: Many invasive species threaten aquatic habitats and organisms in Texas and can adversely affect the state ecologically, environmentally, and economically. For example, zebra mussels (*Dreissena polymorpha*) can multiply rapidly and attach themselves to any available hard structure, restricting water flow in pipes, fouling swimming beaches and plugging engine cooling systems. Giant Salvinia (*Salvinia molesta*) and other invasive vegetation species can form dense mats, interfering with recreational activities like fishing, boating, skiing and swimming. The financial costs of controlling and/or eradicating these types of invasive species are significant. Additionally, the potential for invasive species to spread to other river drainages and reservoirs via watercraft and other means is a serious threat to all public waters of the state. Zebra mussels have been found in Sister Grove Creek, a tributary to Lavon Reservoir and water conduit for water transfer from Texoma Reservoir, where zebra mussels have established. Portland samplers have been deployed in Lavon Reservoir and Sister Grove Creek.

MANAGEMENT STRATEIES

1. Cooperate with the controlling authority to post appropriate signage at access points around the reservoir.
2. Contact and educate marina owners about invasive species, and provide them with posters, literature, etc… so that they can in turn educate their customers.
3. Educate the public about invasive species through the use of media and the internet.
4. Make a speaking point about invasive species when presenting to constituent and user groups.
5. Keep track of (i.e., map) existing and future inter-basin water transfers to facilitate potential invasive species responses.
6. Monitor Portland samplers deployed in Lavon Reservoir.

SAMPLING SCHEDULE JUSTIFICATION:

Conduct general monitoring surveys in 2018 – 2019 with a creel survey, electrofishing, trap netting, and gill netting. Access and habitat surveys will also be conducted.

LITERATURE CITED

Anderson, R.O. and R.M. Neumann. 1996. Length, weight, and associated structural indices. Pages 447-482 *in* B.R. Murphy and D.W. Willis, editors. Fisheries techniques, 2nd edition. American Fisheries Society, Bethesda, Maryland.

DiCenzo, V.J., M.J. Maceina, and M.R. Stimpert. 1996. Relations between reservoir trophic state and Gizzard Shad population characteristics in Alabama reservoirs. North American Journal of Fisheries Management 16:888-895.

Guy, C.S., R.M. Neumann, D.W. Willis, and R.O. Anderson. 2007. Proportional Size Distribution (PSD): a further refinement of population size structure index terminology. Fisheries 32(7):348

Hysmith, B.T. and J.H. Moczygemba. 1980. Existing reservoir and stream management recommendations. Lake Lavon, 1979. Texas Parks and Wildlife Department, Federal Aid Report F-30-R-3, Austin.

Hysmith, B.T. and J.H. Moczygemba. 2011. Statewide freshwater fisheries monitoring and management program survey report for Lake Lavon, 2010. Texas Parks and Wildlife Department, Federal Aid Report F-221-M-1, Austin.

Texas Commission on Environmental Quality. 2011. Trophic Classification of Texas Reservoirs Quality 2010 Texas Water Inventory and 303(d) List. 18 pp.

United States Geological Society (USGS). 2015. National water information system: Web interface. Available: http://waterdata.usgs.gov/tx/nwis (May 2015).

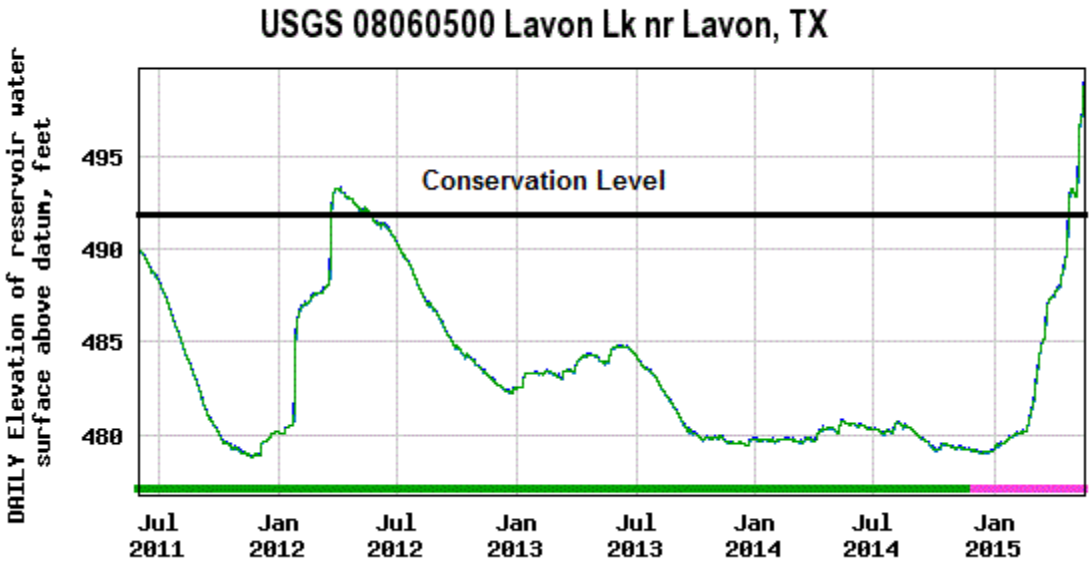

Figure 1. Monthly average water level elevations in feet above mean sea level (MSL) recorded for Lavon Reservoir (U.S. Geological Survey. 2015. USGS real time water data for USGS 08060500 Lavon Lake near Lavon, Texas. http://waterdata.usgs.gov/nwis), Texas, June 2011-May 2015.

Table 1. Characteristics of Lavon Reservoir, Texas.

Characteristic	Description
Year constructed	1953
Controlling authority	U.S. Army Corps of Engineers
Counties	Collin
Reservoir type	Mainstream
Shoreline development index	5.9
Conductivity	286 µmhos/cm

Table 2. Boat ramp characteristics for Lavon Reservoir, Texas, August, 2014. Reservoir elevation at time of survey was 479.09 feet above mean sea level.

Boat ramp	Latitude Longitude (dd)	Public	Parking capacity (N)	Elevation at end of boat ramp (ft)	Condition
Twin Groves	33.16593 -96.44157	Y	40	490[a]	Out of water. Extension is not feasible
Caddo Park	33.16247 -96.41896	Y	30	490[a]	Out of water. Extension is not feasible
Elm Creek	33.14009 -96.42500	Y	30	485[a]	Out of water. Extension is not feasible
Lakeland Park	33.10315 -96.44589	Y	60	478[a]	Out of water. Extension is not feasible
Tickey Creek	33.09562 -96.47443	Y	60	478[a]	Out of water. Extension is not feasible
Pebble Beach	33.08451 -96.45275	Y	45	481[a]	Out of water. Extension is not feasible
Little Ridge	33.06624 -96.45500	Y	60	478	Fair. Extension is feasible.
Mallard Park	33.04860 -96.42698	Y	30	478	Fair. Extension is feasible.
Lavonia Park	33.04178 -96.44335	Y	60	478	Fair. Extension is feasible.
Clear Lake	33.05900 -96.48810	Y	45	478	Fair. Extension is feasible.
Bratonia Park	33.11063 -96.52019	Y	20	490[a]	Out of water. Extension is not feasible
Highland Park	33.10782 -96.54063	Y	30	490[a]	Out of water. Extension is not feasible
Brockdale Park	33.07344 -96.54531	Y	30	484[a]	Out of water. Extension is not feasible
Collin Park	33.05104 -96.53057	Y	85	478	Fair. Extension is feasible.
East Fork Park	33.03705 -96.51466	Y	105	478	Fair. Extension is feasible.
Avalon Park	33.04276 -96.49807	Y	60	474	Excellent. No access issues.

[a] Elevations were determined using GPS and may be approximate due to GPS error. Varying lake levels and large amounts of siltation on ramps have prevented more accurate onsite measurements from being taken since original survey date.

Table 3. Harvest regulations for Lavon Reservoir, Texas.

Species	Bag limit	Length limit
Catfish: Channel and Blue Catfish, their hybrids and subspecies	25 (in any combination)	12-inch minimum
Catfish, Flathead	5	18-inch minimum
Bass, White	25	10-inch minimum
Bass, Striped	5	18-inch minimum
Bass, Largemouth	5	14-inch minimum
Crappie: White and Black Crappie, their hybrids and subspecies	25 (in any combination)	10-inch minimum

Table 4. Stocking history of Lavon Reservoir, Texas. Life stages are fry (FRY), fingerlings (FGL), advanced fingerlings (AFGL), adults (ADL) and unknown (UNK). Life stages for each species are defined as having a mean length that falls within the given length range. For each year and life stage the species mean total length (Mean TL; in) is given. For years where there were multiple stocking events for a particular species and life stage the mean TL is an average for all stocking events combined.

Species	Year	Number	Life Stage	Mean TL (in)
Blue catfish	1989	214,259	FGL	2.6
	1997	214,106	FGL	2.0
	1998	214,588	FGL	2.2
	Total	642,953		
Channel catfish	1954	20,000	AFGL	7.9
	1971	26,700	AFGL	7.9
	Total	46,700		
Florida Largemouth bass	1988	67,226	FGL	2.0
	1988	361,652	FRY	1.0
	1997	250,800	FGL	1.2
	2004	539,664	FGL	1.5
	2005	535,577	FGL	1.5
	Total	1,754,919		
Largemouth bass	1954	1,027,000	FRY	0.7
	1968	177,100	UNK	UNK
	Total	1,204,100		
Mixed Largemouth Bass	1988	98,860		1.0
	Total	98,860		
Palmetto Bass (Striped X White Bass hybrid)	1976	39,200	FGL	UNK
	Total	39,200		
Striped bass	1989	213,826	FGL	1.4
	1994	428,402	FGL	1.3
	2004	19,241	FGL	1.9
	2005	107,008	FGL	1.6
	2006	216,086	FGL	1.8
	2007	339,114	FGL	1.5
	2008	216,090	FGL	1.6
	Total	1,539,767		
Threadfin shad	1980	8,250	AFGL	2.9
	1984	2,000	AFGL	3.0
	Total	10,250		

Table 4 continued.

Species	Year	Number	Life Stage	Mean TL (in)
Walleye	1976	86,000	FRY	0.2
	Total	86,000		
White bass	1957	330	ADL	UNK
	Total	330		

Table 5. Survey of structural habitat types, Lavon Reservoir, Texas, 2014. Shoreline habitat type units are in miles and standing timber and piers, boat docks, and marinas in acres.

Habitat type	Estimate	% of total
Bulkhead	0.1 miles	0.1
Piers, boat docks, marinas	100 acres	0.5
Natural	41.2 miles	34.0
Rocky	79.7 miles	65.9
Standing timber	10,700 acres	50.0

Table 6. Survey of aquatic vegetation, Lavon Reservoir, Texas, 2002 – 2014. Surface area (acres) is listed with percent of total reservoir surface area in parentheses.

Vegetation	2002	2006	2010	2014
Native submersed		0.0	10 (<0.1)	0.0
Native emergent	44 (0.2)	0.0	44 (0.2)	0.0

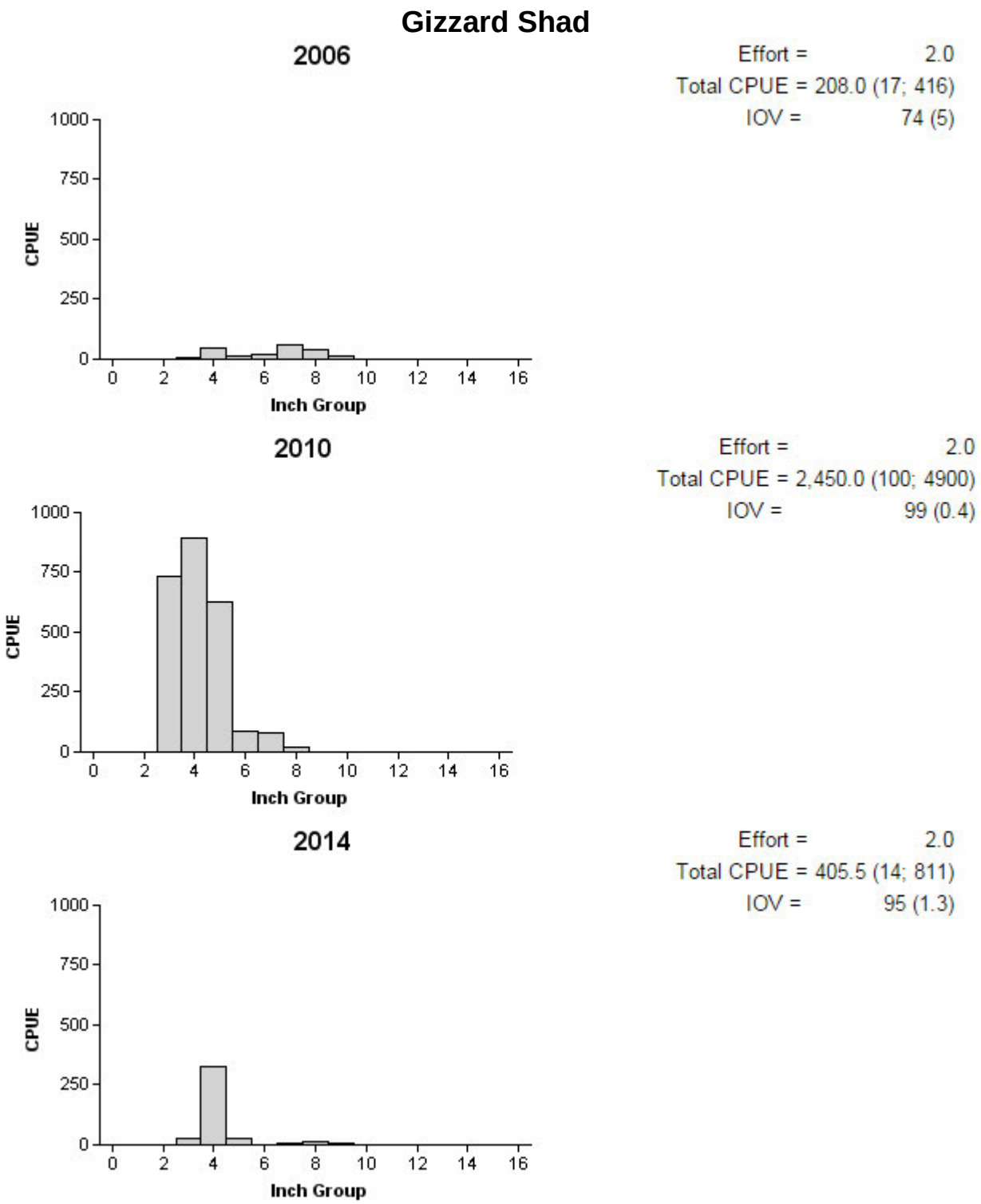

Figure 2. Number of Gizzard Shad caught per hour (CPUE) and population indices (RSE and N for CPUE and SE for IOV are in parentheses) for fall electrofishing surveys, Lavon Reservoir, Texas, 2006, 2010, and 2014.

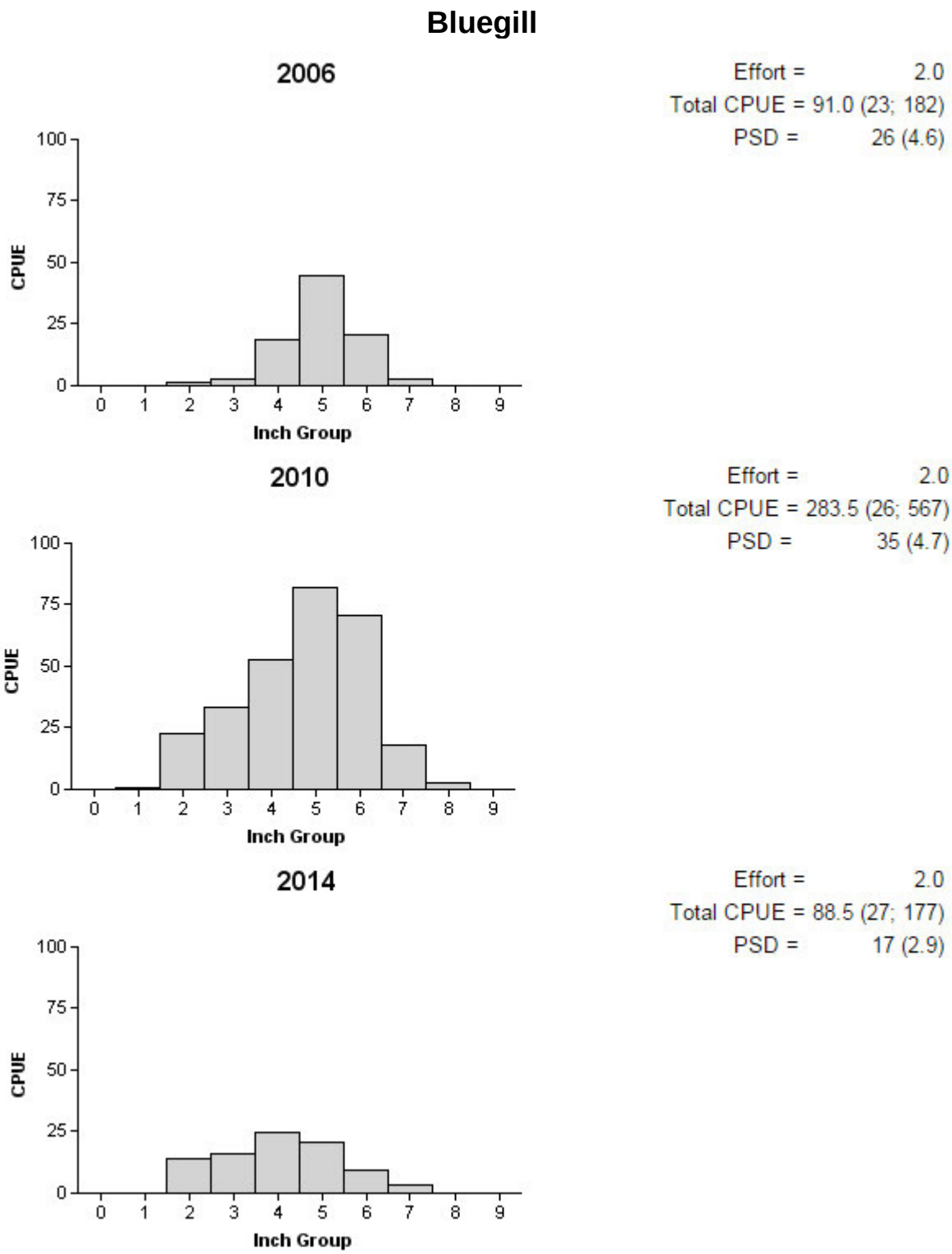

Figure 3. Number of Bluegill caught per hour (CPUE) and population indices (RSE and N for CPUE and SE for size structure are in parentheses) for fall electrofishing surveys, Lavon Reservoir, Texas, 2006, 2010, and 2014.

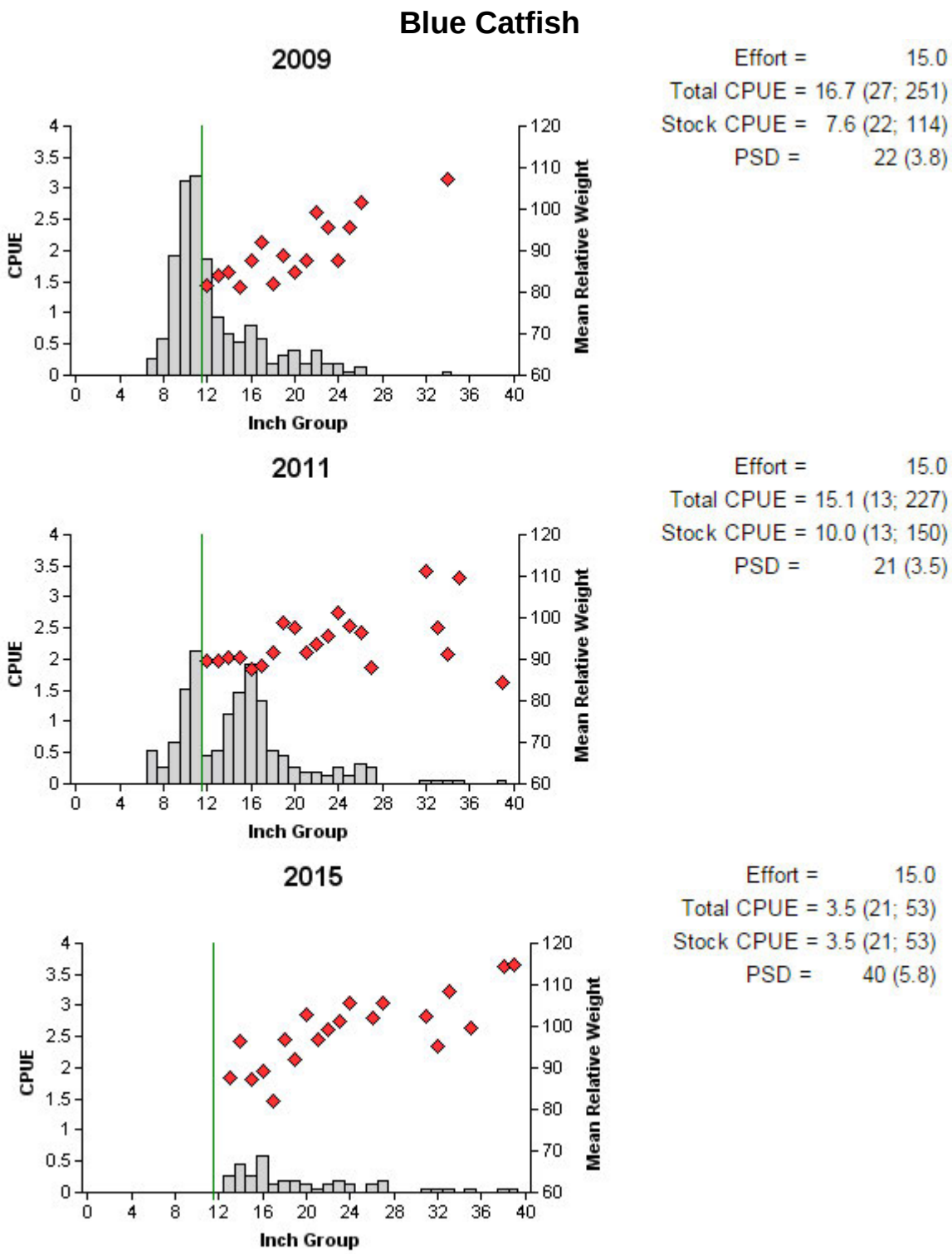

Figure 4. Number of Blue Catfish caught per net night (CPUE, bars), mean relative weight (diamonds), and population indices (RSE and N for CPUE and SE for size structure are in parentheses) for spring gill net surveys, Lavon Reservoir, Texas, 2009, 2011, and 2015. Vertical lines represent length limit at time of collection.

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Channel Catfish

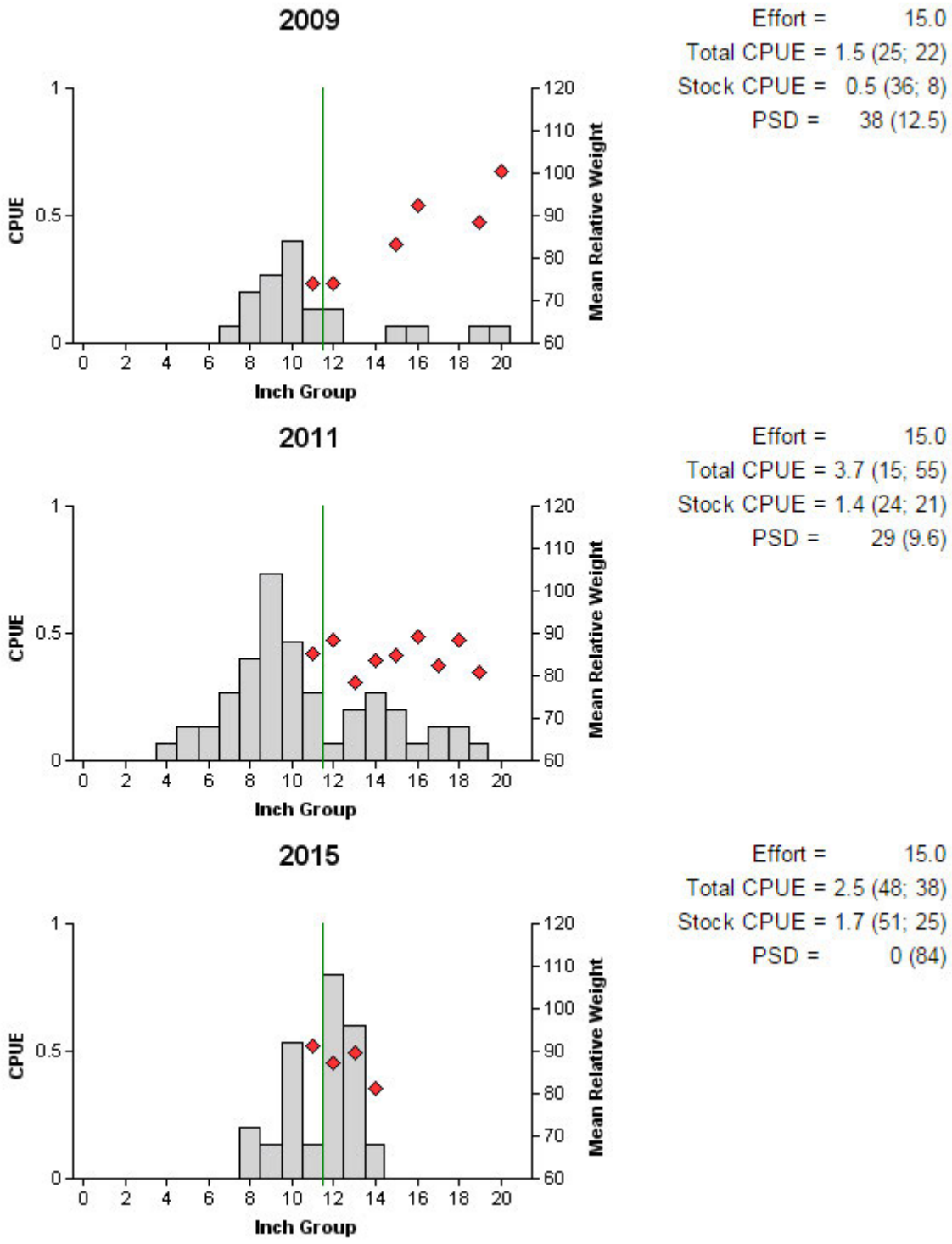


Figure 5. Number of Channel Catfish caught per net night (CPUE, bars), mean relative weight (diamonds), and population indices (RSE and N for CPUE and SE for size structure are in parentheses) for spring gill net surveys, Lavon Reservoir, Texas, 2009, 2011, and 2015. Vertical lines represent length limit at time of collection.

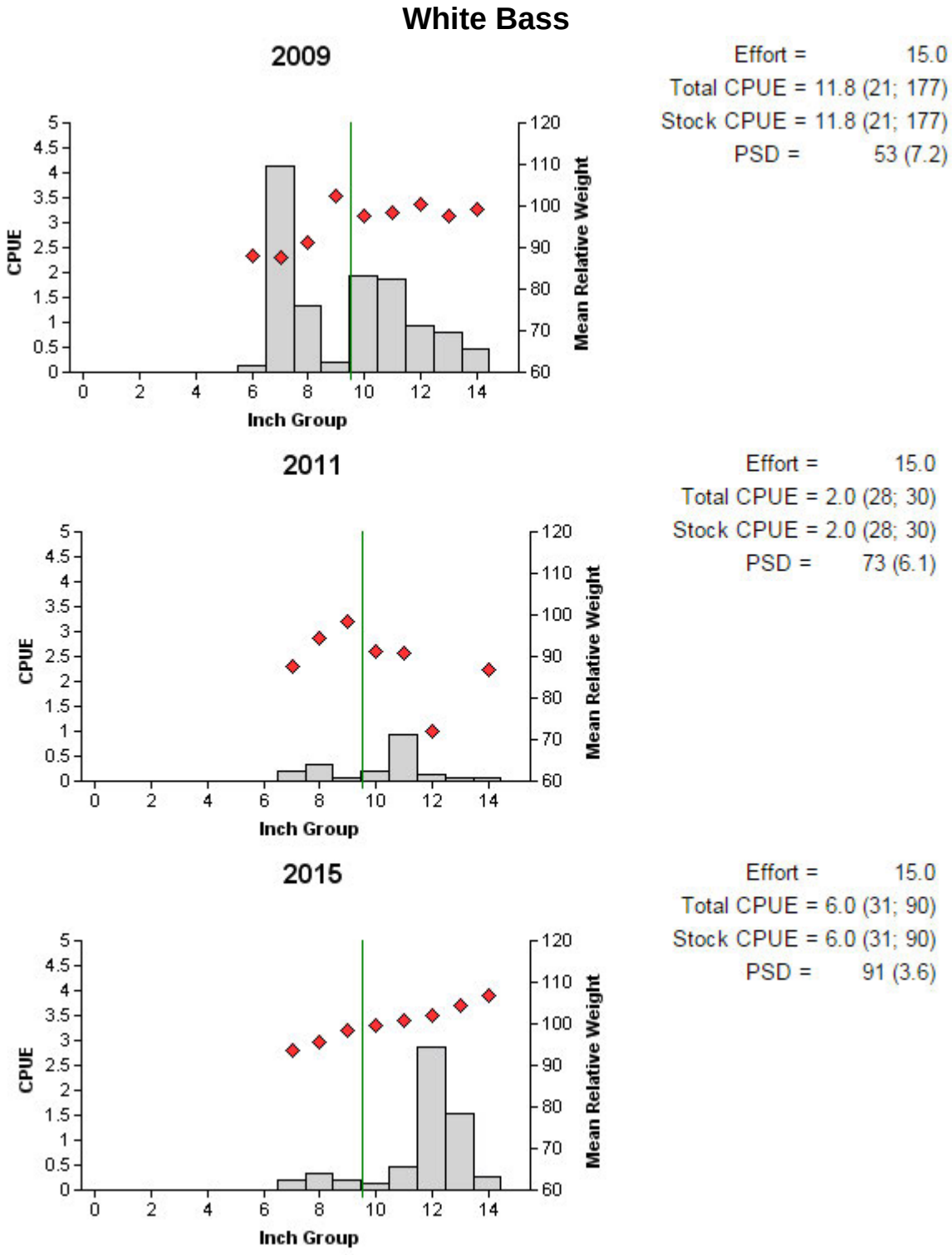


Figure 6. Number of White Bass caught per net night (CPUE, bars), mean relative weight (diamonds), and population indices (RSE and N for CPUE and SE for size structure are in parentheses) for spring gill net surveys, Lavon Reservoir, Texas, 2009, 2011, and 2015. Vertical lines represent length limit at time of collection.

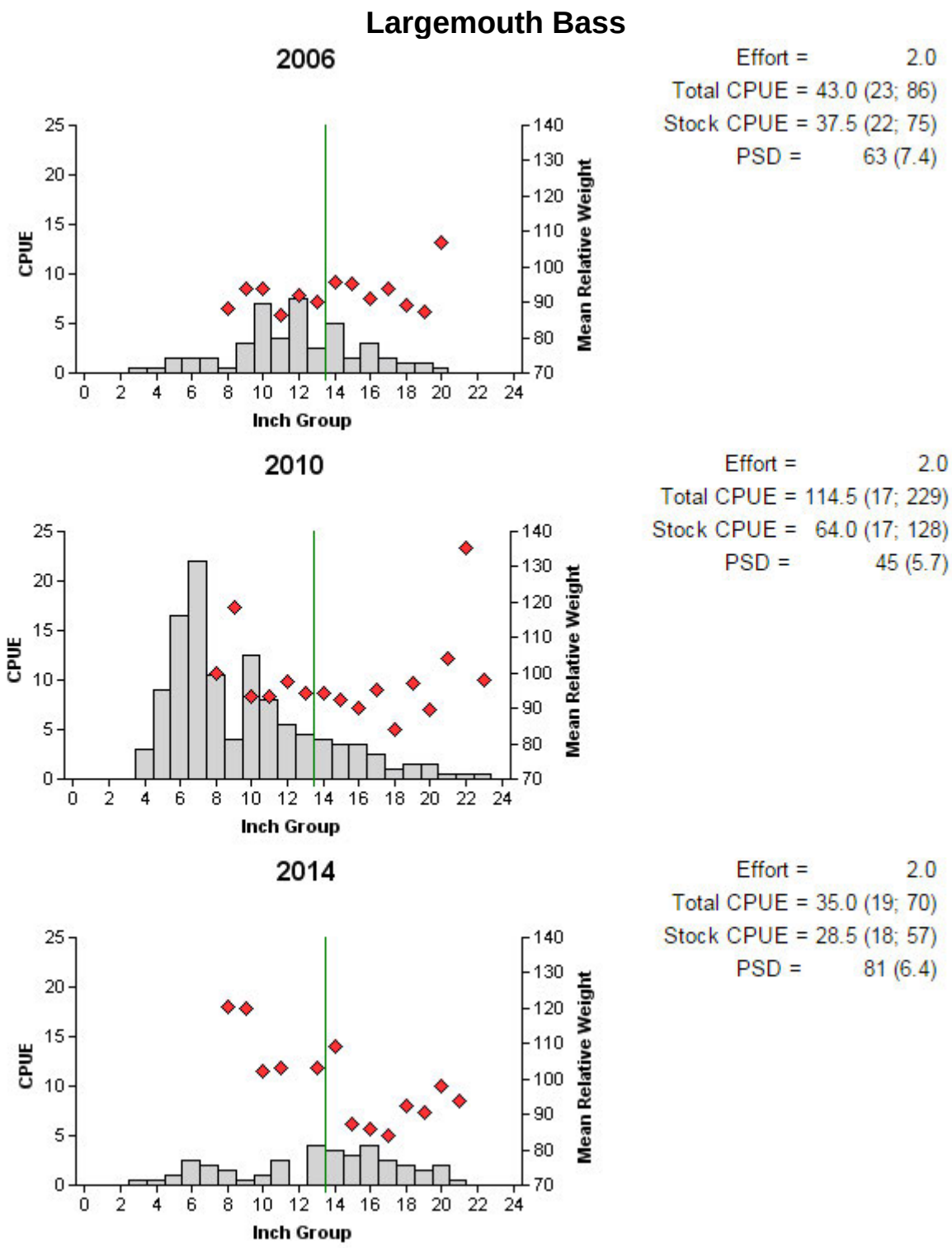


Figure 7. Number of Largemouth Bass caught per hour (CPUE, bars), mean relative weight (diamonds), and population indices (RSE and N for CPUE and SE for size structure are in parentheses) for fall electrofishing surveys, Lavon Reservoir, Texas, 2006, 2010, and 2014. Vertical lines represent length limit at time of collection.

Table 7. Results of genetic analysis of Largemouth Bass collected by fall electrofishing, Lavon Reservoir, Texas, 1990, 1996, 1999, 2002, 2006, and 2014. FLMB = Florida Largemouth Bass, NLMB = Northern Largemouth Bass, Intergrade = hybrid between a FLMB and a NLMB. Genetic composition was determined by electrophoresis prior to 2005 and with micro-satellite DNA analysis since 2005.

		Number of fish				
Year	Sample size	FLMB	Intergrade	NLMB	% FLMB alleles	% FLMB
1990	36	1	6	29	6.9	2.8
1996	40	1	37	2	52.6	2.5
1999	33	1	17	15	23.5	3.0
2002	24	0	7	17	10.4	0.0
2006	30	1	24	5	42.0	3.3
2014	30	2	23	5	39.0	6.7

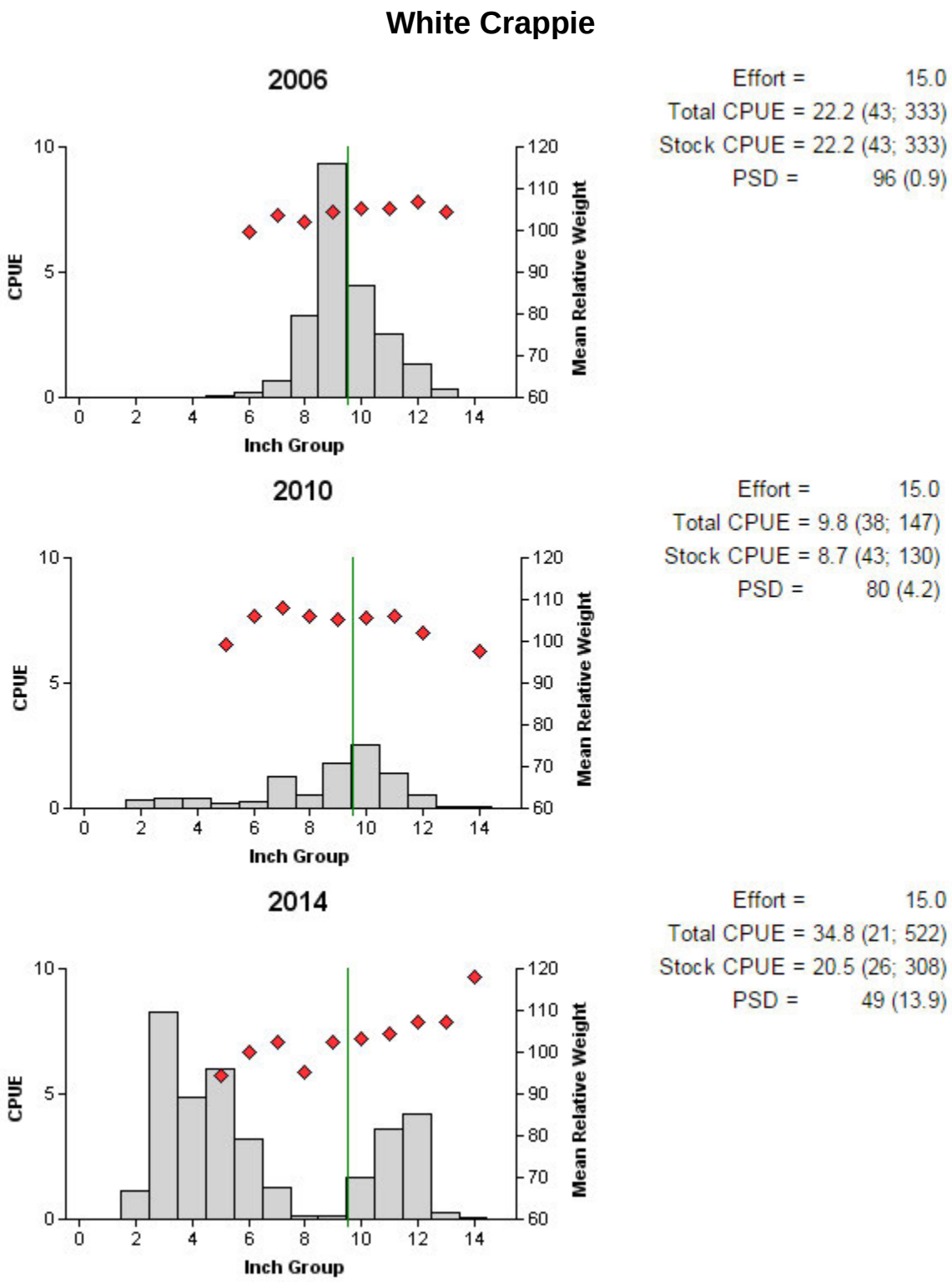


Figure 8. Number of White Crappie caught per net night (CPUE, bars), mean relative weight (diamonds), and population indices (RSE and N for CPUE and SE for size structure are in parentheses) for fall trap netting surveys, Lavon Reservoir, Texas, 2006, 2010, and 2014. Vertical lines represent length limit at time of collection.

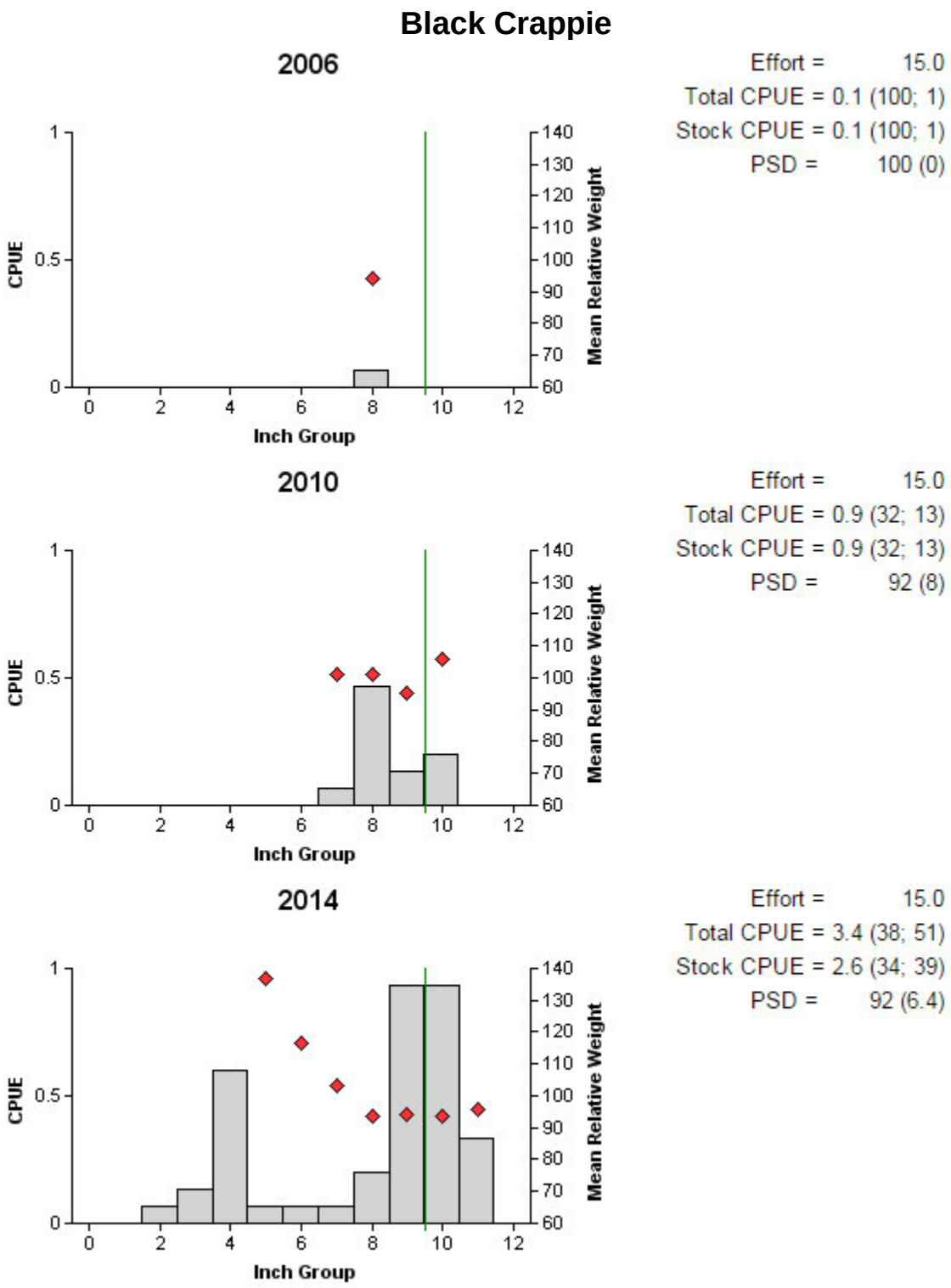


Figure 9. Number of Black Crappie caught per net night (CPUE, bars), mean relative weight (diamonds), and population indices (RSE and N for CPUE and SE for size structure are in parentheses) for fall trap netting surveys, Lavon Reservoir, Texas, 2006, 2010, and 2014. Vertical lines represent length limit at time of collection.

Table 8. Proposed sampling schedule for Lavon Reservoir, Texas. Survey period is June through May. Gill netting surveys are conducted in the spring, while electrofishing and trap netting surveys are conducted in the fall. Standard survey denoted by S.

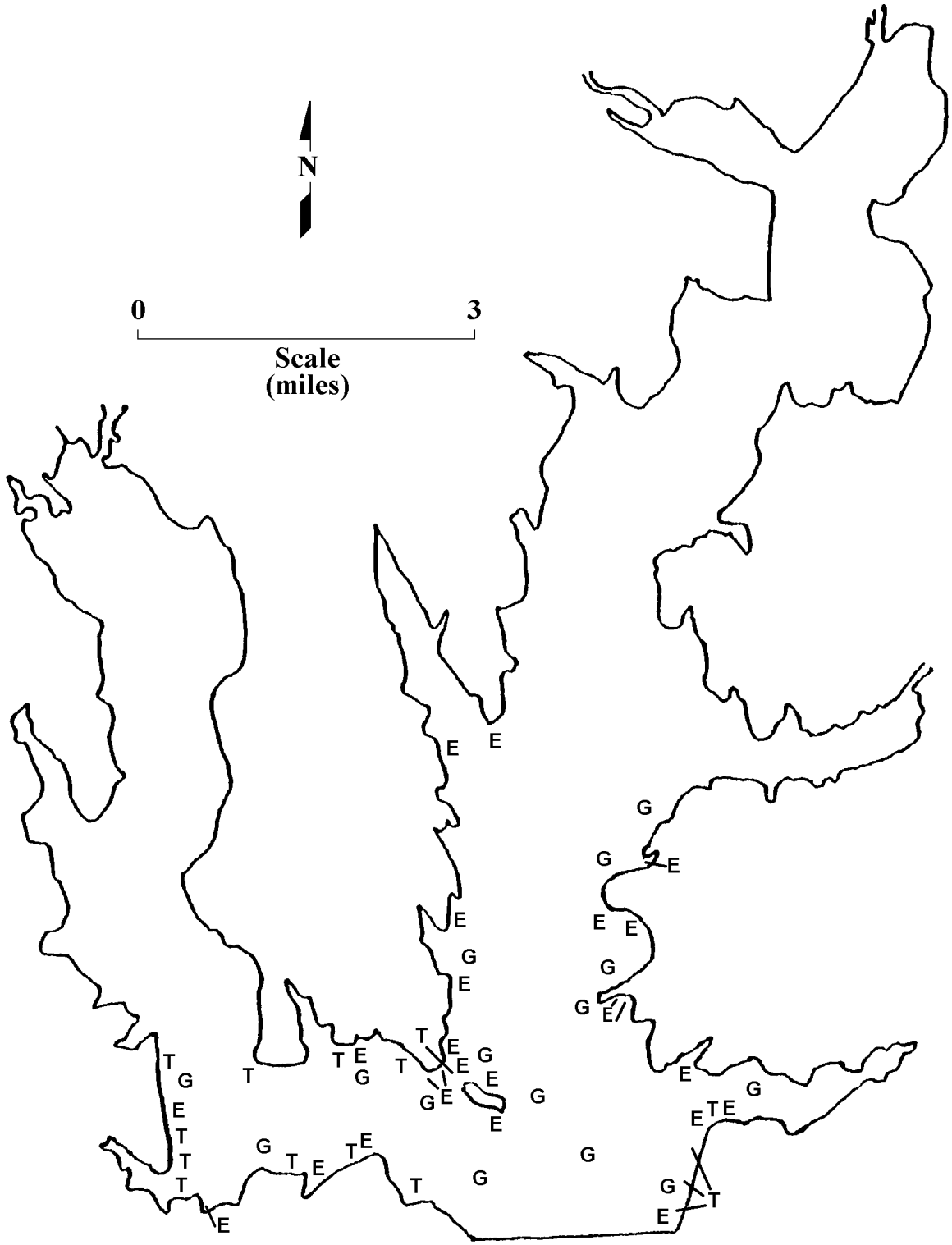
Survey year	Electrofish Fall(Spring)	Trap net	Gill net	Habitat		Access	Creel survey	Report
				Structural	Vegetation			
2015-2016								
2016-2017								
2017-2018								
2018-2019	S	S	S		S	S	S	S

APPENDIX A

Number (N) and catch rate (CPUE) of all target species collected from all gear types from Lavon Reservoir, Texas, 2014-2015. Sampling effort was 15 net nights for gill netting, 15 net nights for trap netting, and 2 hours for electrofishing.

	Gill Netting		Trap Netting		Electrofishing	
Species	N	CPUE	N	CPUE	N	CPUE
Gizzard Shad					811	405.5
Threadfin Shad					28	14.0
Blue Catfish	53	3.5				
Channel Catfish	38	2.5				
White Bass	90	6.0				
Green Sunfish					8	4.0
Warmouth					9	4.5
Orangespotted Sunfish					32	16.0
Bluegill					177	88.5
Longear Sunfish					171	85.5
Largemouth Bass					70	35.0
White Crappie			522	34.8		
Black Crappie			51	3.4		

APPENDIX B



Location of sampling sites, Lavon Reservoir, Texas, 2014-2015. Electrofishing, trap netting, and gill netting stations are indicated by E, T, and G, respectively. Water level was 12.5 feet below conservation for electrofishing, 12.9 feet below during trap netting, and 7.1 feet below during gill netting.

APPENDIX C

Historical catch rates of targeted species by gear type for Lavon Reservoir, Texas, 1996, 1999, 2002, 2006, 2009, 2010, and 2014.

		Year							
Gear	Species	1996[a]	1999	2002[b]	2006[b]	2009	2010[b]	2014[b]	**Avg.**
Gill Netting	Blue catfish	1.1	8.3	14.8	16.7	15.5	15.1	3.5	**10.7**
(fish/net night)	Channel catfish	1.9	2.5	0.9	1.5	1.3	3.7	2.5	**2.0**
	Flathead catfish	0.0	0.0	0.0	0.1	0.0	0.1		**0.0**
	White bass	3.8	3.8	2.5	0.1	11.8	2.0	6.0	**4.3**
	Striped bass	1.3	1.5	0.1	0.1	0.1	0.2		**0.5**
Electrofishing	Gizzard shad	202.5	215.5	209.5	208.0		2450.0	405.5	**527.3**
(fish/hour)	Threadfin shad	120.5	330.0	58.5	832.0		170.5	14.0	**217.9**
	Green sunfish	1.5	4.0	0.0	0.0		6.5	4.0	**2.3**
	Warmouth	0.5	3.0	2.5	8.0		14.5	4.5	**4.7**
	Orangespotted sunfish	0.0	0.0	2.5	0.0		1.0	16.0	**2.3**
	Bluegill	33.0	40.5	79.0	91.0		283.5	88.5	**87.9**
	Longear sunfish	4.0	88.0	66.5	65.5		244.5	85.5	**79.1**
	Redear sunfish	0.0	0.0	0.0	1.0		3.0	0.0	**0.6**
	Largemouth bass	9.0	66.0	18.5	43.0		114.5	35.0	**40.9**
Trap Netting	White Crappie	3.5	17.8	17.5	22.2		9.8	34.8	**15.1**
(fish/net night)	Black Crappie	0.0	0.0	0.0	0.1		0.9	3.4	**0.6**

[a] Trap netting was conducted in January 1997.

[b] Gill netting was conducted in the spring of the following year.

ATTACHMENT TR-10

Existing Entrainment Performance Studies

No studies have been conducted at the Ray Olinger Power Plant or Lake Lavon documenting technology efficacy or through-facility entrainment survival. A literature review was conducted, and no studies were found that are comparable to the Ray Olinger Power Plant or Lake Lavon.

MEMORANDUM

FREESE AND NICHOLS

Innovative approaches
Practical results
Outstanding service

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TO: Applications Review and Processing Team (MC 148)

FROM: Cassie Villarreal, FNI

SUBJECT: Garland Power and Light TPDES Application WQ0001923000

DATE: 8/9/2024

PROJECT: GPL24350

The TCEQ Applications Review and Processing Team contacted the permittee about an application submitted via STEERS on August 8, 2024. Although the application in STEERS is listed as a "new permit," it is a renewal/major amendment for an existing facility (WQ0001923000). TCEQ staff discussed that they would work on making this change internally but suggested we submit a PDF copy to the TCEQ FTP Server with a memo of what was discussed. If needed, we can follow up with hard copies of the application.

Please let me know if you have any questions regarding the application.

Thank you,

Sincerely,

Cassandra Villarreal, M.S.
Freese and Nichols, Inc.
cassandra.villarreal@freese.com
817-735-7294

TEXAS COMMISSION ON ENVIRONMENTAL QUALITY

Protecting Texas by Reducing and Preventing Pollution

August 8, 2024

Dear Applicant:

Re: Confirmation of Submission of the New Industrial Wastewater Individual Permit Application

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

ER Account Number: ER083325
Application Reference Number: 660831
Authorization Number: WQ0005464000
Site Name: Garland Municipal Power - Ray Olinger Plant
Regulated Entity: RN100219203 - GARLAND MUNICIPAL POWER - RAY OLINGER PLANT
Customer(s): CN600328694 - City of Garland

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

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

Sincerely,
Applications Review and Processing Team
Water Quality Division

TEXAS COMMISSION ON ENVIRONMENTAL QUALITY

INDUSTRIAL WASTEWATER PERMIT APPLICATION CHECKLIST

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

APPLICANT NAME: City of Garland

PERMIT NUMBER (If new, leave blank): WQ00 0001923000

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

	Y	N		Y	N
Administrative Report 1.0	☒	☐	Worksheet 8.0	☐	☒
Administrative Report 1.1	☐	☒	Worksheet 9.0	☐	☒
SPIF	☒	☐	Worksheet 10.0	☐	☒
Core Data Form	☒	☐	Worksheet 11.0	☒	☐
Public Involvement Plan Form	☒	☐	Worksheet 11.1	☒	☐
Plain Language Summary	☒	☐	Worksheet 11.2	☒	☐
Technical Report 1.0	☒	☐	Worksheet 11.3	☒	☐
Worksheet 1.0	☒	☐	Original USGS Map	☒	☐
Worksheet 2.0	☒	☐	Affected Landowners Map	☒	☐
Worksheet 3.0	☐	☒	Landowner Disk or Labels	☒	☐
Worksheet 3.1	☐	☒	Flow Diagram	☒	☐
Worksheet 3.2	☐	☒	Site Drawing	☐	☒
Worksheet 3.3	☐	☒	Original Photographs	☒	☐
Worksheet 4.0	☒	☐	Design Calculations	☐	☒
Worksheet 4.1	☐	☒	Solids Management Plan	☐	☒
Worksheet 5.0	☐	☒	Water Balance	☒	☐
Worksheet 6.0	☒	☐			
Worksheet 7.0	☒	☐			

For TCEQ Use Only

Segment Number _____County _____
Expiration Date _____Region _____
Permit Number _____

TEXAS COMMISSION ON ENVIRONMENTAL QUALITY

INDUSTRIAL WASTEWATER PERMIT APPLICATION ADMINISTRATIVE REPORT 1.0

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

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

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

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

Applicant Name: City of Garland

Permit No.: WQ0001923000

EPA ID No.: TX0001848

Expiration Date: February 5, 2025

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

☒ Industrial Wastewater (wastewater and stormwater)

☐ Industrial Stormwater (stormwater only)

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

☒ Active ☐ Inactive

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

☒ TPDES Permit ☐ TLAP ☐ TPDES with TLAP component

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

☐ New

☐ Renewal with changes ☐ Renewal without changes

☒ Major amendment with renewal ☐ Major amendment without renewal

☐ Minor amendment without renewal

☐ Minor modification without renewal

f. If applying for an amendment or modification, describe the request: N/A

For TCEQ Use Only

Segment Number _____County _____
Expiration Date _____Region _____
Permit Number _____

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

g. Application Fee

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

h. Payment Information

Mailed

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

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

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

Epay

Voucher number: Click to enter text.

Copy of voucher attachment: Click to enter text.

Item 2. Applicant Information (Instructions, Pages 26)

a. Customer Number, if applicant is an existing customer: CN600328694

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

b. Legal name of the entity (applicant) applying for this permit: City of Garland

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

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

Prefix: Mr. Full Name (Last/First Name): Cline, Darrell

Title: General Manager & CEO Credential: N/A

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

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

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

☒ Yes ☐ No

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

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

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

a. Legal name of the entity (co-applicant) applying for this permit: N/A

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

b. Customer Number (if applicant is an existing customer): CNN/A

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

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

Prefix: N/A Full Name (Last/First Name): N/A

Title: N/A Credential: N/A

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

☐ Yes ☐ No

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

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

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

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

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

a. ☒ Administrative Contact ☒ Technical Contact

Prefix: Mr. Full Name (Last/First Name): Burr, Michael

Title: Environmental Manager Credential: N/A

Organization Name: Garland Power & Light

Mailing Address: 13835 County Road 489 City/State/Zip: Nevada, Texas, 75173

Phone No: 972-485-6453 Email: mburr@gpltexas.org

b. ☒ Administrative Contact ☒ Technical Contact

Prefix: Mrs. Full Name (Last/First Name): Leatherwood, Katie

Title: Environmental Scientist Credential: P.G.

Organization Name: Freese and Nichols, Inc

Mailing Address: 801 Cherry Street, Suite 2800 City/State/Zip: Fort Worth, TX 76102

Phone No: 817-735-7503 Email: katie.leatherwood@freese.com

Attachment: N/A

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

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

a. Prefix: Mr. Full Name (Last/First Name): Bernard, David

Title: Production Manager Credential: N/A

Organization Name: Garland Power & Light

Mailing Address: 13835 Country Road 489 City/State/Zip: Nevada, TX 75173

Phone No: 972-205-3831 Email: dbernard@gpltexas.org

b. Prefix: Mr. Full Name (Last/First Name): Burr, Michael

Title: Environmental Manager Credential: N/A

Organization Name: Garland Power & Light

Mailing Address: 13835 Country Road 489 City/State/Zip: Nevada, TX 75173

Phone No: 972-485-6458 Email: mburr@gpltexas.org

Attachment: N/A

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

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

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

Prefix: Mr. Full Name (Last/First Name): Bernard, David

Title: Production Manager Credential: N/A

Organization Name: Garland Power & Light

Mailing Address: 13835 Country Road 489 City/State/Zip: Nevada, TX 75173

Phone No: 972-205-3831 Email: dbernard@gpltexas.org

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

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

Prefix: Mr. Full Name (Last/First Name): Bernard, David

Title: Production Manager Credential: N/A

Organization Name: Garland Power & Light

Mailing Address: 13835 Country Road 489 City/State/Zip: Nevada, TX 75173

Phone No: 972-205-3831 Email: dbernard@gpltexas.org

Item 9. Notice Information (Instructions, Pages 28)

a. Individual Publishing the Notices

Prefix: Mr. Full Name (Last/First Name): Bernard, David

Title: Production Manager Credential: N/A

Organization Name: Garland Power & Light

Mailing Address: 13835 Country Road 489 City/State/Zip: Nevada, TX 75173

Phone No: 972-205-3831 Email: dbernard@gpltexas.org

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

☒ E-mail: mburr@gpltexas.org; dbernard@gpltexas.org; katie.leatherwood@freese.com;

☐ Fax: Click to enter text.

☐ Regular Mail (USPS)

Mailing Address: Click to enter text.

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

c. Contact in the Notice

Prefix: Mr. Full Name (Last/First Name): Bernard, David

Title: Production Manager Credential: N/A

Organization Name: Garland Power & Light

Phone No: 972-205-3831 Email: dbernard@gpltexas.org

d. Public Viewing Location Information

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

Public building name: Wylie Municipal Complex Location within the building: Office of City Secretary

Physical Address of Building: 300 Country Club Road, Building 100

City: Wylie County: Collin

e. Bilingual Notice Requirements

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

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

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

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

☒ Yes ☐ No

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

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

   ☒ Yes ☐ No

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

   ☐ Yes ☒ No

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

   ☐ Yes ☐ No ☒ N/A

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

f. Plain Language Summary Template – Complete the Plain Language Summary (TCEQ Form 20972) and include as an attachment. Attachment: AR-2

g. Complete one Public Involvement Plan (PIP) Form (TCEQ Form 20960) for each application for a new permit or major amendment and include as an attachment. Attachment: AR-3

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

a. TCEQ issued Regulated Entity Number (RN), if available: RN100219203

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

b. Name of project or site (the name known by the community where located): Garland Municipal Power – Ray Olinger Plant

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

☒ Yes ☐ No ☐ N/A (new permit)

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

d. Owner of treatment facility:

Prefix: N/A Full Name (Last/First Name): N/A

or Organization Name: City of Garland

Mailing Address: 13835 Country Road 489 City/State/Zip: Nevada, TX 75173

Phone No: 972-205-2650 Email: Click to enter text.

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

f. Owner of land where treatment facility is or will be: N/A

Prefix: N/A Full Name (Last/First Name): N/A

or Organization Name: City of Garland

Mailing Address: 13835 Country Road 489 City/State/Zip: Nevada, TX 75173

Phone No: 972-205-2650 Email: dbernard@gpltexas.org

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

g. Owner of effluent TLAP disposal site (if applicable): N/A

Prefix: N/A Full Name (Last/First Name): N/A

or Organization Name: N/A

Mailing Address: N/A City/State/Zip: N/A

Phone No: N/A Email: N/A

Note: If not the same as the facility owner, attach a long-term lease agreement in effect for at least six years. Attachment: N/A

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

Prefix: N/A Full Name (Last/First Name): N/A

or Organization Name: N/A

Mailing Address: N/A City/State/Zip: N/A

Phone No: N/A Email: N/A

Note: If not the same as the facility owner, attach a long-term lease agreement in effect for at least six years. Attachment: N/A

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

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

☐ Yes ☒ No

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

☒ One-mile radius

☒ Applicant's property boundaries

☒ Labeled point(s) of discharge

☐ Effluent disposal site boundaries

☐ Sewage sludge disposal site

☒ Three-miles downstream information

☒ Treatment facility boundaries

☒ Highlighted discharge route(s)

☒ All wastewater ponds

☐ New and future construction

Attachment: AR-4

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

☐ Yes ☐ No or New Permit N/A

If no, or a new application, provide an accurate location description: N/A

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

☒ Yes ☐ No or New Permit

If no, or a new application, provide an accurate location description: N/A

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

☒ Yes ☐ No or New Permit

If no, or a new permit, provide an accurate description of the discharge route: N/A

f. City nearest the outfall(s): Nevada

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

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

☐ Yes ☒ No

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

For new and amendment applications, attach copies of letters that show proof of contact and provide the approval letter upon receipt. Attachment: N/A

For all applications involving an average daily discharge of 5 MGD or more, provide the names of all counties located within 100 statute miles downstream of the point(s) of discharge: N/A

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

☐ Yes No or New Permit ☐ N/A

If no, or a new application, provide an accurate location description: N/A

j. City nearest the disposal site: N/A

k. County in which the disposal site is located: N/A

l. For TLAPs, describe how effluent is/will be routed from the treatment facility to the disposal site: N/A

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

Item 12. Miscellaneous Information (Instructions, Page 33)

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

☐ Yes ☒ No

If yes, list each person: N/A

b. Do you owe any fees to the TCEQ?

☐ Yes ☒ No

If yes, provide the following information:

Account no.: N/A

Total amount due: N/A

c. Do you owe any penalties to the TCEQ?

☐ Yes ☒ No

If yes, provide the following information:

Enforcement order no.: N/A

Amount due: N/A

INDUSTRIAL WASTEWATER PERMIT APPLICATION ADMINISTRATIVE REPORT 1.1

The following information is required for new and amendment applications.

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

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

☒ The applicant's property boundaries.

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

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

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

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

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

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

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

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

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

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

Attachment: AR-5

b. Check the box next to the format of the landowners list:

☐ Readable/Writeable CD ☒ Four sets of labels

Attachment: AR-5

d. Provide the source of the landowners' names and mailing addresses: Collin County CAD

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

☐ Yes ☒ No

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

Item 2. Original Photographs (Instructions, Page 37)

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

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

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

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

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

Attachment: AR-6

INDUSTRIAL WASTEWATER PERMIT APPLICATION

SUPPLEMENTAL PERMIT INFORMATION FORM (SPIF)

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

Attachment: SPIF-1 (SPIF Form), SPIF-2 (SPIF Topo Map)

INDUSTRIAL WASTEWATER PERMIT APPLICATION CHECKLIST OF COMMON DEFICIENCIES

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

☒ Core Data Form (TCEQ Form No. 10400)
(Required for all applications types. Must be completed in its entirety and signed. Note: Form may be signed by applicant representative.)

☒ Correct and Current Industrial Wastewater Permit Application Forms
(TCEQ Form Nos. 10055 and 10411. Version dated 5/10/2019 or later.)

☒ Water Quality Permit Payment Submittal Form (Page 14) EPAY
(Original payment sent to TCEQ Revenue Section. See instructions for mailing address.)

☒ 7.5 Minute USGS Quadrangle Topographic Map Attached
(Full-size map if seeking "New" permit. 8 ½ x 11 acceptable for Renewals and Amendments.)

☒ N/A ☐ Current/Non-Expired, Executed Lease Agreement or Easement Attached

☐ N/A ☒ Landowners Map
(See instructions for landowner requirements.)

Things to Know:

- All the items shown on the map must be labeled.
- The applicant's complete property boundaries must be delineated which includes boundaries of contiguous property owned by the applicant.
- The applicant cannot be its own adjacent landowner. You must identify the landowners immediately adjacent to their property, regardless of how far they are from the actual facility.
- If the applicant's property is adjacent to a road, creek, or stream, the landowners on the opposite side must be identified. Although the properties are not adjacent to applicant's property boundary, they are considered potentially affected landowners. If the adjacent road is a divided highway as identified on the USGS topographic map, the applicant does not have to identify the landowners on the opposite side of the highway.

☐ N/A ☒ Landowners Cross Reference List
(See instructions for landowner requirements.)

☐ N/A ☒ Landowners Labels or CD-RW attached
(See instructions for landowner requirements.)

☒ Original signature per 30 TAC § 305.44 – Blue Ink Preferred
(If signature page is not signed by an elected official or principle executive officer, a copy of signature authority/delegation letter must be attached.)

☒ Plain Language Summary

TEXAS COMMISSION ON ENVIRONMENTAL QUALITY

INDUSTRIAL WASTEWATER PERMIT APPLICATION TECHNICAL REPORT 1.0

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

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

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

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

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

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

Steam Electric Power Plant (SIC Code 4911 – Electric Services)

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

The Ray Olinger Plant burns natural gas to produce steam used to drive turbine generators producing electric power. It also has one combustion gas turbine for power peaking. Exhaust steam is condensed in non-contact heat exchangers using lake water as the cooling media. Boiler blowdown and demineralized wastewater goes to evaporation ponds with zero discharge.

[1] 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
Natural Gas	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: TR-1

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: FEMA Floodplain Map No. 48085C0430J

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.

Sodium hyperchlorate is used at the intake to control algae in the circulating water used for condenser cooling. Ammonium bisulfate is used for dichlorination at the outlet of the condenser to limit the total residual chlorine to less than 0.1 mg/L when the water exits the outfall into the lake.

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: TR-2

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)	E	E	E	E
Associated Outfall Number				
Liner Type (C) (I) (S) or (A)	C	C	C	S
Alt. Liner Attachment Reference				
Leak Detection System, Y/N				
Groundwater Monitoring Wells, Y/N				
Groundwater Monitoring Data Attachment				
Pond Bottom Located Above The Seasonal High-Water Table, Y/N				
Length (ft)	200	100	384	400
Width (ft)	184	90	274	321
Max Depth From Water Surface (ft), Not Including Freeboard	3	3	3	6
Freeboard (ft)	2	2	2	2
Surface Area (acres)	0.85	0.20	2.42	2.95
Storage Capacity (gallons)	1,376,416	336,623	3,935,352	5,762,992
40 CFR Part 257, Subpart D, Y/N				
Date of Construction				

Attachment: N/A

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/0r numbered accordingly (i.e., page 6a, 6b, etc.) may be used to provide information on the additional outfalls.

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

Outfall Longitude and Latitude

Outfall No.	Latitude (Decimal Degrees)	Longitude (Decimal Degrees)
001	33.068508	-96.454209

Outfall Location Description

Outfall No.	Location Description
001	Lake Lavon
Internal 101	Near water treatment units (to be removed)
Internal 102	Surrounding and near ROP1,2, and 3

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

Outfall No.	Description of sampling point
001	Outfall location (33.068508, -96.454209

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	404	404			
Internal 101	Report	Report			

Outfall Discharge – Method and Measurement

Outfall No.	Pumped Discharge? Y/N	Gravity Discharge? Y/N	Type of Flow Measurement Device Used
001	Y	N	Meter
Internal 101	Y	N	Est.
Internal 102	N	Y	Est.

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	N	Y	N	24	31	12
Internal 101	Y	N	N	Variable	Variable	Variable

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)
Internal 102	Y	N	N	Variable	Variable	Variable

Outfall Wastestream Contributions

Outfall No. 001

Contributing Wastestream	Volume (MGD)	Percent (%) of Total Flow
ROP3 Condenser and Plant Service Water	86.903	59
ROP1 & ROP2 Condensers and Plant Service Water	61.198	41
Internal Outfall 101 – Filter Backwash and RO Reject	0.052	0
Internal Outfall 102 – Stormwater Run-off (gravity, seasonal)	0.014	0
Total	**148.167**	**100**

Outfall No. Internal 101 (to be removed)

Contributing Wastestream	Volume (MGD)	Percent (%) of Total Flow
Prefilter Backwash	0.03	0
RO Reject	0.022	0

Outfall No. Internal 102

Contributing Wastestream	Volume (MGD)	Percent (%) of Total Flow
Stormwater	0.014	0

Attachment: N/A

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: TR-3

c. Cooling Towers and Boilers

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

Cooling Towers and Boilers

Type of Unit	Number of Units	Daily Avg Blowdown (gallons/day)	Daily Max Blowdown (gallons/day)
Cooling Towers			
Boilers	3	34,022	48,916

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: The ROPP facility has a current MSGP authorization (TXR05AX97). The exposed materials include diesel and gasoline storage, used oil, and sodium hypochlorite associated with the industrial process.

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.**
AAA Septic Tank Service, Inc	TCEQ 24027
Nortex Septic Service	TCEQ 25282

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:** N/A

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

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

☐ Yes ☒ No

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

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

b. Attach the following information to the application:

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

Attachment: 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)
N/A	

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

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

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

CWIS ID	Unit 1	Unit 2	Unit 3	
Owner	GP&L	GP&L	GP&L	
Operator	GP&L	GP&L	GP&L	

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. 0430044

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: Click to enter text.

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

   ☒ Yes ☐ No

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

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

   ☐ Yes ☒ No

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

   ☐ Track I – Fixed facility

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

   ☐ Track I – Not a fixed facility

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

   ☐ Track II – Fixed facility

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

   Attachment: Click to enter text.

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

This item is only applicable to existing permitted facilities.

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

☒ Yes ☐ No

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

GP&L is requesting to remove internal Outfall 101 from the permit to eliminate separate sampling frequency from Outfall 001.

Other Requirement No. 12 (Evaporation Ponds) of the current permit lists that Pond No. 1 and No.3 can accept Meatal Cleaning Waste (MCW). However, the Draft Permit Rationale, Technology-Based Effluent Limitations/Conditions, states, "boiler blowdown, demineralized wastewater, and metal cleaning waste are routed to four evaporation ponds with zero discharge." GP&L would like to inquire about listing all four evaporation ponds to accept MCW.

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

☐ Yes ☒ No

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

N/A - renewal

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

☐ Yes ☒ No

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

N/A - renewal

INDUSTRIAL WASTEWATER PERMIT APPLICATION WORKSHEET 1.0: EPA CATEGORICAL EFFLUENT GUIDELINES

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

Item 1. Categorical Industries (Instructions, Page 53)

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

☒ Yes ☐ No

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

40 CFR Effluent Guideline

Industry	40 CFR Part
Steam Electric Power Generating	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
Once-through cooling water	404 Max (varies daily)	404	MGD

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.

Process: Once-through cooling water and low-volume waste

Non-Process: Stormwater runoff from the site

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
Once-through cooling water	423	12	1975
Low volume waste	423	12	2011

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): 7/8/24 – 7/24/24

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:** TR-4

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

Attach correspondence from TCEQ approving submittal of less than the required number of samples, if applicable. **Attachment:** N/A

TABLE 1 and TABLE 2 (Instructions, Page 58)

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

Table 1 for Outfall No.: 001 **Samples are (check one):** ☐ **Composite** ☒ **Grab**

Pollutant	**Sample 1 (mg/L) 7/6/24**	**Sample 2 (mg/L) 7/8/24**	**Sample 3 (mg/L) 7/16/24**	**Sample 4 (mg/L) 7/24/24**
BOD (5-day)	1.67	1.39	2.53	Lab
CBOD (5-day)	1.75	1.44	2.52	Results
Chemical oxygen demand	25.4	19.0	22.2	Pending
Total organic carbon	11.5	11.2	5.34	
Dissolved oxygen	8.77	10.2	7.77	
Ammonia nitrogen	<0.0280	<0.0280	<0.0280	
Total suspended solids	5.93	6.20	<2.65	
Nitrate nitrogen	<0.0480	<0.0480	<0.0480	
Total organic nitrogen	1.03	0.343	0.478	
Total phosphorus	0.101	0.0443	0.0442	
Oil and grease	0.780	<0.35	<0.35	

Pollutant	Sample 1 (mg/L) 7/6/24	Sample 2 (mg/L) 7/8/24	Sample 3 (mg/L) 7/16/24	Sample 4 (mg/L) 7/24/24
Total residual chlorine	0.033	0.108	0.0420	
Total dissolved solids	184	159	219	
Sulfate	27.1	23.3	27.3	
Chloride	15.4	14.4	16.1	
Fluoride	0.177	0.172	0.243	
Total alkalinity (mg/L as CaCO3)	110	120	110	
Temperature (˚F)	86.45	83.9	86.05	84.3
pH (standard units)	8.21	7.83	8.35	

Table 2 for Outfall No.: 001 **Samples are (check one): ☐ Composite ☒ Grab**

Pollutant	Sample 1 (µg/L)	Sample 2 (µg/L)	Sample 3 (µg/L)	Sample 4 (µg/L)	MAL (µg/L)
Aluminum, total	98.4	115	167	Lab	2.5
Antimony, total	<5	<5	<5	Results	5
Arsenic, total	4.8	5.18	5.28	Pending	0.5
Barium, total	39.3	65.9	34.1		3
Beryllium, total	<0.5	<0.5	<0.5		0.5
Cadmium, total	<1	<1	<1		1
Chromium, total	<3	<3	<3		3
Chromium, hexavalent	<3	<3	<3		3
Chromium, trivalent	<3	<3	<3		N/A
Copper, total	6.18	6.09	2.57		2
Cyanide, available	<2	<2	<2		2/10
Lead, total	<0.5	<0.5	<0.5		0.5
Mercury, total	0.078	<0.0005	0.045		0.005/0.0005
Nickel, total	<2	<2	<2		2
Selenium, total	<5	<0.5	<0.5		5
Silver, total	<0.5	<0.5	<0.5		0.5
Thallium, total	<0.5	<0.5	0.894		0.5
Zinc, total	6.02	<5.0	<5.0		5.0

TABLE 3 (Instructions, Page 58)

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

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

Table 3 for Outfall No.: 001 **Samples are (check one): ☐ Composite ☒ Grab**

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

Pollutant	Sample 1 (µg/L)*	Sample 2 (µg/L)*	Sample 3 (µg/L)*	Sample 4 (µg/L)*	MAL (µg/L)*
1,1-Dichloroethene [1,1-Dichloroethylene]	<10	<10	<10		10
Dichloromethane [Methylene chloride]	<20	<20	<20		20
1,2-Dichloropropane	<10	<10	<10		10
1,3-Dichloropropene [1,3-Dichloropropylene]	<10	<10	<10		10
2,4-Dimethylphenol	<10	<10	<10		10
Di-n-Butyl phthalate	<10	<10	<10		10
Ethylbenzene	<10	<10	<10		10
Fluoride	<500	<500	<500		500
Hexachlorobenzene	<5	<5	<5		5
Hexachlorobutadiene	<10	<10	<10		10
Hexachlorocyclopentadiene	<10	<10	<10		10
Hexachloroethane	<20	<20	<20		20
Methyl ethyl ketone	<50	<50	<50		50
Nitrobenzene	<10	<10	<10		10
N-Nitrosodiethylamine	<20	<20	<20		20
N-Nitroso-di-n-butylamine	<20	<20	<20		20
Nonylphenol	<333	<333	<333		333
Pentachlorobenzene	<20	<20	<20		20
Pentachlorophenol	<5	<5	<5		5
Phenanthrene	<10	<10	<10		10
Polychlorinated biphenyls (PCBs) (**)	<0.2	<0.2	<0.2		0.2
Pyridine	<20	<20	<20		20
1,2,4,5-Tetrachlorobenzene	<20	<20	<20		20
1,1,2,2-Tetrachloroethane	<10	<10	<10		10
Tetrachloroethene [Tetrachloroethylene]	<10	<10	<10		10
Toluene	<10	<10	<10		10
1,1,1-Trichloroethane	<10	<10	<10		10
1,1,2-Trichloroethane	<10	<10	<10		10
Trichloroethene [Trichloroethylene]	<10	<10	<10		10

Pollutant	Sample 1 (µg/L)*	Sample 2 (µg/L)*	Sample 3 (µg/L)*	Sample 4 (µg/L)*	MAL (µg/L)*
2,4,5-Trichlorophenol	<50	<50	<50		50
TTHM (Total trihalomethanes)	<10	<10	<10		10
Vinyl chloride	<10	<10	<10		10

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

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

TABLE 4 (Instructions, Pages 58-59)

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

a. **Tributyltin**

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

☐ Yes ☒ No

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

☐ Manufacturers and formulators of tributyltin or related compounds.

☐ Painting of ships, boats and marine structures.

☐ Ship and boat building and repairing.

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

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

☐ Facilities engaged in wood preserving.

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

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

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

☐ Yes ☒ No

Domestic wastewater is/will be discharged.

☐ Yes ☒ No

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

c. E. coli (discharge to freshwater)

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

☐ Yes ☒ No

Domestic wastewater is/will be discharged.

☐ Yes ☒ No

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

Table 4 for Outfall No.: 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
E. coli (cfu or MPN/100 mL)					N/A

TABLE 5 (Instructions, Page 59)

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

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

☒ N/A

Table 5 for Outfall No.: 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
Diuron					0.090

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

* Indicate units if different from µg/L.

TABLE 6 (Instructions, Page 59)

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

Table 6 for Outfall No.: 001 **Samples are (check one): ☐ Composite ☒ Grab**

Pollutants	Believed Present	Believed Absent	Sample 1 (mg/L)	Sample 2 (mg/L)	Sample 3 (mg/L)	Sample 4 (mg/L)	MAL (µg/L)*
Bromide	☐	☒	<400	<400	<400		400
Color (PCU)	☐	☒	20.0	20.0	20.0		—
Nitrate-Nitrite (as N)	☐	☒	<0.048	<0.048	0.21		—
Sulfide (as S)	☐	☒	<0.023	<0.023	<0.023		—
Sulfite (as SO3)	☐	☒	<1.19	<1.19	<1.19		—
Surfactants	☐	☒	<0.36	<0.36	<0.36		—
Boron, total	☐	☒	0.0707	0.0759	0.0702		20
Cobalt, total	☐	☒	0.00021	0.000199	0.00305		0.3
Iron, total	☒	☐	0.0935	0.119	0.0153		7
Magnesium, total	☒	☐	3.62	3.78	3.92		20
Manganese, total	☒	☐	0.0324	0.135	0.0439		0.5
Molybdenum, total	☐	☒	0.000963	0.00103	0.00174		1
Tin, total	☐	☒	<5	<5	<5		5
Titanium, total	☐	☒	<30	<30	<30		30

TABLE 7 (Instructions, Page 60)

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

☐ N/A

Table 7 for Applicable Industrial Categories

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

* Test if believed present.

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

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

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

Table 8 for Outfall No.: 001 **Samples are (check one): ☐ Composite ☒ Grab**

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

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

* Indicate units if different from µg/L.

Table 9 for Outfall No.: 001 **Samples are (check one): ☐ Composite ☒ Grab**

Pollutant	Sample 1 (µg/L)*	Sample 2 (µg/L)*	Sample 3 (µg/L)*	Sample 4 (µg/L)*	MAL (µg/L)
2-Chlorophenol	<10	<10	<10	Lab	10
2,4-Dichlorophenol	<10	<10	<10	Results	10
2,4-Dimethylphenol	<10	<10	<10	Pending	10
4,6-Dinitro-o-cresol	<50	<50	<50		50
2,4-Dinitrophenol	<50	<50	<50		50
2-Nitrophenol	<20	<20	<20		20
4-Nitrophenol	<50	<50	<50		50
p-Chloro-m-cresol	<10	<10	<10		10
Pentachlorophenol	<5	<5	<5		5
Phenol	<10	<10	<10		10
2,4,6-Trichlorophenol	<10	<10	<10		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
Benzo(k)fluoranthene					5
Bis(2-chloroethoxy)methane					10

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

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

* Indicate units if different from µg/L.

Table 11 for Outfall No.: 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
PCB 1232					0.2
PCB 1248					0.2

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

* Indicate units if different from µg/L.

Attachment: 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 (Ronnel) CASRN 299-84-3
- ☐ 2,4,5-trichlorophenol (TCP) CASRN 95-95-4
- ☐ hexachlorophene (HCP) CASRN 70-30-4
- ☐ None of the above

Description: 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: Click to enter text.

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

Table 12 for Outfall No.: Click to enter text. **Samples are (check one):** ☐ **Composite** ☐ **Grab**

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

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

TABLE 13 (HAZARDOUS SUBSTANCES)

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

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

☐ Yes ☒ No

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

☐ Yes ☒ No

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

Table 13 for Outfall No.: 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

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: North Texas Municipal Water District

2. The distance and direction from the outfall to the drinking water supply intake: 2.86 miles southwest

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: N/A 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: Click to enter text.

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

☐ Yes ☐ No

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

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

Date and time of observation: Click to enter text.

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

☐ Yes ☐ No

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

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

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

☐ oil field activities
☒ urban runoff
☐ agricultural runoff
☐ septic tanks
☒ upstream discharges
☐ other, specify: Click to enter text.

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

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

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

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

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

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

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

INDUSTRIAL WASTEWATER PERMIT APPLICATION WORKSHEET 6.0: INDUSTRIAL WASTE CONTRIBUTION

The following information **is required** for all applications for publicly-owned treatment works (POTWs).

For an explanation of the terms used in this worksheet, refer to the General Definitions on pages 4-12 and the Definitions Relating to Pretreatment on pages 13-14 of the Instructions.

Item 1. All POTWs (Instructions, Page 86)

a. Complete the following table with the number of each type of industrial users (IUs) that discharge to the POTW and the daily average flows from each.

Industrial User Information

Type of Industrial User	Number of Industrial Users	Daily Average Flow (gallons per day)
CIU	0 (zero)	0
SIU – Non-categorical	0 (zero)	0
Other IU	0 (zero)	0

b. In the past three years, has the POTW experienced treatment plant interference?

☐ Yes ☒ No

If **yes**, identify the date(s), duration, nature of interference, and probable cause(s) and possible source(s) of each interference event. Include the names of the IU(s) that may have caused the interference: N/A

c. In the past three years, has the POTW experienced pass-through?

☐ Yes ☒ No

If **yes**, identify the date(s), duration, pollutants passing through the treatment plant, and probable cause(s) and possible source(s) of each pass-through event. Include the names of the IU(s) that may have caused the pass-through: N/A

d. Does the POTW have, or is it required to develop, an approved pretreatment program?

☐ Yes ☒ No

If **yes**, answer all questions in Item 2 and skip Item 3.

If **no**, skip Item 2 and answer all questions in Item 3 for each SIU and CIU.

Item 2. POTWs With Approved Pretreatment Programs or Those Required To Develop A Pretreatment Program (Instructions, Page 86)

a. Have there been any substantial modifications to the POTW's approved pretreatment program that have not been submitted to the Approval Authority (TCEQ) for approval according to *40 CFR § 403.18*?

☐ Yes ☐ No

If **yes**, include an attachment which identifies all substantial modifications that have not been submitted to the TCEQ and the purpose of the modifications.

Attachment: N/A

b. Have there been any non-substantial modifications to the POTW's approved pretreatment program that have not been submitted to the Approval Authority (TCEQ)?

☐ Yes ☐ No

If **yes**, include an attachment which identifies all non-substantial modifications that have not been submitted to the TCEQ and the purpose of the modification.

Attachment: N/A

c. List all parameters measured above the MAL in the POTW's effluent monitoring during the last three years:

Effluent Parameters Measured Above the MAL

Pollutant	Concentration	MAL	Units	Date

Attachment: N/A

d. Has any SIU, CIU, or other IU caused or contributed to any other problems (excluding interference or pass-through) at the POTW in the past three years?

☐ Yes ☐ No

If **yes**, provide a description of each episode, including date(s), duration, description of problems, and probable pollutants. Include the name(s) of the SIU(s)/CIU(s)/other IU(s) that may have caused or contributed to any of the problems: Click to enter text.

Item 3. Significant Industrial User and Categorical Industrial User Information (Instructions, Pages 88-87)

POTWs that **do not** have an approved pretreatment program **are required** to provide the following information for each SIU and CIU:

a. Mr. or Ms.: N/A First/Last Name: N/A

Organization Name: N/A SIC Code: N/A

Phone number: N/A Email address: N/A

Physical Address: N/A City/State/ZIP Code: N/A

Attachment: N/A

b. Describe the industrial processes or other activities that affect or contribute to the SIU(s) or CIU(s) discharge (e.g., process and non-process wastewater): N/A

c. Provide a description of the principal products(s) or service(s) performed: N/A

d. Flow rate information

Flow Rate Information

Effluent Type	Discharge Day (gallons per day)	Discharge Frequency (Continuous, batch, or intermittent)
Process Wastewater		
Non-process Wastewater		

e. Pretreatment Standards

1. Is the SIU or CIU subject to technology-based local limits as defined in the application instructions?

   ☐ Yes ☐ No

2. Is the SIU subject to categorical pretreatment standards?

   ☐ Yes ☐ No

   If **yes**, provide the category and subcategory or subcategories in the SIUs Subject To Categorical Pretreatment Standards table.

SIUs Subject to Categorical Pretreatment Standards

Category in 40 CFR	Subcategory in 40 CFR	Subcategory in 40 CFR	Subcategory in 40 CFR	Subcategory in 40 CFR

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

   ☐ Yes ☐ No

   If **yes**, provide a description of each episode, including dates, duration, description of problems, and probable pollutants, and include the name(s) of the SIU(s)/CIU(s) that may have caused or contributed to the problem(s): N/A

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

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

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

Item 1. Applicability (Instructions, Page 89)

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

☐ Yes ☒ No

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

Item 2. Stormwater Coverage (Instructions, Page 89)

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

Authorization Coverage

Outfall	Authorization under MSGP	Authorized Under Individual Permit
	☐	☐
	☐	☐
	☐	☐
	☐	☐
	☐	☐
	☐	☐
	☐	☐
	☐	☐

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

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

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

Item 3. Site Map (Instructions, Page 90)

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

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

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

Attachment: N/A

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

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

Impervious Surfaces

Outfall	Area of Impervious Surface (include units)	Total Area Drained (include units)

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

Wettest month: N/A

Average rainfall for wettest month (total inches): N/A

25-year, 24-hour rainfall (inches): N/A

Source: N/A

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

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

e. Describe any BMPs and controls the facility uses/proposes to prevent or effectively reduce pollution in stormwater discharges from the facility: N/A

Item 5. Pollutant Analysis (Instructions, Page 91)

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

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

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

Table 17 for Outfall No.: N/A

Pollutant	Grab Sample* Maximum (mg/L)	Composite Sample** Maximum (mg/L)	Grab Sample* Average (mg/L)	Composite Sample** Average (mg/L)	Number of Storm Events Sampled	MAL (mg/L)
pH (standard units)	(max)	—	(min)	—		—
Total suspended solids						—
Chemical oxygen demand						—
Total organic carbon						—
Oil and grease						—
Arsenic, total						0.0005
Barium, total						0.003
Cadmium, total						0.001
Chromium, total						0.003
Chromium, trivalent						—
Chromium, hexavalent						0.003
Copper, total						0.002

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

* Taken during first 30 minutes of storm event

** Flow-weighted composite sample

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

Table 18 for Outfall No.: N/A

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

* Taken during first 30 minutes of storm event

** Flow-weighted composite sample

Attachment: N/A

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

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

Date of storm event: N/A

Duration of storm event (minutes): N/A

Total rainfall during storm event (inches): N/A

Number of hours the between beginning of the storm measured and the end of the previous measurable storm event (hours): N/A

Maximum flow rate during rain event (gallons/minute): N/A

Total stormwater flow from rain event (gallons): N/A

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

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	357 MGD
Total AIF	147.13 MGD
Intake Flow Use(s) (%)	
Contact cooling	0.01
Non-contact cooling	99.9
Process Wastewater	0
Other	0

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: TR-5

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	**Primary (Once-through)**	**Make-up (none)**		
DIF (include units)	357 MGD	N/A		
AIF (include units)	148.1722	N/A		
Intake Flow Use(s) (%)				
Contact cooling	0.01	N/A		
Non-contact cooling	99.9	N/A		
Process Wastewater	0	N/A		
Other	0	N/A		
Latitude (decimal degrees)	33.065381	N/A		
Longitude (decimal degrees)	96.453139	N/A		

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: TR-6

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	**Primary (Once-through)**			
Source Waterbody	Lake Lavon			
Mean Annual Flow	Surface area: 20,559 acres Storage capacity:			

CWIS ID	Primary (Once-through)			
Source Waterbody	Lake Lavon			
	409,360 acre-feet Watershed size: 770 square miles			
Source	Texas Water Development Board			

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: TR-7

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: TR-8

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: N/A

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: Primary

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: N/A

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				

- 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				

- 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: TR-5 (Table 4)

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: TR-5 (Item 6)

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: TR-8

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: Lake Lavon

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: TR-9

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: N/A

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: Primary

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: TR-10

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

a. Attach an entrainment characterization study, as described at *40 CFR § 122.21(r)(9)*: N/A

b. Attach a comprehensive feasibility study, as described as *40 CFR § 122.21(r)(10)*: N/A

c. Attach a benefits valuation study, as described as *40 CFR § 122.21(r)(11)*: N/A

d. Attach a non-water quality environmental and other impacts study, as described as *40 CFR § 122.21(r)(12)*: N/A

e. Attach a peer review analysis, as described as *40 CFR § 122.21(r)(13)*: N/A

ATTACHMENT AR-1

Core Data Form

TCEQ Use Only

TCEQ Core Data Form

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

SECTION I: General Information

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

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

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

2. Customer Reference Number *(if issued)*	Follow this link to search for CN or RN numbers in Central Registry**	3. Regulated Entity Reference Number *(if issued)*
CN 600130140		RN 100219203

SECTION II: Customer Information

4. General Customer Information	5. Effective Date for Customer Information Updates (mm/dd/yyyy)	7/31/2024

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

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

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

City of Garland Power & Light

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

11. Type of Customer:

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

12. Number of Employees

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

13. Independently Owned and Operated?

☒ **Yes** ☐ **No**

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

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

15. Mailing Address:

13835 County Rd. 489

City	Nevada	State	TX	ZIP	75173	ZIP + 4	

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

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

(972) 205-2650		( ) -

SECTION III: Regulated Entity Information

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

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

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

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

Garland Municipal Power - Ray Olinger Plant

23. Street Address of the Regulated Entity: ***(No PO Boxes)***	13835 County Rd. 489							
	City	Nevada	**State**	TX	**ZIP**	75173	**ZIP + 4**	
24. County	Collin							

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

25. Description to Physical Location:					
26. Nearest City			**State**		**Nearest ZIP Code**
Nevada			TX		75173

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

27. Latitude (N) In Decimal:	33.068056		**28. Longitude (W) In Decimal:**	-96.452500	
Degrees	Minutes	Seconds	Degrees	Minutes	Seconds
33	04	05	-96	27	09

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

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

Electric Power Plant

34. Mailing Address:	**13835 County Rd.**							
	City	**Nevada**	**State**	**TX**	**ZIP**	**75173**	**ZIP + 4**	
35. E-Mail Address:	**MBurr@gpltexas.org**							

36. Telephone Number	**37. Extension or Code**	**38. Fax Number** *(if applicable)*
(972) 205-2650		( ) -

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

☐ Dam Safety	☐ Districts	☐ Edwards Aquifer	☒ Emissions Inventory Air	☒ Industrial Hazardous Waste
			CP0026M	TXP490355593
☐ Municipal Solid Waste	☒ New Source Review Air	☐ OSSF	☒ Petroleum Storage Tank	☐ PWS
	PSDTX935		59661	
☐ Sludge	☒ Storm Water	☐ Title V Air	☐ Tires	☐ Used Oil
	TXR05AX97			
☐ Voluntary Cleanup	☒ Wastewater	☐ Wastewater Agriculture	☐ Water Rights	☐ Other:
	WQ0001923000			

SECTION IV: Preparer Information

40. Name:	Cassandra Villarreal	**41. Title:**	Environmental Scientist
42. Telephone Number	**43. Ext./Code**	**44. Fax Number**	**45. E-Mail Address**
(817) 735-7294		(817) 735-7492	cassandra.villarreal@freese.com

SECTION V: Authorized Signature

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

Company:	Freese and Nichols, Inc.	**Job Title:**	Environmental Scientist
Name *(In Print):*	Katie Leatherwood	**Phone:**	(817) 735- **7503**
Signature:		**Date:**	

ATTACHMENT AR-2

Plain Language Summary

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.

The City of Garland (CN600328694), operates the Garland Municipal Power - Ray Olinger Power Plant (RN100219203), a natural gas steam electric generating facility. The facility is located at 13835 County Road 489, in Nevada, Collin County, Texas 75173.

This application is for a renewal and amendment to discharge of once-through cooling water from Units 1, 2, and 3 and stormwater at a daily average flow not to exceed 404,000,000 gallons per day via Outfall 001. This amendment is to remove Internal Outfall 101.

Discharges from the facility are expected to contain chlorine. Additional pollutants are included in Worksheet 2.0 of the permit application package. Industrial wastewater is treated by using sodium hyperchlorate at the intake for algae control, and the circulating water is used for condenser cooling. Ammonia bisulfate is used for dechlorination at the condenser outlet to limit the chlorine residual.

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.

La ciudad de Garland (CN600328694) opera la planta eléctrica Garland Municipal Power - Ray Olinger (RN100219203), una instalación de generación de electricidad a vapor con gas natural. La instalación está ubicada en 13835 County Road 489, en Nevada, Condado de Collin, Texas 75173.

Esta solicitud es para una renovación y enmienda a la descarga de agua de enfriamiento de un solo paso de las Unidades 1, 2 y 3 y aguas pluviales con un flujo promedio diario que no exceda los 404,000,000 galones por día a través del Emisario 001. Esta enmienda es para eliminar el Emisario Interno 101.

Se espera que las descargas de la instalación contengan cloro. Se incluyen contaminantes adicionales en la Hoja de trabajo 2.0 del paquete de solicitud de permiso. Las aguas residuales industriales se tratan utilizando hiperclorato de sodio en la entrada para controlar las algas y el agua en circulación se utiliza para enfriar el condensador. El bisulfato de amoníaco se utiliza para la dicloración en la salida del condensador para limitar el cloro residual.

INSTRUCTIONS

1. Enter the name of applicant in this section. The applicant name should match the name associated with the customer number.
2. Enter the Customer Number in this section. Each Individual or Organization is issued a unique 11-digit identification number called a CN (e.g. CN123456789).
3. Choose “operates” in this section for existing facility applications or choose “proposes to operate” for new facility applications.
4. Enter the name of the facility in this section. The facility name should match the name associated with the regulated entity number.
5. Enter the Regulated Entity number in this section. Each site location is issued a unique 11-digit identification number called an RN (e.g. RN123456789).
6. Choose the appropriate article (a or an) to complete the sentence.
7. Enter a description of the facility in this section. For example: steam electric generating facility, nitrogenous fertilizer manufacturing facility, etc.
8. Choose “is” for an existing facility or “will be” for a new facility.
9. Enter the location of the facility in this section.
10. Enter the City nearest the facility in this section.

11. Enter the County nearest the facility in this section.
12. Enter the zip code for the facility address in this section.
13. Enter a summary of the application request in this section. For example: renewal to discharge 25,000 gallons per day of treated domestic wastewater, new application to discharge process wastewater and stormwater on an intermittent and flow-variable basis, or major amendment to reduce monitoring frequency for pH, etc. If more than one outfall is included in the application, provide applicable information for each individual outfall.
14. List all pollutants expected in the discharge from this facility in this section. If applicable, refer to the pollutants from any federal numeric effluent limitations that apply to your facility.
15. Enter the discharge types from your facility in this section (e.g., stormwater, process wastewater, once through cooling water, etc.)
16. Choose the appropriate verb tense to complete the sentence.
17. Enter a description of the wastewater treatment used at your facility. Include a description of each process, starting with initial treatment and finishing with the outfall/point of disposal. Use additional lines for individual discharge types if necessary.

Questions or comments concerning this form may be directed to the Water Quality Division's Application Review and Processing Team by email at WQ-ARPTeam@tceq.texas.gov or by phone at (512) 239-4671.

ATTACHMENT AR-3

Public Involvement Plan

Texas Commission on Environmental Quality

Public Involvement Plan Form for Permit and Registration Applications

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

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

Section 1. Preliminary Screening

☐ New Permit or Registration Application

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

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

Section 2. Secondary Screening

☒ Requires public notice,

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

☒ Located within any of the following geographical locations:

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

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

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

This permit has not had significant public interest in the last permit cycles. Therefore, the remaining sections of the form are not applicable.

Section 3. Application Information

Type of Application (check all that apply):

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

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

Water Quality

☐ Texas Pollutant Discharge Elimination System (TPDES)

- ☐ Texas Land Application Permit (TLAP)
- ☐ State Only Concentrated Animal Feeding Operation (CAFO)
- ☐ Water Treatment Plant Residuals Disposal Permit

☐ Class B Biosolids Land Application Permit

☐ Domestic Septage Land Application Registration

Water Rights New Permit

☐ New Appropriation of Water

☐ New or existing reservoir

Amendment to an Existing Water Right

☐ Add a New Appropriation of Water

☐ Add a New or Existing Reservoir

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

Section 4. Plain Language Summary

Provide a brief description of planned activities.

N/A

Section 5. Community and Demographic Information

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

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

(City)

(County)

(Census Tract)
Please indicate which of these three is the level used for gathering the following information.

☐ City ☐ County ☐ Census Tract

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

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

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

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

(e) Languages commonly spoken in area by percentage

(f) Community and/or Stakeholder Groups

(g) Historic public interest or involvement

Section 6. Planned Public Outreach Activities

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

☐ Yes ☐ No

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

☐ Yes ☐ No

If Yes, please describe.

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

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

☐ Yes ☐ No

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

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

☐ Publish in alternative language newspaper

☐ Posted on Commissioner's Integrated Database Website

☐ Mailed by TCEQ's Office of the Chief Clerk

☐ Other (specify)

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

☐ Yes ☐ No

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

☐ Yes ☐ No

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

☐ TCEQ Regional Office ☐ TCEQ Central Office

☐ Public Place (specify)

Section 7. Voluntary Submittal

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

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

☐ Yes ☐ No

What types of notice will be provided?

☐ Publish in alternative language newspaper

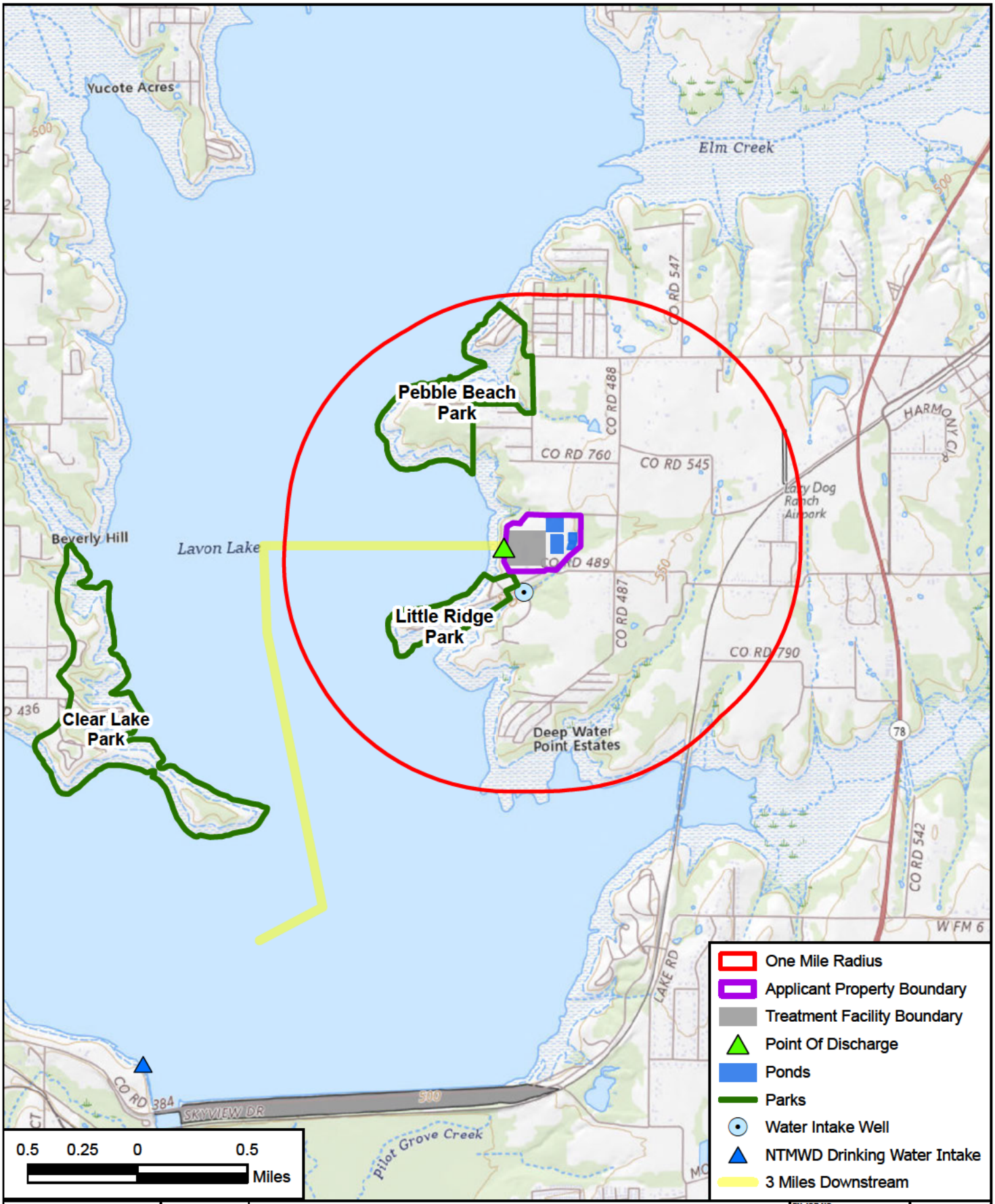
☐ Posted on Commissioner's Integrated Database Website

☐ Mailed by TCEQ's Office of the Chief Clerk

☐ Other (specify)

ATTACHMENT AR-4

USGS Topographic Map



FREESE AND NICHOLS, INC
801 Cherry Street, Suite 2800
Fort Worth, TX 76102
Phone - (817) 735 - 7300

City of Garland

Ray Olinger TPDES Permit Renewal

USGS 7.5 Minute Quadrangle

FN JOB NO	GPL24350
FILE NAME	GP&L TPDES Renewal.mxd
DATE	8/1/2024
SCALE	1:37,500
DESIGNED	CLV
DRAFTED	08245

1

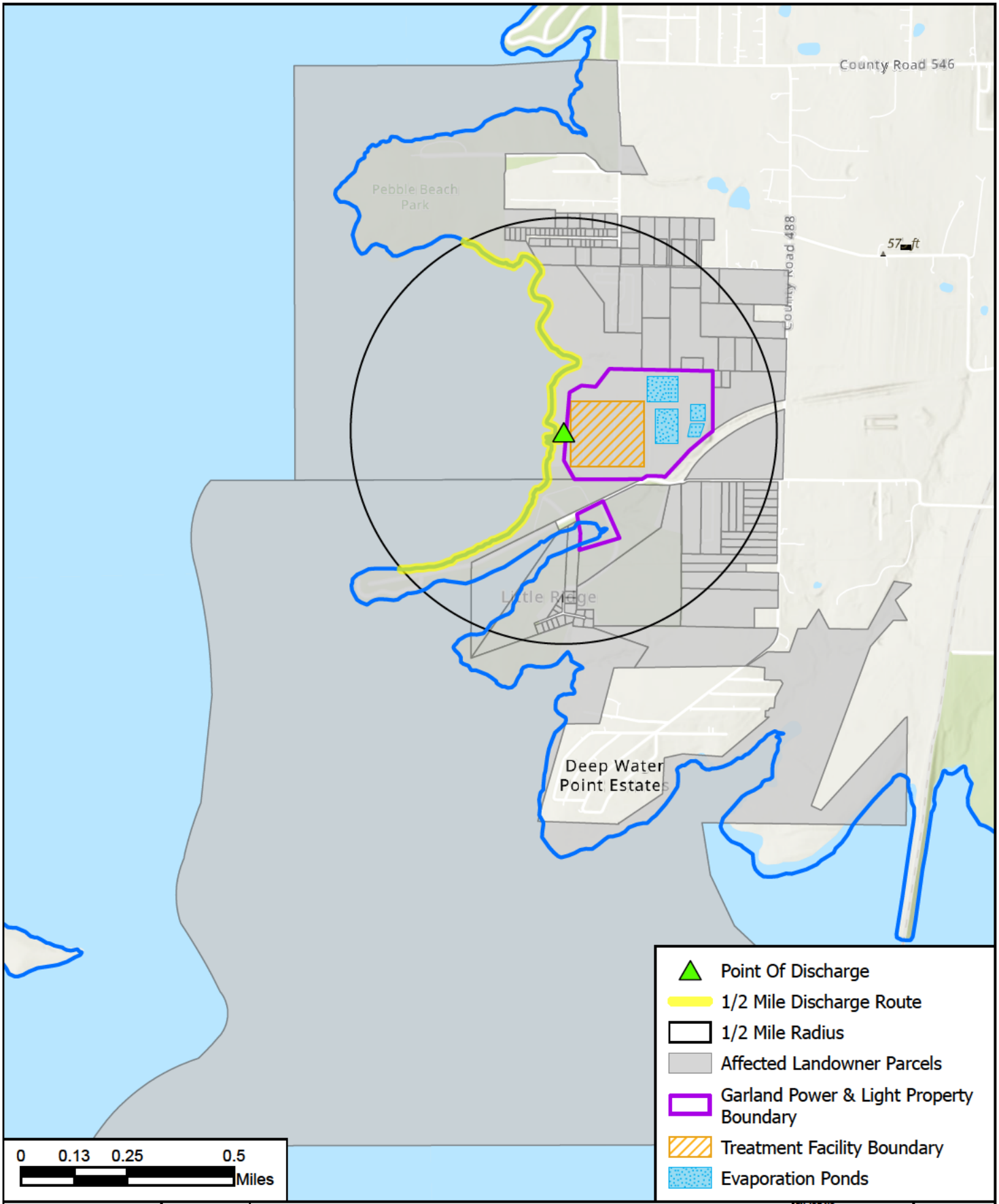
FIGURE

Path: H:\ENVIRONMENTAL\Working\GP&L TPDES Renewal\GP&L TPDES Renewal.aprx

NAD 1983 StatePlane Texas South Central FIPS 4204 Feet

ATTACHMENT AR-5

Affected Landowners



FREESE AND NICHOLS
FREESE AND NICHOLS, INC
801 Cherry Street, Suite 2800
Fort Worth, TX 76102
Phone - (817) 735 - 7300

City of Garland

Ray Olinger Power Plant

Affected Landowners

FN JOB NO	GPL24350
FILE NAME	GP&L TPDES Renewal.mxd
DATE	7/16/2024
SCALE	1:9,399
DESIGNED	CLV
DRAFTED	08245

3a

FIGURE

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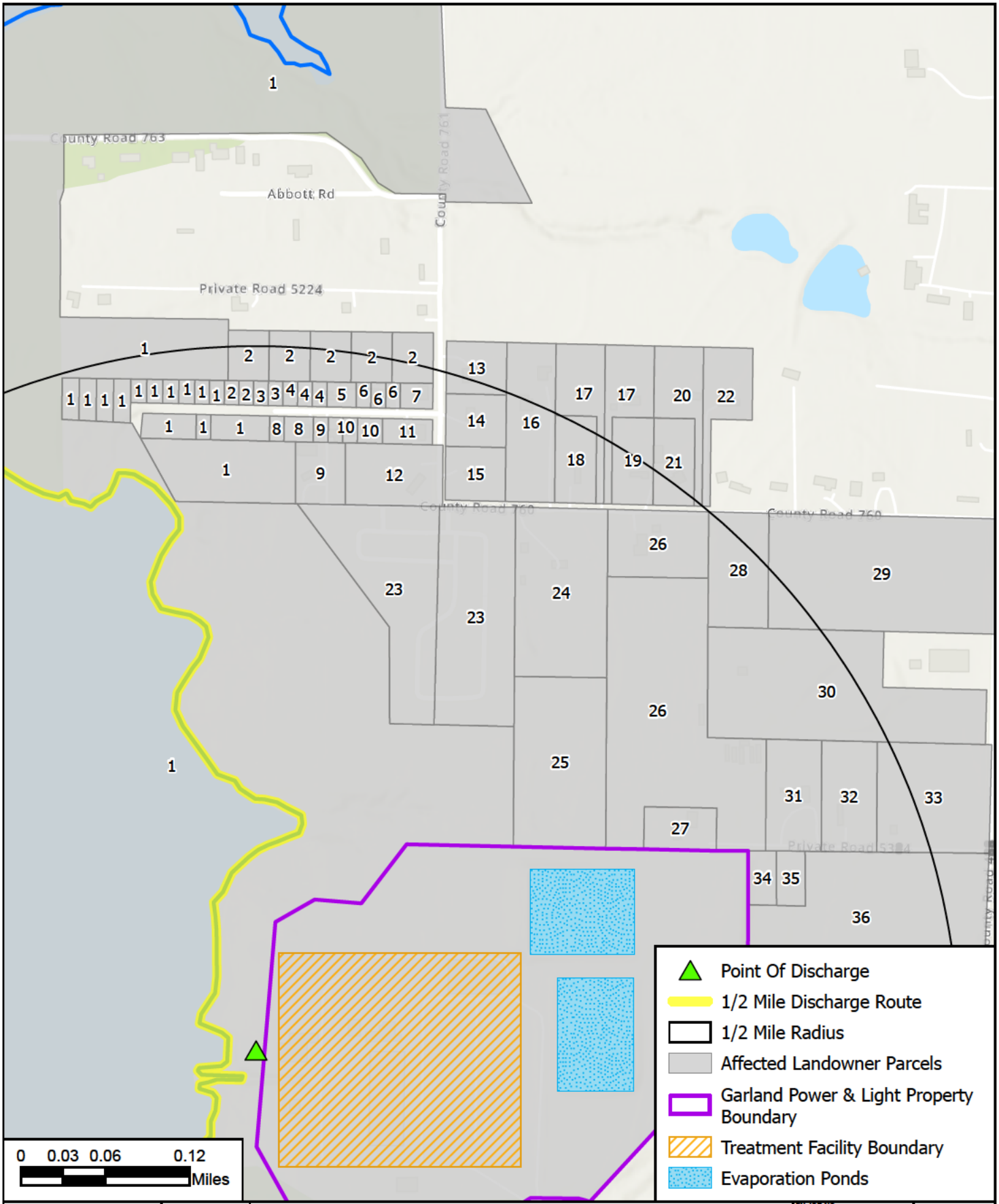

FREESE AND NICHOLS, INC
801 Cherry Street, Suite 2800
Fort Worth, TX 76102
Phone - (817) 735 - 7300

City of Garland

Ray Olinger Power Plant

Affected Landowners

FN JOB NO	GPL24350
FILE NAME	GP&L TPDES Renewal.mxd
DATE	7/16/2024
SCALE	1:9,186
DESIGNED	CLV
DRAFTED	08245

3b

FIGURE

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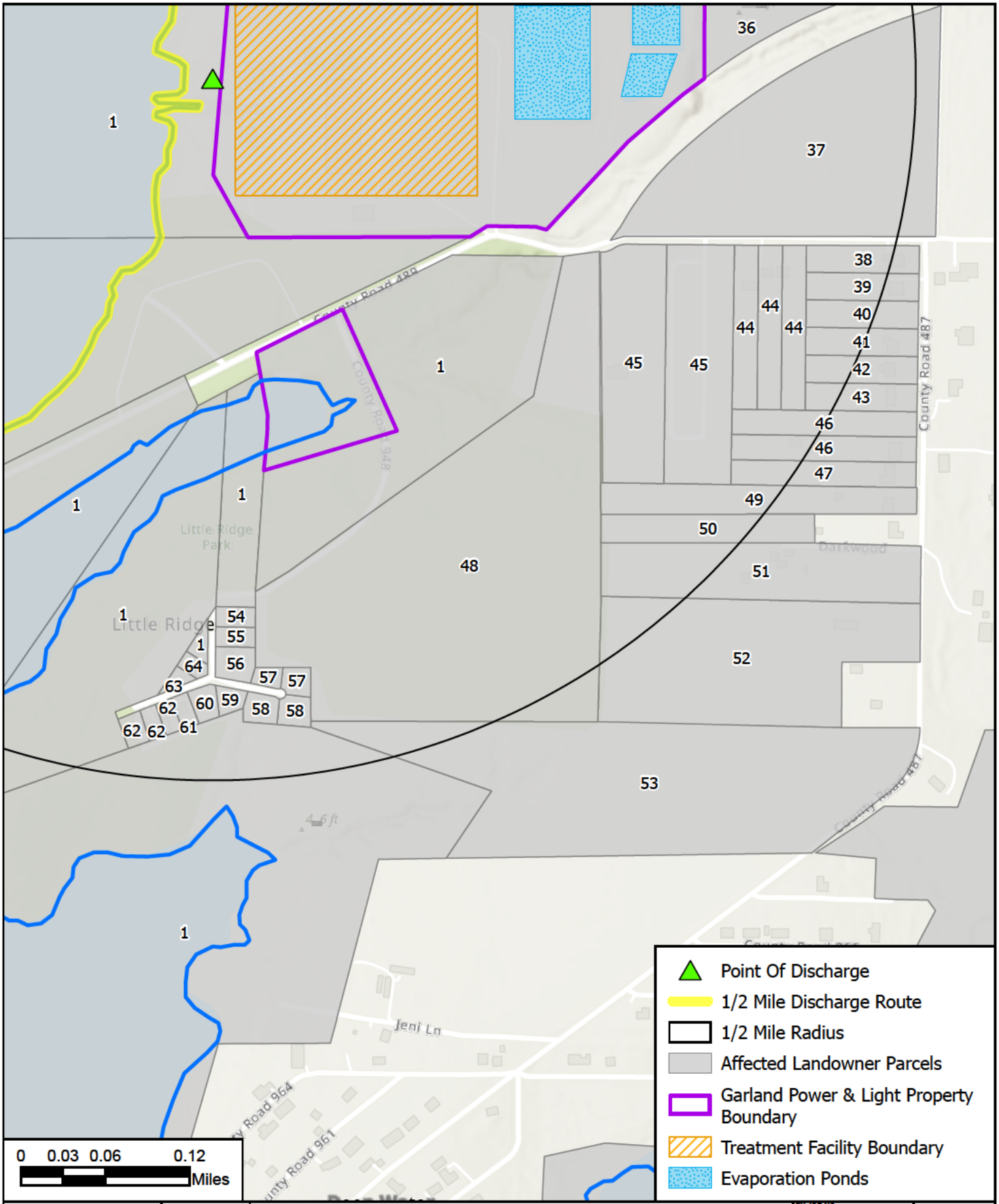

FREESE AND NICHOLS
FREESE AND NICHOLS, INC
801 Cherry Street, Suite 2800
Fort Worth, TX 76102
Phone - (817) 735 - 7300

City of Garland

Ray Olinger Power Plant

Affected Landowners

FN JOB NO	GPL24350
FILE NAME	GP&L TPDES Renewal.mxd
DATE	7/16/2024
SCALE	1:9,186
DESIGNED	CLV
DRAFTED	08245

3c

FIGURE

Path: H:\ENVIRONMENTAL\Working\GP&L TPDES Renewal\GP&L TPDES Renewal.aprx

Affected Landowner Map
Cross Referenced List

1 USA

2 Mcintire Robin & Shannon
6172 County Road 761
Nevada, TX 75173-6116

3 888 Ma Ltd
3324 Sandy Trail Ln
Plano, TX 75023-5656

4 Escalona Jose Luis Ontiveros
630 Stoneybrook Dr
Wylie, TX 75098-4036

5 Benites Rodolfo Garcia &
Herlinda Vasquez
13521 County Road 762
Nevada, TX 75173-6121

6 Mcguire Buddy Pierce Jr & Lawanna Ann
13539 County Road 762
Nevada, TX 75173-6121

7 Riggall Marvin V Jr
13569 County Road 762
Nevada, TX 75173-6121

8 Karczmarski Christopher Marc
13510 County Road 762
Nevada, TX 75173-6120

9 Lavonland LLC
13527 County Road 760
Nevada, TX 75173-6109

10 Dauksavage-Deloach Sonja &
Billy Joe Dauksavage
13540 County Road 762
Nevada, TX 75173-6120

11 Mcintire Legacy Trust
6172 County Road 761
Nevada, TX 75173-6116

12 Huang Doris
3936 Dalston Ln
Plano, TX 75023-1027

13 Riggall Marvin Vale Jr & Laura
6191 County Road 761
Nevada, TX 75173-6165

14 Dickeson Wayne & Freda
Po Box 326
Copeville, TX 75121-0326

15 Iriarte Dianne D &
Tyre Wade Allen
6285 County Road 761
Nevada, TX 75173-6119

16 Bretado Rayo Elizabeth &
Carlos Cruz Ruiz
13731 County Road 760
Nevada, TX 75173-6111

17 Rios Humberto & Maria Del Carmen Rios
13771 County Road 760
Nevada, TX 75173-6111

18 Sutton James Robert &
Sutton Jane Ann
Po Box 5
Weston, TX 75097-0005

19 Wilson Marcus G
Po Box 233
Copeville, TX 75121-0233

20 Ramirez-Macareno Agustin Jaime &
Jazmin Ramirez
13823 County Road 760
Nevada, TX 75173-6113

21 Pelham Troy V & Barbara
13809 County Road 760
Nevada, TX 75173-6113

22 Flores Lazaro & Sulema
13849 County Road 760
Nevada, TX 75173-6113

23 Fritts Enterprises Inc
1322 Briar Hollow Ln
Garland, TX 75043-1614

24 Emery Jody J
13700 County Road 760
Nevada, TX 75173-6110

25 Fritts James C Dba Crossed Palms Rv Resort
1322 Briar Hollow Ln
Garland, TX 75043-1614

26 Stone Rose Properties LLC
Po Box 92341
Southlake, TX 76092-0135

27 Proctor A O
Po Box 3
Copeville, TX 75121-0003

28 Arteaga Felix Jose Jr
13888 County Road 760
Nevada, TX 75173-6138

29 Arteaga Felix Jose & Marbella
6310 County Road 488
Nevada, TX 75173-6355

30 Turner Rocky
6364 County Road 488
Nevada, TX 75173-6355

31 Small Michael & Jessica
Po Box 226
Copeville, TX 75121-0226

32 Boughner Tamara Jean & Bruce Raymond
Po Box 212
Copeville, TX 75121-0212

33 Gonzalez Jose Lira &
Lorena Arteaga-Degonzalez
3015 Elm Grove Rd
Wylie, TX 75098-6251

34 White Wayne M
Po Box 365
Shamrock, TX 79079-0365

35 Eaker Jeanie
Po Box 44
Copeville, TX 75121-0044

36 Massengale Pat J Elliott
9623 Park Highlands Dr
Dallas, TX 75238-2959

37 Garland City Of
200 N 5Th St
Garland, TX 75040-6314

38 Orr Rebecca Kathleen &
Michael Alan Parks
14128 County Road 489
Nevada, TX 75173-6038

39 Choctaw American Insurance Inc
10900 Ne 4Th St Ste 2300
Bellevue, WA 98004-5882

40 Munroe Patricia
6782 County Road 487
Nevada, TX 75173-6088

41 Bryant Matthew &
Lisa Bryant
6800 County Road 487
Nevada, TX 75173-6026

42 Moody Christopher &
Crystal Dawn Moody
6822 County Road 487
Nevada, TX 75173-6026

43 Aquatero John
Po Box 336
Lavon, TX 75166-0336

44 Burnett Julianna
3321 Carriage Ct
Richardson, TX 75082-3663

45 Chp Northeast LP
550 S Watters Rd Ste 127
Allen, TX 75013-5225

46 Taylor Roy Lee & Elizabeth Kern
6860 County Road 487
Nevada, TX 75173-6026

47 Ferrell Douglas
6900 County Road 487
Nevada, TX 75173-6028

48 Jewish Family Service of Dallas Inc
5402 Arapaho Rd Ste 102
Dallas, TX 75248-7098

49 Unknown

50 Barlett Bruce A & Michelle M
6932 County Road 487
Nevada, TX 75173-6028

51	Choudhary Harsh 6956 County Road 487 Nevada, TX 75173-6028
52	Nix Ronald Dean 7022 County Road 487 Nevada, TX 75173-6030
53	Wolverton William Dale 6953 Cotner Rd Nevada, TX 75173-6303
54	Wallace Kevin & Alesa 18693 Hilltop Ln Nevada, TX 75173-8165
55	Nix Marjorie Jean 7214 County Road 1207 Nevada, TX 75173-6232
56	Ramirez Miguel Lindo & Maricela Zavala 105 Glen Knoll Dr Wylie, TX 75098-5004
57	White Donald & Janice White 7294 County Road 1207 Nevada, TX 75173-6232
58	Brown Vicki 807 S China St Brady, TX 76825-5437
59	Nix Marjorie Jean - Cle & Estate of Robert L Nix 7214 County Road 1207 Nevada, TX 75173-6232
60	Lessig Kimberly 7241 County Road 1208 Nevada, TX 75173-6235
61	Lessig Kenneth Allen 7241 County Road 1208 Nevada, TX 75173-6235
62	Thompson Deborah Elaine Po Box 380 Copeville, TX 75121-0380
63	White Shawn Marie 7252 County Road 1208 Nevada, TX 75173-6234
64	Rademacher Ronald Ray 7224 County Road 1208 Nevada, TX 75173-6234

USA
(USACE)

Escalona Jose Luis Ontiveros
630 Stoneybrook Dr
Wylie, TX 75098-4036

Riggall Marvin V Jr
13569 County Road 762
Nevada, TX 75173-6121

Dauksavage-Deloach Sonja &
Billy Joe Dauksavage
13540 County Road 762
Nevada, TX 75173-6120

Riggall Marvin Vale Jr & Laura
6191 County Road 761
Nevada, TX 75173-6165

Iriarte Dianne D &
Tyre Wade Allen
6285 County Road 761
Nevada, TX 75173-6119

Sutton James Robert &
Sutton Jane Ann
Po Box 5
Weston, TX 75097-0005

Pelham Troy V & Barbara
13809 County Road 760
Nevada, TX 75173-6113

Emery Jody J
13700 County Road 760
Nevada, TX 75173-6110

Proctor A O
Po Box 3
Copeville, TX 75121-0003

Mcintire Robin & Shannon
6172 County Road 761
Nevada, TX 75173-6116

Benites Rodolfo Garcia &
Herlinda Vasquez
13521 County Road 762
Nevada, TX 75173-6121

Karczmarski Christopher Marc
13510 County Road 762
Nevada, TX 75173-6120

Mcintire Legacy Trust
6172 County Road 761
Nevada, TX 75173-6116

Dickeson Wayne & Freda
Po Box 326
Copeville, TX 75121-0326

Bretado Rayo Elizabeth &
Carlos Cruz Ruiz
13731 County Road 760
Nevada, TX 75173-6111

Wilson Marcus G
Po Box 233
Copeville, TX 75121-0233

Flores Lazaro & Sulema
13849 County Road 760
Nevada, TX 75173-6113

Fritts James C Dba Crossed Palms Rv
Resort
1322 Briar Hollow Ln
Garland, TX 75043-1614

Arteaga Felix Jose Jr
13888 County Road 760
Nevada, TX 75173-6138

888 Ma Ltd
3324 Sandy Trail Ln
Plano, TX 75023-5656

Mcguire Buddy Pierce Jr & Lawanna
Ann
13539 County Road 762
Nevada, TX 75173-6121

Lavonland LLC
13527 County Road 760
Nevada, TX 75173-6109

Huang Doris
3936 Dalston Ln
Plano, TX 75023-1027

Iriarte Dianne D &
Tyre Wade Allen
6285 County Road 761
Nevada, TX 75173-6119

Rios Humberto & Maria Del Carmen
Rios
13771 County Road 760
Nevada, TX 75173-6111

Ramirez-Macareno Agustin Jaime &
Jazmin Ramirez
13823 County Road 760
Nevada, TX 75173-6113

Fritts Enterprises Inc
1322 Briar Hollow Ln
Garland, TX 75043-1614

Stone Rose Properties LLC
Po Box 92341
Southlake, TX 76092-0135

Arteaga Felix Jose & Marbella
6310 County Road 488
Nevada, TX 75173-6355

Turner Rocky
6364 County Road 488
Nevada, TX 75173-6355

Gonzalez Jose Lira &
Lorena Arteaga-Degonzalez
3015 Elm Grove Rd
Wylie, TX 75098-6251

Massengale Pat J Elliott
9623 Park Highlands Dr
Dallas, TX 75238-2959

Choctaw American Insurance Inc
10900 Ne 4Th St Ste 2300
Bellevue, WA 98004-5882

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Crystal Dawn Moody
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Nevada, TX 75173-6026

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Nix Marjorie Jean
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Nevada, TX 75173-6232

Brown Vicki
807 S China St
Brady, TX 76825-5437

Small Michael & Jessica
Po Box 226
Copeville, TX 75121-0226

White Wayne M
Po Box 365
Shamrock, TX 79079-0365

Garland City Of
200 N 5Th St
Garland, TX 75040-6314

Munroe Patricia
6782 County Road 487
Nevada, TX 75173-6088

Aquatero John
Po Box 336
Lavon, TX 75166-0336

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Zavala
105 Glen Knoll Dr
Wylie, TX 75098-5004

Nix Marjorie Jean - Cle &
Estate of Robert L Nix
7214 County Road 1207
Nevada, TX 75173-6232

Boughner Tamara Jean & Bruce
Raymond
Po Box 212
Copeville, TX 75121-0212

Eaker Jeanie
Po Box 44
Copeville, TX 75121-0044

Orr Rebecca Kathleen &
Michael Alan Parks
14128 County Road 489
Nevada, TX 75173-6038

Bryant Matthew &
Lisa Bryant
6800 County Road 487
Nevada, TX 75173-6026

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3321 Carriage Ct
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Nevada, TX 75173-6232

Ramirez Miguel Lindo & Maricela
Zavala
105 Glen Knoll Dr
Wylie, TX 75098-5004

White Donald &
Janice White
7294 County Road 1207
Nevada, TX 75173-6232

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Lessig Kimberly
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Nevada, TX 75173-6235

Lessig Kenneth Allen
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7252 County Road 1208
Nevada, TX 75173-6234

Rademacher Ronald Ray
7224 County Road 1208
Nevada, TX 75173-6234

ATTACHMENT AR-6

Original Photographs

Photo 1: Facing South Towards Intake Pumps

Photo 2: Facing South Towards Water Intake

Photo 3: Facing East Toward Units 1, 2, and 3

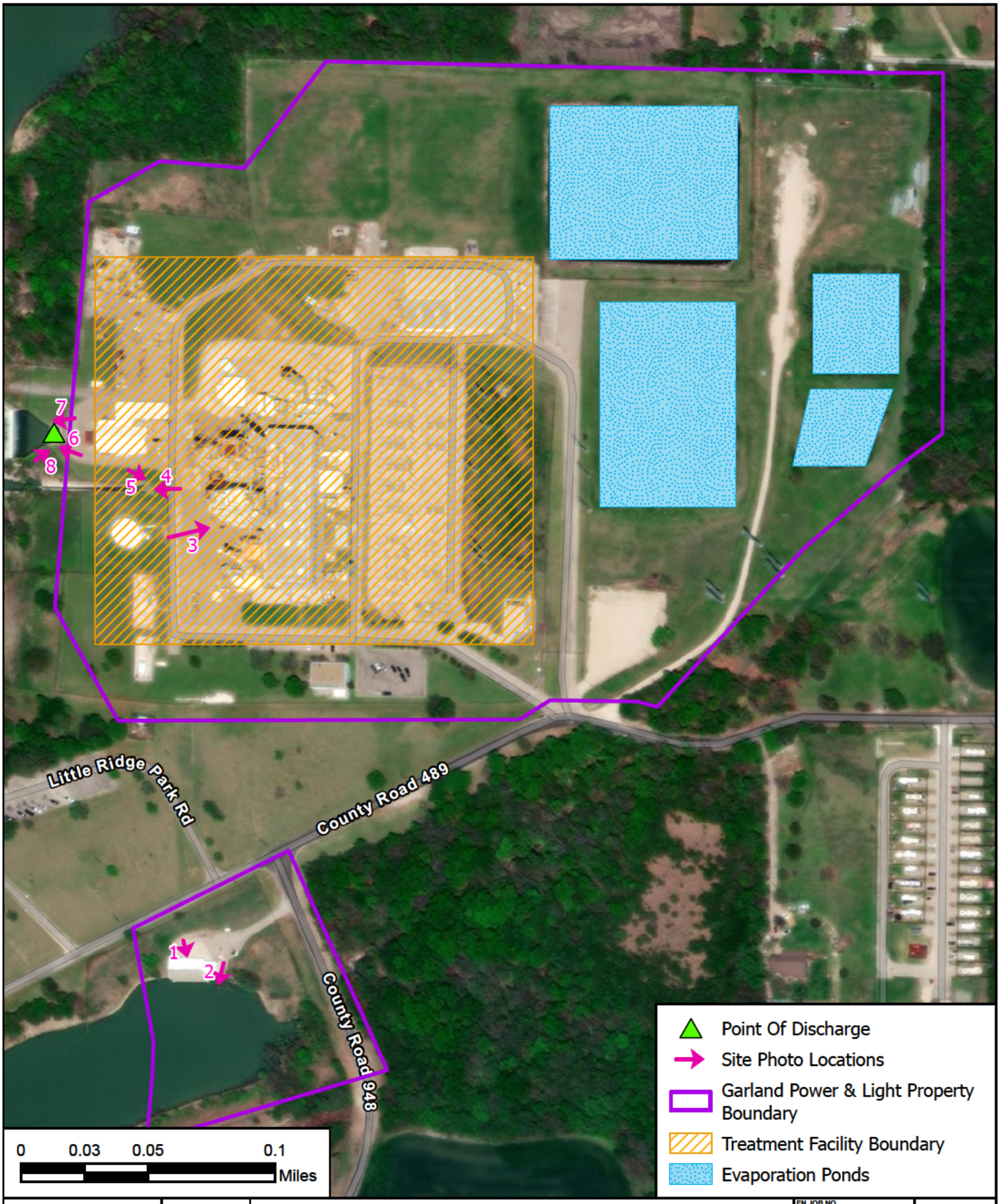
Photo 4: Outfall 001 (south) facing west towards Lake Lavon.

Photo 5: Outfall 001 (south) facing southeast towards the facility.

Photo 6: Outfall 001 (north) facing northwest towards Lake Lavon.

Photo 7: Outfall 001 (north) facing southwest towards Lake Lavon.

Photo 8: Outfall 001 (north) facing northeast towards facility.



FREESE AND NICHOLS
FREESE AND NICHOLS, INC
801 Cherry Street, Suite 2800
Fort Worth, TX 76102
Phone - (817) 735 - 7300

N W E S

City of Garland

Ray Olinger TPDES Permit Renewal

Original Site Photo Locations

FN JOB NO	GPL24350
FILE NAME	GP&L TPDES Renewal.mxd
DATE	8/2/2024
SCALE	
DESIGNED	CLV
DRAFTED	08245

4

FIGURE

Path: H:\ENVIRONMENTAL\Working\GP&L TPDES Renewal\GP&L TPDES Renewal.aprx

ATTACHMENT SPIF-1

SPIF Form

TEXAS COMMISSION ON ENVIRONMENTAL QUALITY

SUPPLEMENTAL PERMIT INFORMATION FORM (SPIF)

FOR AGENCIES REVIEWING DOMESTIC OR INDUSTRIAL TPDES WASTEWATER PERMIT APPLICATIONS

TCEQ USE ONLY:

Application type: ____Renewal ____Major Amendment ____Minor Amendment ____New

County: _____ Segment Number: _____

Admin Complete Date: _____

Agency Receiving SPIF:

_____ Texas Historical Commission _____ U.S. Fish and Wildlife

_____ Texas Parks and Wildlife Department _____ U.S. Army Corps of Engineers

This form applies to TPDES permit applications only. (Instructions, Page 53)

Complete this form as a separate document. TCEQ will mail a copy to each agency as required by our agreement with EPA. If any of the items are not completely addressed or further information is needed, we will contact you to provide the information before issuing the permit. Address each item completely.

Do not refer to your response to any item in the permit application form. Provide each attachment for this form separately from the Administrative Report of the application. The application will not be declared administratively complete without this SPIF form being completed in its entirety including all attachments. Questions or comments concerning this form may be directed to the Water Quality Division's Application Review and Processing Team by email at WQ-ARPTeam@tceq.texas.gov or by phone at (512) 239-4671.

The following applies to all applications:

1. Permittee: Ray Olinger Steam Electric Station

   Permit No. WQ00 01923000 EPA ID No. TX 0001848

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

   13835 County Rd 489, Nevada, TX 75173

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): Mr.

First and Last Name: David Bernard

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

Title: Production Manager

Mailing Address: 13835 Co Rd 489

City, State, Zip Code: Nevada, TX 75173

Phone No.: 972-205-3831 Ext.: N /A Fax No.: 972-485-6485

E-mail Address: dbernard@gpltexas.org

2. List the county in which the facility is located: Collin
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.

From the plant site through a channel to Lake Lavon in Segment No. 0821 of the Trinity River Basin.

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

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

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

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

☐ Disturbance of vegetation or wetlands

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

N/A

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

Land is currently used for steam electric plant directly adjacent to Lake Lavon.

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:

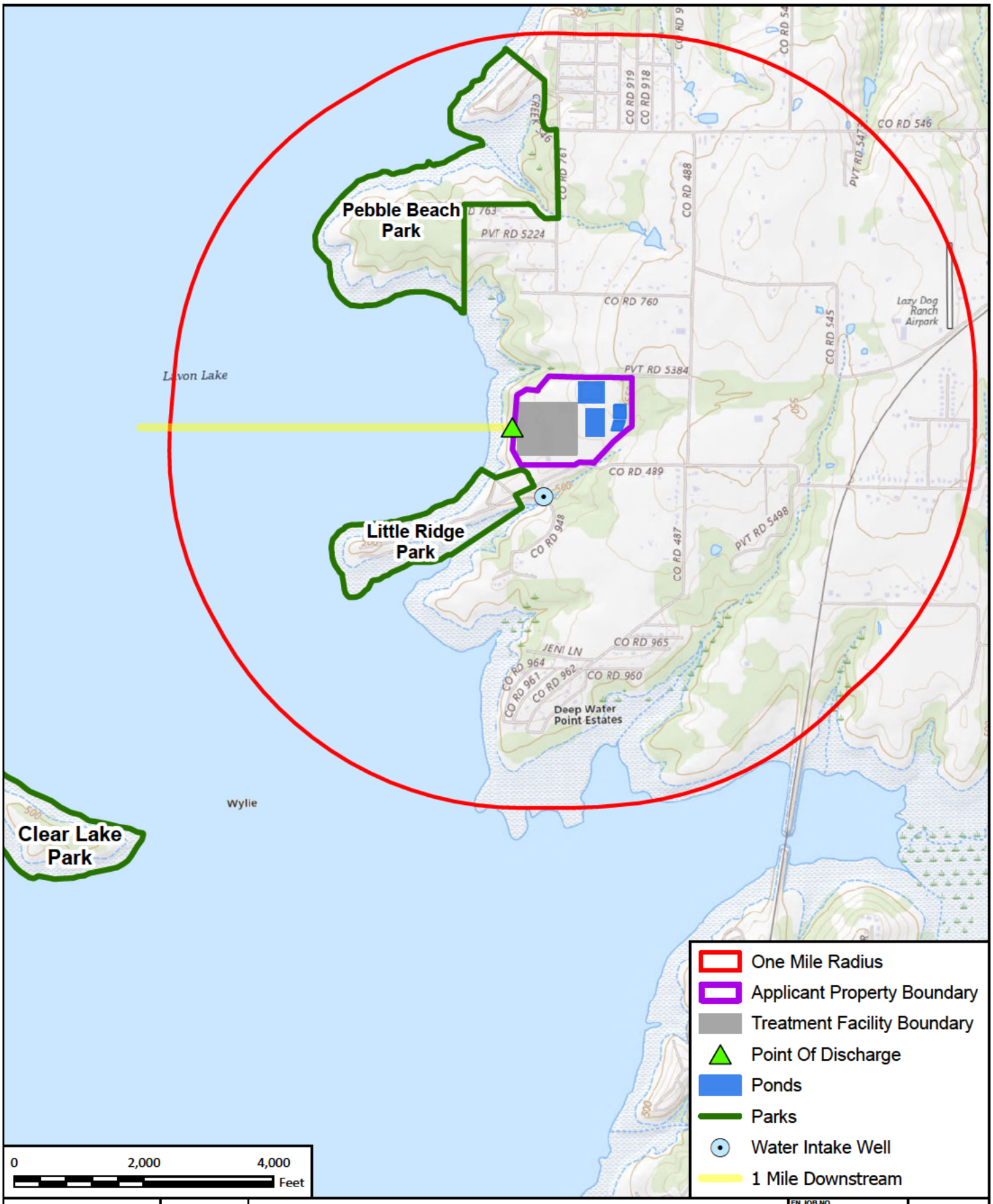
1967 - 1975

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

ROPP Unit 1 was constructed in 1967, Unit 2 in 1971, and Unit 3 in 1975.

ATTACHMENT SPIF-2

SPIF USGS Topographic Map



FREESE AND NICHOLS
FREESE AND NICHOLS, INC
801 Cherry Street, Suite 2800
Fort Worth, TX 76102
Phone - (817) 735 - 7300

City of Garland

Ray Olinger TPDES Permit Renewal

SPIF USGS Topographic Map

FN JOB NO	GPL24350
FILE NAME	GP&L TPDES Renewal.mxd
DATE	8/1/2024
SCALE	1:24,000
DESIGNED	CLV
DRAFTED	08245

1

FIGURE

Path: H:\ENVIRONMENTAL\Working\GP&L TPDES Renewal\GP&L TPDES Renewal.aprx

NAD 1983 StatePlane Texas South Central FIPS 4204 Feet

ATTACHMENT TR-1

Facility Map

Facility Map
WQ0001923000

Storm Water 1

Storm Water 4

Outfall 001

Outfall 102

Storm Water 2

Storm Water 3

Water Intake

Unit 3

Unit 2

Unit 1

POND # 4

POND # 3

POND # 2

POND # 1

WATER ELEVATION 535.4

W.E. 536.9

VH-1004 EL. 545.71

VH-1005 EL. 523.04

VH-1007 EL. 515.72

VH-1006 EL. 519.67

VH-1003 EL. 522.30

V-2002 EL. 518.20

V-2010 EL. 499.11

CONCRETE SLAB

WALL

WALLS

H-1002

BRUSH

GROUND OBSCURED CONTOURS OMITTED

Legend

CULV

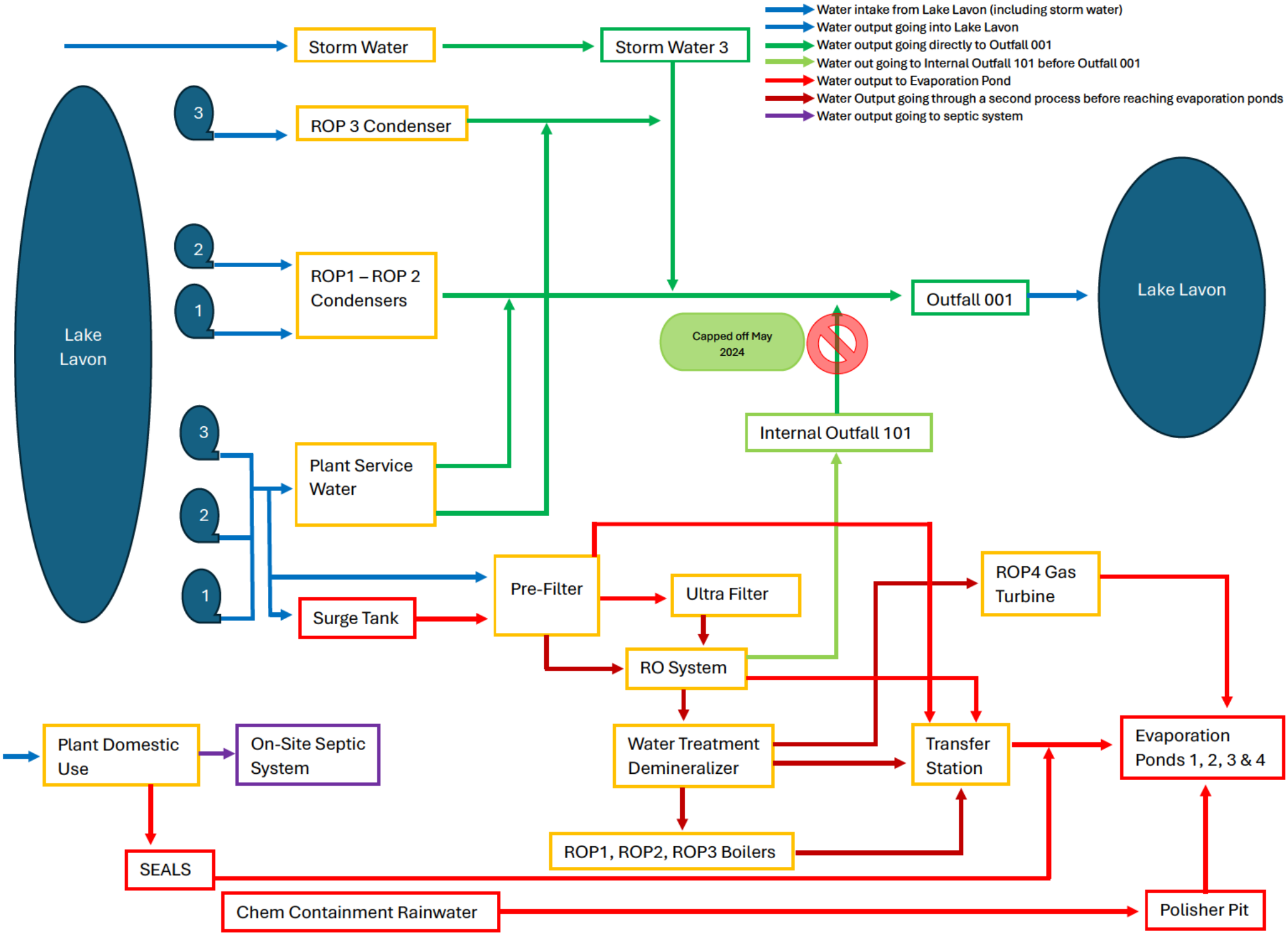
DITCH

INLETS

MANHOLE

ATTACHMENT TR-2

Flow Schematic


Water intake from Lake Lavon (including storm water)
Water output going into Lake Lavon
Water output going directly to Outfall 001
Water out going to Internal Outfall 101 before Outfall 001
Water output to Evaporation Pond
Water Output going through a second process before reaching evaporation ponds
Water output going to septic system
Storm Water
Storm Water 3
3
ROP 3 Condenser
Lake Lavon
2
1
ROP1 – ROP 2 Condensers
Outfall 001
Lake Lavon
Capped off May 2024
Internal Outfall 101
3
2
1
Plant Service Water
Surge Tank
Pre-Filter
Ultra Filter
ROP4 Gas Turbine
RO System
Plant Domestic Use
On-Site Septic System
Water Treatment Demineralizer
Transfer Station
Evaporation Ponds 1, 2, 3 & 4
ROP1, ROP2, ROP3 Boilers
SEALS
Chem Containment Rainwater
Polisher Pit

ATTACHMENT TR-3

SDS

Technical Report 1.0
Industrial

Section 5.c. Blowdown and Once-Through Cooling Water Discharges

Product Identification: Disodium Phosphate Anhydrous
Product Use: pH control and corrosion inhibitor in boilers, would be found in boiler blowdown
CAS Number: 7558-79-4
Product Classification: No information available on MSDS
Product Half Life: No information available on MSDS
Frequency of Use: Twice a week
Product Toxicity to Fish or Aquatic Invertebrate Organisms: No information available on MSDS

Product Identification: Trisodium Phosphate Anhydrous
Product Use: pH control and corrosion inhibitor in boilers, would be found in boiler blowdown
CAS Number: 7601-54-9
Product Classification: No information available on MSDS
Product Half Life: No information available on MSDS
Frequency of Use: Daily
Product Toxicity to Fish or Aquatic Invertebrate Organisms: No information available on MSDS

Product Identification: Morpholine <35%
Product Use: pH control and corrosion inhibitor in boilers, would be found in boiler blowdown
CAS Number: 110-91-8
Product Classification: No information available on MSDS
Product Half Life: No information available on MSDS
Frequency of Use: Daily
Product Toxicity to Fish or Aquatic Invertebrate Organisms: No information available on MSDS

Product Identification: Hydroquinone <10%
Product Use: oxygen scavenger and corrosion inhibitor in boilers, would be found in boiler blowdown
CAS Number: 123-31-9
Product Classification: No information available on MSDS
Product Half Life: No information available on MSDS
Frequency of Use: Daily
Product Toxicity to Fish or Aquatic Invertebrate Organisms: No information available on MSDS

Product Identification: Hydrate Line >95% slaked Line, Calcium Hydroxide
Product Use: Used to elevate pH in makeup water to precipitate calcium, magnesium and other impurities for water purification. Waste would be blown down to waster pit and pumped to evaporation pond.
CAS Number: 1305-78-8
Product Classification: No information available on MSDS
Product Half Life: No information available on MSDS
Frequency of Use: Daily
Product Toxicity to Fish or Aquatic Invertebrate Organisms: No information available on MSDS

Technical Report 1.0
Industrial

Section 5.c. Blowdown and Once-Through Cooling Water Discharges

Product Identification: Bleach 10%, sodium hypochlorite
Product Use: bacterial algae control in once through condensers, reduced with ammonium bisulfate when discharged.
CAS Number: 7681-52-9
Product Classification: No information available on MSDS
Product Half Life: No information available on MSDS
Frequency of Use: Three times a week
Product Toxicity to Fish or Aquatic Invertebrate Organisms: product may be toxic to aquatic life in immediate area of accidental spill according to MSDS

Product Identification: Ammonium Bisulfite 45-70%
Product Use: Product used to reduce residual and total chlorine in once through condensers
CAS Number: 10192-30-0
Product Classification: No information available on MSDS
Product Half Life: No information available on MSDS
Frequency of Use: Three times a week
Product Toxicity to Fish or Aquatic Invertebrate Organisms: No information available on MSDS

Product Use: Product is used to regenerate cation beds of demineralizer for water purification. Waste is drained to waste pit and pumped to evaporation pond.
CAS Number: 7664-93-9
Product Classification: No information available on MSDS
Product Half Life: No information available on MSDS
Frequency of Use: Daily
Product Toxicity to Fish or Aquatic Invertebrate Organisms: No information available on MSDS

Product Identification: Sodium Hydroxide 50%
Product Use: Product used to regenerate anion beds of the demineralizer used in water purification. The waste is drained into the waste pit and pumped to the evaporation pond.
CAS Number: 1310-73-2
Product Classification: No information available on MSDS
Product Half Life: No information available on MSDS
Frequency of Use: Daily
Product Toxicity to Fish or Aquatic Invertebrate Organisms: No information available on MSDS

ATTACHMENT TR-4

Lab Reports

ANALYTICAL REPORT

July 23, 2024

Garland Power & Light

Sample Delivery Group:	L1754191
Samples Received:	07/08/2024
Project Number:	
Description:	TPDES

Report To: Jeff McClain
13835 County Rd 489
Nevada, TX 75173

Entire Report Reviewed By: Dorothy P Roberts

Dorothy P Roberts
Project Manager

Pace Analytical National
12065 Lebanon Rd Mount Juliet, TN 37122 615-758-5858 800-767-5859 mydata.pacelabs.com

TABLE OF CONTENTS

SAMPLE SUMMARY

OUTFALL 001 L1754191-01 WW

	Collected by	Collected date/time	Received date/time
		07/06/24 23:09	07/08/24 09:51

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst	Location
Calculated Results	WG2317944	1	07/12/24 19:03	07/12/24 19:03	KCM	Allen, TX
Calculated Results	WG2323027	1	07/15/24 20:10	07/15/24 20:10	EIG	Allen, TX
Gravimetric Analysis by Method 2540C	WG2320714	1	07/10/24 16:26	07/10/24 17:12	QQT	Allen, TX
Gravimetric Analysis by Method 2540D	WG2320499	1	07/10/24 13:12	07/10/24 16:33	QQT	Allen, TX
Wet Chemistry by Method 1664A	WG2319853	1	07/11/24 09:09	07/11/24 15:24	TK	Allen, TX
Wet Chemistry by Method 2120B	WG2320288	1	07/10/24 10:40	07/10/24 10:40	EIG	Allen, TX
Wet Chemistry by Method 2320B	WG2319489	1	07/09/24 09:39	07/09/24 09:39	SEN	Allen, TX
Wet Chemistry by Method 300.0	WG2320313	1	07/10/24 21:19	07/10/24 21:19	JDG	Mt. Juliet, TN
Wet Chemistry by Method 3500Cr-B	WG2322157	1	07/12/24 19:03	07/12/24 19:03	KCM	Allen, TX
Wet Chemistry by Method 351.2	WG2323027	1	07/15/24 11:10	07/15/24 20:10	EIG	Allen, TX
Wet Chemistry by Method 353.2	WG2321792	1	07/12/24 12:54	07/12/24 12:54	EIG	Allen, TX
Wet Chemistry by Method 360.1	WG2324067	1	07/16/24 14:05	07/16/24 14:05	JBS	Allen, TX
Wet Chemistry by Method 4500Cl G-2011	WG2322664	1	07/14/24 12:14	07/14/24 12:14	CAH	Mt. Juliet, TN
Wet Chemistry by Method 4500CN-E	WG2321047	1	07/11/24 11:30	07/11/24 16:58	KCM	Allen, TX
Wet Chemistry by Method 4500CN-G	WG2323646	1	07/16/24 16:14	07/16/24 16:14	KCM	Allen, TX
Wet Chemistry by Method 4500P-E	WG2319455	1	07/10/24 10:11	07/10/24 10:11	SMC	Allen, TX
Wet Chemistry by Method 4500-S2 D	WG2319662	1	07/09/24 15:00	07/09/24 15:00	EIG	Allen, TX
Wet Chemistry by Method 4500SO3 B-2011	WG2323050	1	07/15/24 11:20	07/15/24 11:20	JAR	Mt. Juliet, TN
Wet Chemistry by Method 5210 B-2016	WG2319171	1	07/08/24 15:09	07/13/24 09:39	SEN	Allen, TX
Wet Chemistry by Method 5210 B-2016	WG2319172	1	07/08/24 15:30	07/13/24 10:03	SEN	Allen, TX
Wet Chemistry by Method 5220D	WG2319514	1	07/09/24 09:59	07/09/24 12:02	JBS	Allen, TX
Wet Chemistry by Method 5310C	WG2320357	2	07/11/24 20:39	07/11/24 20:39	EIG	Allen, TX
Wet Chemistry by Method 5540C	WG2319936	1	07/09/24 18:54	07/09/24 19:02	EIG	Allen, TX
Wet Chemistry by Method SM 4500-H+B	WG2321035	1	07/11/24 09:01	07/11/24 09:01	JBS	Allen, TX
Wet Chemistry by Method SM4500NH3H	WG2321326	1	07/11/24 16:41	07/11/24 16:41	EIG	Allen, TX
Mercury by Method 245.1	WG2320254	1	07/10/24 09:46	07/10/24 16:05	TDM	Allen, TX
Metals (ICP) by Method 200.7	WG2320626	1	07/10/24 16:30	07/11/24 15:39	SKW	Allen, TX
Metals (ICPMS) by Method 200.8	WG2317944	1	07/09/24 13:25	07/10/24 21:56	NA	Allen, TX
Metals (ICPMS) by Method 200.8	WG2317944	1	07/09/24 13:25	07/11/24 17:29	NA	Allen, TX
Volatile Organic Compounds (GC/MS) by Method 624.1	WG2319924	1	07/09/24 18:02	07/09/24 18:02	NSR	Allen, TX
Polychlorinated Biphenyls (GC) by Method EPA-608.3	WG2322292	1	07/13/24 19:04	07/14/24 06:14	LJD	Mt. Juliet, TN
Semi Volatile Organic Compounds (GC/MS) by Method 625.1	WG2320434	1	07/10/24 12:55	07/13/24 15:45	XLY	Allen, TX

CASE NARRATIVE

All sample aliquots were received at the correct temperature, in the proper containers, with the appropriate preservatives, and within method specified holding times, unless qualified or notated within the report. Where applicable, all MDL (LOD) and RDL (LOQ) values reported for environmental samples have been corrected for the dilution factor used in the analysis. All Method and Batch Quality Control are within established criteria except where addressed in this case narrative, a non-conformance form or properly qualified within the sample results. By my digital signature below, I affirm to the best of my knowledge, all problems/anomalies observed by the laboratory as having the potential to affect the quality of the data have been identified by the laboratory, and no information or data have been knowingly withheld that would affect the quality of the data.

Dorothy P Roberts
Project Manager

Sample Delivery Group (SDG) Narrative

The following analysis were performed from an unpreserved, insufficiently or inadequately preserved sample.

Lab Sample ID	Project Sample ID	Method
L1754191-01	OUTFALL 001	4500-S2 D, 4500CN-E

The Laboratory is not accredited for specific analytes on the associated Sample/Method. These analytes are flagged in the Sample Results section of the report with an asterisk (*).

Lab Sample ID	Project Sample ID	Method
L1754191-01	OUTFALL 001	300.0

Analysis was filtered in the laboratory.

Lab Sample ID	Project Sample ID	Method
L1754191-01	OUTFALL 001	3500Cr-B

No extra volume received to perform Matrix Spike samples.

Lab Sample ID	Project Sample ID	Method
L1754191-01	OUTFALL 001	625.1

Calculated Results

Analyte	Result mg/l	Qualifier	MDL mg/l	RDL mg/l	Dilution	Analysis date / time	Batch
Chromium,Trivalent	0.000525	J	0.000510	0.00300	1	07/12/2024 19:03	WG2317944
Organic Nitrogen	1.03		0.0280	0.100	1	07/15/2024 20:10	WG2323027

Gravimetric Analysis by Method 2540C

Analyte	Result mg/l	Qualifier	RDL mg/l	Dilution	Analysis date / time	Batch
Total Dissolved Solids	184		25.0	1	07/10/2024 17:12	WG2320714

Gravimetric Analysis by Method 2540D

Analyte	Result mg/l	Qualifier	RDL mg/l	Dilution	Analysis date / time	Batch
Suspended Solids	5.93		2.65	1	07/10/2024 16:33	WG2320499

Wet Chemistry by Method 1664A

Analyte	Result mg/l	Qualifier	MDL mg/l	RDL mg/l	Dilution	Analysis date / time	Batch
Oil & Grease (Hexane Extr)	0.780	J	0.350	5.00	1	07/11/2024 15:24	WG2319853

Wet Chemistry by Method 2120B

Analyte	Result units	Qualifier	RDL units	Dilution	Analysis date / time	Batch
Color	20.0	T8	5.00	1	07/10/2024 10:40	WG2320288

Sample Narrative:

L1754191-01 WG2320288: 7

Wet Chemistry by Method 2320B

Analyte	Result mg/l	Qualifier	MDL mg/l	RDL mg/l	Dilution	Analysis date / time	Batch
Alkalinity	110		20.0	20.0	1	07/09/2024 09:39	WG2319489

Wet Chemistry by Method 300.0

Analyte	Result mg/l	Qualifier	MDL mg/l	RDL mg/l	Dilution	Analysis date / time	Batch
*Bromide	0.914	J	0.353	1.00	1	07/10/2024 21:19	WG2320313
Chloride	15.4		0.379	1.00	1	07/10/2024 21:19	WG2320313
Fluoride	0.177		0.0640	0.150	1	07/10/2024 21:19	WG2320313
Nitrate as (N)	U	Q	0.0480	0.100	1	07/10/2024 21:19	WG2320313
Sulfate	27.1		0.594	5.00	1	07/10/2024 21:19	WG2320313

Wet Chemistry by Method 3500Cr-B

Analyte	Result mg/l	Qualifier	MDL mg/l	RDL mg/l	Dilution	Analysis date / time	Batch
Chromium,Hexavalent	U	T8	0.00200	0.00300	1	07/12/2024 19:03	WG2322157

Wet Chemistry by Method 351.2

Analyte	Result mg/l	Qualifier	MDL mg/l	RDL mg/l	Dilution	Analysis date / time	Batch
Kjeldahl Nitrogen, TKN	1.03	J5	0.140	0.250	1	07/15/2024 20:10	WG2323027

Wet Chemistry by Method 353.2

Analyte	Result	Qualifier	MDL	RDL	Dilution	Analysis	Batch
	mg/l		mg/l	mg/l		date / time	
Nitrate-Nitrite	U		0.0300	0.0500	1	07/12/2024 12:54	WG2321792

Wet Chemistry by Method 360.1

Analyte	Result	Qualifier	RDL	Dilution	Analysis	Batch
	mg/l		mg/l		date / time	
Dissolved Oxygen	8.77	T8	1	1	07/16/2024 14:05	WG2324067

Wet Chemistry by Method 4500Cl G-2011

Analyte	Result	Qualifier	MDL	RDL	Dilution	Analysis	Batch
	mg/l		mg/l	mg/l		date / time	
Chlorine,residual	0.0330	J T8	0.0260	0.100	1	07/14/2024 12:14	WG2322664

Wet Chemistry by Method 4500CN-E

Analyte	Result	Qualifier	MDL	RDL	Dilution	Analysis	Batch
	mg/l		mg/l	mg/l		date / time	
Cyanide	U		0.00430	0.0100	1	07/11/2024 16:58	WG2321047

Wet Chemistry by Method 4500CN-G

Analyte	Result	Qualifier	MDL	RDL	Dilution	Analysis	Batch
	mg/l		mg/l	mg/l		date / time	
Cyanide,amenable	U		0.00350	0.0100	1	07/16/2024 16:14	WG2323646

Wet Chemistry by Method 4500P-E

Analyte	Result	Qualifier	MDL	RDL	Dilution	Analysis	Batch
	mg/l		mg/l	mg/l		date / time	
Phosphorus,Total	0.101		0.0152	0.0500	1	07/10/2024 10:11	WG2319455

Wet Chemistry by Method 4500-S2 D

Analyte	Result	Qualifier	MDL	RDL	Dilution	Analysis	Batch
	mg/l		mg/l	mg/l		date / time	
Sulfide	U		0.0230	0.100	1	07/09/2024 15:00	WG2319662

Wet Chemistry by Method 4500SO3 B-2011

Analyte	Result	Qualifier	MDL	RDL	Dilution	Analysis	Batch
	mg/l		mg/l	mg/l		date / time	
Sulfite	U	T8	1.19	3.00	1	07/15/2024 11:20	WG2323050

Wet Chemistry by Method 5210 B-2016

Analyte	Result	Qualifier	RDL	Dilution	Analysis	Batch
	mg/l		mg/l		date / time	
BOD	1.67		1.00	1	07/13/2024 09:39	WG2319171
CBOD	1.75		1.00	1	07/13/2024 10:03	WG2319172

Wet Chemistry by Method 5220D

Analyte	Result	Qualifier	MDL	RDL	Dilution	Analysis	Batch
	mg/l		mg/l	mg/l		date / time	
COD	25.4	J	16.1	35.0	1	07/09/2024 12:02	WG2319514

Wet Chemistry by Method 5310C

Analyte	Result	Qualifier	MDL	RDL	Dilution	Analysis	Batch
	mg/l		mg/l	mg/l		date / time	

Wet Chemistry by Method 5310C

Analyte	Result	Qualifier	MDL	RDL	Dilution	Analysis	Batch
	mg/l		mg/l	mg/l		date / time	
TOC (Total Organic Carbon)	11.5		0.540	1.40	2	07/11/2024 20:39	WG2320357

Wet Chemistry by Method 5540C

Analyte	Result	Qualifier	MDL	RDL	Dilution	Analysis	Batch
	mg/l		mg/l	mg/l		date / time	
MBAS	U	T8	0.360	0.500	1	07/09/2024 19:02	WG2319936

Wet Chemistry by Method SM 4500-H+B

Analyte	Result	Qualifier	Dilution	Analysis	Batch
	su			date / time	
pH	8.21	T8	1	07/11/2024 09:01	WG2321035

Sample Narrative:

L1754191-01 WG2321035: 8.21 at 19.1C

Wet Chemistry by Method SM4500NH3H

Analyte	Result	Qualifier	MDL	RDL	Dilution	Analysis	Batch
	mg/l		mg/l	mg/l		date / time	
Ammonia Nitrogen	U		0.0280	0.100	1	07/11/2024 16:41	WG2321326

Mercury by Method 245.1

Analyte	Result	Qualifier	MDL	RDL	Dilution	Analysis	Batch
	mg/l		mg/l	mg/l		date / time	
Mercury	0.0000780	B J	0.0000450	0.000200	1	07/10/2024 16:05	WG2320254

Metals (ICP) by Method 200.7

Analyte	Result	Qualifier	MDL	RDL	Dilution	Analysis	Batch
	mg/l		mg/l	mg/l		date / time	
Boron	0.0707	J	0.0186	0.100	1	07/11/2024 15:39	WG2320626
Tin	U		0.00240	0.0250	1	07/11/2024 15:39	WG2320626
Titanium	U		0.00835	0.100	1	07/11/2024 15:39	WG2320626

Metals (ICPMS) by Method 200.8

Analyte	Result	Qualifier	MDL	RDL	Dilution	Analysis	Batch
	mg/l		mg/l	mg/l		date / time	
Aluminum	0.0984		0.00186	0.00250	1	07/11/2024 17:29	WG2317944
Antimony	U		0.000580	0.00500	1	07/10/2024 21:56	WG2317944
Arsenic	0.00448		0.000100	0.000500	1	07/11/2024 17:29	WG2317944
Barium	0.0393		0.000440	0.00300	1	07/10/2024 21:56	WG2317944
Beryllium	0.0000935	J	0.0000600	0.000500	1	07/11/2024 17:29	WG2317944
Cadmium	U		0.000120	0.00100	1	07/10/2024 21:56	WG2317944
Chromium	0.000525	J	0.000510	0.00300	1	07/10/2024 21:56	WG2317944
Cobalt	0.000210	B J	0.0000400	0.000300	1	07/11/2024 17:29	WG2317944
Copper	0.00618		0.000900	0.00200	1	07/11/2024 17:29	WG2317944
Iron	0.0935		0.00432	0.00700	1	07/11/2024 17:29	WG2317944
Lead	U		0.000140	0.000500	1	07/10/2024 21:56	WG2317944
Magnesium	3.62		0.0121	0.0200	1	07/11/2024 17:29	WG2317944
Manganese	0.0324		0.000330	0.000500	1	07/10/2024 21:56	WG2317944
Molybdenum	0.000963	J	0.000530	0.00100	1	07/11/2024 17:29	WG2317944
Nickel	0.00166	J	0.000640	0.00200	1	07/11/2024 17:29	WG2317944
Selenium	U		0.000740	0.00500	1	07/10/2024 21:56	WG2317944
Silver	U		0.0000800	0.000500	1	07/10/2024 21:56	WG2317944
Thallium	0.000363	J	0.000190	0.000500	1	07/11/2024 17:29	WG2317944

Metals (ICPMS) by Method 200.8

Analyte	Result	Qualifier	MDL	RDL	Dilution	Analysis	Batch
	mg/l		mg/l	mg/l		date / time	
Zinc	0.00602		0.00265	0.00500	1	07/11/2024 17:29	WG2317944

Volatile Organic Compounds (GC/MS) by Method 624.1

Analyte	Result	Qualifier	MDL	RDL	Dilution	Analysis	Batch
	mg/l		mg/l	mg/l		date / time	
1,1,1-Trichloroethane	U		0.00335	0.00500	1	07/09/2024 18:02	WG2319924
1,1,2,2-Tetrachloroethane	U		0.000596	0.00500	1	07/09/2024 18:02	WG2319924
1,1,2-Trichloroethane	U		0.00145	0.00500	1	07/09/2024 18:02	WG2319924
1,1-Dichloroethene	U		0.00367	0.00500	1	07/09/2024 18:02	WG2319924
1,1-Dichloroethane	U		0.00292	0.00500	1	07/09/2024 18:02	WG2319924
1,2-Dibromoethane	U		0.000549	0.00200	1	07/09/2024 18:02	WG2319924
1,2-Dichlorobenzene	U		0.00172	0.00200	1	07/09/2024 18:02	WG2319924
1,2-Dichloroethane	U		0.00195	0.00500	1	07/09/2024 18:02	WG2319924
1,2-Dichloropropane	U		0.000804	0.00200	1	07/09/2024 18:02	WG2319924
1,3-Dichlorobenzene	U		0.00419	0.00500	1	07/09/2024 18:02	WG2319924
1,4-Dichlorobenzene	U		0.00173	0.00200	1	07/09/2024 18:02	WG2319924
2-Butanone (MEK)	U		0.00822	0.0250	1	07/09/2024 18:02	WG2319924
2-Chloroethyl vinyl ether	U	J6	0.00652	0.0100	1	07/09/2024 18:02	WG2319924
Acrolein	U		0.00544	0.0100	1	07/09/2024 18:02	WG2319924
Acrylonitrile	U		0.00709	0.0100	1	07/09/2024 18:02	WG2319924
Benzene	U		0.00207	0.00500	1	07/09/2024 18:02	WG2319924
Bromodichloromethane	U		0.00179	0.00200	1	07/09/2024 18:02	WG2319924
Bromoform	U		0.000960	0.0100	1	07/09/2024 18:02	WG2319924
Bromomethane	U		0.00347	0.00500	1	07/09/2024 18:02	WG2319924
Carbon tetrachloride	U		0.00159	0.00200	1	07/09/2024 18:02	WG2319924
Chlorobenzene	U		0.00276	0.0100	1	07/09/2024 18:02	WG2319924
Chloroethane	U		0.00296	0.00500	1	07/09/2024 18:02	WG2319924
Chloroform	U		0.00212	0.00500	1	07/09/2024 18:02	WG2319924
Chloromethane	U		0.00361	0.00500	1	07/09/2024 18:02	WG2319924
cis-1,3-Dichloropropene	U		0.00492	0.0100	1	07/09/2024 18:02	WG2319924
Dibromochloromethane	U		0.00327	0.00500	1	07/09/2024 18:02	WG2319924
Ethylbenzene	U		0.000401	0.00200	1	07/09/2024 18:02	WG2319924
Methylene Chloride	U		0.0117	0.0200	1	07/09/2024 18:02	WG2319924
Tetrachloroethene	U		0.00486	0.0100	1	07/09/2024 18:02	WG2319924
Toluene	U		0.00219	0.00500	1	07/09/2024 18:02	WG2319924
trans-1,2-Dichloroethene	U		0.00501	0.0100	1	07/09/2024 18:02	WG2319924
Trichloroethene	U		0.00262	0.00500	1	07/09/2024 18:02	WG2319924
Vinyl chloride	U		0.00466	0.00500	1	07/09/2024 18:02	WG2319924
(S) 1,2-Dichloroethane-d4	*93.9*			*70.0-130*		*07/09/2024 18:02*	WG2319924
(S) 4-Bromofluorobenzene	*94.4*			*70.0-130*		*07/09/2024 18:02*	WG2319924
(S) Toluene-d8	*97.8*			*70.0-130*		*07/09/2024 18:02*	WG2319924

Polychlorinated Biphenyls (GC) by Method EPA-608.3

Analyte	Result	Qualifier	MDL	RDL	Dilution	Analysis	Batch
	mg/l		mg/l	mg/l		date / time	
PCB 1016	U		0.000270	0.000500	1	07/14/2024 06:14	WG2322292
PCB 1221	U		0.000270	0.000500	1	07/14/2024 06:14	WG2322292
PCB 1232	U		0.000270	0.000500	1	07/14/2024 06:14	WG2322292
PCB 1242	U		0.000270	0.000500	1	07/14/2024 06:14	WG2322292
PCB 1248	U		0.000173	0.000500	1	07/14/2024 06:14	WG2322292
PCB 1254	U		0.000173	0.000500	1	07/14/2024 06:14	WG2322292
PCB 1260	U		0.000173	0.000500	1	07/14/2024 06:14	WG2322292
Total PCBs	U		0.000173	0.000500	1	07/14/2024 06:14	WG2322292
(S) Decachlorobiphenyl	*31.2*			*10.0-144*		*07/14/2024 06:14*	WG2322292
(S) Tetrachloro-m-xylene	*60.3*			*10.0-135*		*07/14/2024 06:14*	WG2322292

Semi Volatile Organic Compounds (GC/MS) by Method 625.1

Analyte	Result	Qualifier	MDL	RDL	Dilution	Analysis	Batch
	mg/l		mg/l	mg/l		date / time	
1,2,4,5-Tetrachlorobenzene	U		0.000200	0.00200	1	07/13/2024 15:45	WG2320434
2,4,6-Trichlorophenol	U		0.000238	0.00200	1	07/13/2024 15:45	WG2320434
2,4-Dichlorophenol	U		0.000336	0.00400	1	07/13/2024 15:45	WG2320434
2,4-Dimethylphenol	U		0.000613	0.00200	1	07/13/2024 15:45	WG2320434
2,4-Dinitrophenol	U		0.00154	0.0100	1	07/13/2024 15:45	WG2320434
2-Chlorophenol	U		0.000307	0.00200	1	07/13/2024 15:45	WG2320434
2-Methylphenol	U		0.000238	0.00200	1	07/13/2024 15:45	WG2320434
2-Nitrophenol	U		0.000247	0.00200	1	07/13/2024 15:45	WG2320434
3&4-Methyl Phenol	U		0.000238	0.00200	1	07/13/2024 15:45	WG2320434
3,3-Dichlorobenzidine	U		0.000788	0.00400	1	07/13/2024 15:45	WG2320434
4,6-Dinitro-2-methylphenol	U		0.00202	0.0100	1	07/13/2024 15:45	WG2320434
4-Chloro-3-methylphenol	U		0.000217	0.00200	1	07/13/2024 15:45	WG2320434
4-Nitrophenol	U		0.00123	0.0100	1	07/13/2024 15:45	WG2320434
Anthracene	U		0.000168	0.00200	1	07/13/2024 15:45	WG2320434
Benzidine	U		0.000350	0.00400	1	07/13/2024 15:45	WG2320434
Benzo(a)anthracene	U		0.000307	0.00200	1	07/13/2024 15:45	WG2320434
Benzo(a)pyrene	U		0.000470	0.00200	1	07/13/2024 15:45	WG2320434
Bis(2-chloroethyl)ether	U		0.000168	0.00200	1	07/13/2024 15:45	WG2320434
Bis(2-Ethylhexyl)phthalate	U		0.00180	0.00200	1	07/13/2024 15:45	WG2320434
Chrysene	U		0.000257	0.00200	1	07/13/2024 15:45	WG2320434
Di-n-butyl phthalate	U		0.00160	0.00200	1	07/13/2024 15:45	WG2320434
Hexachloro-1,3-butadiene	U		0.000217	0.00200	1	07/13/2024 15:45	WG2320434
Hexachlorobenzene	U		0.000307	0.00200	1	07/13/2024 15:45	WG2320434
Hexachlorocyclopentadiene	U		0.000299	0.00200	1	07/13/2024 15:45	WG2320434
Hexachloroethane	U		0.000247	0.00200	1	07/13/2024 15:45	WG2320434
n-Nitrosodi-n-butylamine	U		0.00110	0.00200	1	07/13/2024 15:45	WG2320434
n-Nitrosodiethylamine	U		0.000696	0.00200	1	07/13/2024 15:45	WG2320434
Nitrobenzene	U		0.000314	0.00200	1	07/13/2024 15:45	WG2320434
Nonylphenol	U		0.000168	0.00200	1	07/13/2024 15:45	WG2320434
Pentachlorobenzene	U		0.000247	0.00200	1	07/13/2024 15:45	WG2320434
Pentachlorophenol	U		0.000283	0.00200	1	07/13/2024 15:45	WG2320434
Phenanthrene	U		0.000200	0.00200	1	07/13/2024 15:45	WG2320434
Phenol	U		0.000500	0.00200	1	07/13/2024 15:45	WG2320434
Pyridine	U		0.00174	0.00400	1	07/13/2024 15:45	WG2320434
Total Cresols	U		0.00153	0.00800	1	07/13/2024 15:45	WG2320434
(S) 2,4,6-Tribromophenol	*49.6*			*29.0-132*		*07/13/2024 15:45*	WG2320434
(S) 2-Fluorobiphenyl	*76.0*			*26.0-102*		*07/13/2024 15:45*	WG2320434
(S) 2-Fluorophenol	*67.0*	J1		*10.0-66.0*		*07/13/2024 15:45*	WG2320434
(S) Nitrobenzene-d5	*75.5*			*15.0-106*		*07/13/2024 15:45*	WG2320434
(S) p-Terphenyl-d14	*84.5*			*10.0-120*		*07/13/2024 15:45*	WG2320434
(S) Phenol-D6	*61.0*	J1		*10.0-54.0*		*07/13/2024 15:45*	WG2320434

Method Blank (MB)

(MB) R4092654-1 07/10/24 17:12

Analyte	MB Result mg/l	MB Qualifier	MB MDL mg/l	MB RDL mg/l
Total Dissolved Solids	U		25.0	25.0

L1754191-01 Original Sample (OS) • Duplicate (DUP)

(OS) L1754191-01 07/10/24 17:12 • (DUP) R4092654-3 07/10/24 17:12

Analyte	Original Result mg/l	DUP Result mg/l	Dilution	DUP RPD %	DUP Qualifier	DUP RPD Limits %
Total Dissolved Solids	184	196	1	6.32		10

Laboratory Control Sample (LCS)

(LCS) R4092654-2 07/10/24 17:12

Analyte	Spike Amount mg/l	LCS Result mg/l	LCS Rec. %	Rec. Limits %	LCS Qualifier
Total Dissolved Solids	2410	2410	100	85.0-115	

Method Blank (MB)

(MB) R4092588-1 07/10/24 16:33

Analyte	MB Result mg/l	MB Qualifier	MB MDL mg/l	MB RDL mg/l
Suspended Solids	U		2.50	2.50

Laboratory Control Sample (LCS)

(LCS) R4092588-2 07/10/24 16:33

Analyte	Spike Amount mg/l	LCS Result mg/l	LCS Rec. %	Rec. Limits %	LCS Qualifier
Suspended Solids	879	803	91.4	85.0-115	

Method Blank (MB)

(MB) R4093012-1 07/11/24 15:24

Analyte	MB Result mg/l	MB Qualifier	MB MDL mg/l	MB RDL mg/l
Oil & Grease (Hexane Extr)	U		0.350	5.00

Laboratory Control Sample (LCS) • Laboratory Control Sample Duplicate (LCSD)

(LCS) R4093012-2 07/11/24 15:24 • (LCSD) R4093012-3 07/11/24 15:24

Analyte	Spike Amount mg/l	LCS Result mg/l	LCSD Result mg/l	LCS Rec. %	LCSD Rec. %	Rec. Limits %	LCS Qualifier	LCSD Qualifier	RPD %	RPD Limits %
Oil & Grease (Hexane Extr)	40.0	35.1	36.2	87.8	90.5	78.0-114			3.09	18

L1753541-02 Original Sample (OS) • Matrix Spike (MS)

(OS) L1753541-02 07/11/24 15:24 • (MS) R4093012-4 07/11/24 15:24

Analyte	Spike Amount mg/l	Original Result mg/l	MS Result mg/l	MS Rec. %	Dilution	Rec. Limits %	MS Qualifier
Oil & Grease (Hexane Extr)	40.0	U	36.8	92.0	1	78.0-114	

Method Blank (MB)

(MB) R4092474-1 07/10/24 10:40

Analyte	MB Result units	MB Qualifier	MB MDL units	MB RDL units
Color	U		5.00	5.00

Sample Narrative:

BLANK: 7

L1754283-01 Original Sample (OS) • Duplicate (DUP)

(OS) L1754283-01 07/10/24 10:40 • (DUP) R4092474-2 07/10/24 10:40

Analyte	Original Result units	DUP Result units	Dilution	DUP RPD %	DUP Qualifier	DUP RPD Limits %
Color	20.0	20.0	1	0.000		20

Sample Narrative:

OS: 7

DUP: 7

Method Blank (MB)

(MB) R4091456-1 07/09/24 09:39

Analyte	MB Result mg/l	MB Qualifier	MB MDL mg/l	MB RDL mg/l
Alkalinity	U		20.0	20.0

L1754191-01 Original Sample (OS) • Duplicate (DUP)

(OS) L1754191-01 07/09/24 09:39 • (DUP) R4091456-3 07/09/24 09:39

Analyte	Original Result mg/l	DUP Result mg/l	Dilution	DUP RPD %	DUP Qualifier	DUP RPD Limits %
Alkalinity	110	113	1	2.25		20

Laboratory Control Sample (LCS)

(LCS) R4091456-2 07/09/24 09:39

Analyte	Spike Amount mg/l	LCS Result mg/l	LCS Rec. %	Rec. Limits %	LCS Qualifier
Alkalinity	250	242	96.8	90.0-110	

Method Blank (MB)

(MB) R4093158-1 07/10/24 19:59

Analyte	MB Result mg/l	MB Qualifier	MB MDL mg/l	MB RDL mg/l
Bromide	U		0.353	1.00
Chloride	U		0.379	1.00
Fluoride	U		0.0640	0.150
Nitrate as (N)	U		0.0480	0.100
Sulfate	U		0.594	5.00

L1747043-13 Original Sample (OS) • Duplicate (DUP)

(OS) L1747043-13 07/10/24 20:26 • (DUP) R4093158-3 07/10/24 20:39

Analyte	Original Result mg/l	DUP Result mg/l	Dilution	DUP RPD %	DUP Qualifier	DUP RPD Limits %
Bromide	1.84	1.79	1	2.94		15
Chloride	67.4	64.7	1	4.05		15
Fluoride	0.125	0.116	1	7.49	J	15
Nitrate as (N)	2.69	2.58	1	4.08		15
Sulfate	95.6	91.0	1	4.92		15

L1754873-01 Original Sample (OS) • Duplicate (DUP)

(OS) L1754873-01 07/11/24 02:15 • (DUP) R4093158-6 07/11/24 02:28

Analyte	Original Result mg/l	DUP Result mg/l	Dilution	DUP RPD %	DUP Qualifier	DUP RPD Limits %
Bromide	0.637	0.595	1	6.79	J	15
Chloride	10.5	10.4	1	1.21		15
Fluoride	0.103	0.142	1	32.4	J P1	15
Nitrate as (N)	U	U	1	0.000		15
Sulfate	142	139	1	1.74		15

Laboratory Control Sample (LCS)

(LCS) R4093158-2 07/10/24 20:12

Analyte	Spike Amount mg/l	LCS Result mg/l	LCS Rec. %	Rec. Limits %	LCS Qualifier
Bromide	40.0	40.4	101	90.0-110	
Chloride	40.0	40.3	101	90.0-110	
Fluoride	8.00	8.11	101	90.0-110	
Nitrate as (N)	8.00	7.79	97.4	90.0-110	

Laboratory Control Sample (LCS)

(LCS) R4093158-2 07/10/24 20:12

Analyte	Spike Amount mg/l	LCS Result mg/l	LCS Rec. %	Rec. Limits %	LCS Qualifier
Sulfate	40.0	40.9	102	90.0-110	

L1747043-13 Original Sample (OS) • Matrix Spike (MS) • Matrix Spike Duplicate (MSD)

(OS) L1747043-13 07/10/24 20:26 • (MS) R4093158-4 07/10/24 20:53 • (MSD) R4093158-5 07/10/24 21:06

Analyte	Spike Amount mg/l	Original Result mg/l	MS Result mg/l	MSD Result mg/l	MS Rec. %	MSD Rec. %	Dilution	Rec. Limits %	MS Qualifier	MSD Qualifier	RPD %	RPD Limits %
Bromide	40.0	1.84	41.2	40.7	98.4	97.2	1	80.0-120			1.19	15
Chloride	40.0	67.4	93.0	91.9	64.0	61.4	1	80.0-120	J6	J6	1.12	15
Fluoride	8.00	0.125	8.34	7.99	103	98.4	1	80.0-120			4.18	15
Nitrate as (N)	8.00	2.69	10.1	9.98	92.6	91.1	1	80.0-120			1.15	15
Sulfate	40.0	95.6	115	112	48.9	42.2	1	80.0-120	J6	J6	2.36	15

L1754873-01 Original Sample (OS) • Matrix Spike (MS)

(OS) L1754873-01 07/11/24 02:15 • (MS) R4093158-7 07/11/24 02:42

Analyte	Spike Amount mg/l	Original Result mg/l	MS Result mg/l	MS Rec. %	Dilution	Rec. Limits %	MS Qualifier
Bromide	40.0	0.637	40.6	99.9	1	80.0-120	
Chloride	40.0	10.5	48.9	96.1	1	80.0-120	
Fluoride	8.00	0.103	8.07	99.5	1	80.0-120	
Nitrate as (N)	8.00	U	8.83	110	1	80.0-120	
Sulfate	40.0	142	149	17.3	1	80.0-120	J6

Method Blank (MB)

(MB) R4093286-1 07/12/24 19:03

Analyte	MB Result mg/l	MB Qualifier	MB MDL mg/l	MB RDL mg/l
Chromium,Hexavalent	U		0.00200	0.00300

Laboratory Control Sample (LCS)

(LCS) R4093286-2 07/12/24 19:03

Analyte	Spike Amount mg/l	LCS Result mg/l	LCS Rec. %	Rec. Limits %	LCS Qualifier
Chromium,Hexavalent	0.200	0.195	97.7	85.0-115	

L1756127-01 Original Sample (OS) • Matrix Spike (MS) • Matrix Spike Duplicate (MSD)

(OS) L1756127-01 07/12/24 19:03 • (MS) R4093286-3 07/12/24 19:03 • (MSD) R4093286-4 07/12/24 19:03

Analyte	Spike Amount mg/l	Original Result mg/l	MS Result mg/l	MSD Result mg/l	MS Rec. %	MSD Rec. %	Dilution	Rec. Limits %	MS Qualifier	MSD Qualifier	RPD %	RPD Limits %
Chromium,Hexavalent	0.200	U	0.204	0.202	102	101	1	10.0-120			0.842	20

Method Blank (MB)

(MB) R4094061-1 07/15/24 20:06

Analyte	MB Result	MB Qualifier	MB MDL	MB RDL
	mg/l		mg/l	mg/l
Kjeldahl Nitrogen, TKN	U		0.140	0.250

Laboratory Control Sample (LCS)

(LCS) R4094061-2 07/15/24 20:07

Analyte	Spike Amount	LCS Result	LCS Rec.	Rec. Limits	LCS Qualifier
	mg/l	mg/l	%	%	
Kjeldahl Nitrogen, TKN	4.00	4.27	107	90.0-110	

L1754191-01 Original Sample (OS) • Matrix Spike (MS) • Matrix Spike Duplicate (MSD)

(OS) L1754191-01 07/15/24 20:10 • (MS) R4094061-3 07/15/24 20:44 • (MSD) R4094061-4 07/15/24 20:45

Analyte	Spike Amount	Original Result	MS Result	MSD Result	MS Rec.	MSD Rec.	Dilution	Rec. Limits	MS Qualifier	MSD Qualifier	RPD	RPD Limits
	mg/l	mg/l	mg/l	mg/l	%	%		%			%	%
Kjeldahl Nitrogen, TKN	4.00	1.03	5.64	6.51	115	137	1	90.0-110	J5	J5	14.3	20

L1754283-01 Original Sample (OS) • Matrix Spike (MS) • Matrix Spike Duplicate (MSD)

(OS) L1754283-01 07/15/24 20:11 • (MS) R4094061-5 07/15/24 20:46 • (MSD) R4094061-6 07/15/24 20:48

Analyte	Spike Amount	Original Result	MS Result	MSD Result	MS Rec.	MSD Rec.	Dilution	Rec. Limits	MS Qualifier	MSD Qualifier	RPD	RPD Limits
	mg/l	mg/l	mg/l	mg/l	%	%		%			%	%
Kjeldahl Nitrogen, TKN	4.00	0.343	4.88	4.63	113	107	1	90.0-110	J5		5.26	20

Method Blank (MB)

(MB) R4093045-1 07/12/24 12:50

Analyte	MB Result mg/l	MB Qualifier	MB MDL mg/l	MB RDL mg/l
Nitrate-Nitrite	U		0.0300	0.0500

Laboratory Control Sample (LCS)

(LCS) R4093045-2 07/12/24 12:51

Analyte	Spike Amount mg/l	LCS Result mg/l	LCS Rec. %	Rec. Limits %	LCS Qualifier
Nitrate-Nitrite	2.50	2.40	96.0	90.0-110	

L1754182-01 Original Sample (OS) • Matrix Spike (MS) • Matrix Spike Duplicate (MSD)

(OS) L1754182-01 07/12/24 12:51 • (MS) R4093045-3 07/12/24 12:59 • (MSD) R4093045-4 07/12/24 13:00

Analyte	Spike Amount mg/l	Original Result mg/l	MS Result mg/l	MSD Result mg/l	MS Rec. %	MSD Rec. %	Dilution	Rec. Limits %	MS Qualifier	MSD Qualifier	RPD %	RPD Limits %
Nitrate-Nitrite	2.50	0.794	3.13	3.11	93.4	92.6	1	90.0-110			0.641	20

L1756836-01 Original Sample (OS) • Duplicate (DUP)

(OS) L1756836-01 07/16/24 14:05 • (DUP) R4094367-1 07/16/24 14:05

Analyte	Original Result mg/l	DUP Result mg/l	Dilution	DUP RPD %	DUP Qualifier	DUP RPD Limits %
Dissolved Oxygen	7.77	8.25	1	5.99		10

Method Blank (MB)

(MB) R4093561-1 07/14/24 11:59

Analyte	MB Result mg/l	MB Qualifier	MB MDL mg/l	MB RDL mg/l
Chlorine,residual	U		0.0260	0.100

L1754191-01 Original Sample (OS) • Duplicate (DUP)

(OS) L1754191-01 07/14/24 12:14 • (DUP) R4093561-3 07/14/24 12:15

Analyte	Original Result mg/l	DUP Result mg/l	Dilution	DUP RPD %	DUP Qualifier	DUP RPD Limits %
Chlorine,residual	0.0330	0.0340	1	2.99	J	20

Laboratory Control Sample (LCS)

(LCS) R4093561-2 07/14/24 12:13

Analyte	Spike Amount mg/l	LCS Result mg/l	LCS Rec. %	Rec. Limits %	LCS Qualifier
Chlorine,residual	1.00	0.960	96.0	85.0-115	

Method Blank (MB)

(MB) R4092740-1 07/11/24 16:58

Analyte	MB Result mg/l	MB Qualifier	MB MDL mg/l	MB RDL mg/l
Cyanide	U		0.00430	0.0100

Laboratory Control Sample (LCS)

(LCS) R4092740-2 07/11/24 16:58

Analyte	Spike Amount mg/l	LCS Result mg/l	LCS Rec. %	Rec. Limits %	LCS Qualifier
Cyanide	0.100	0.0908	90.8	85.0-115	

L1754359-01 Original Sample (OS) • Matrix Spike (MS) • Matrix Spike Duplicate (MSD)

(OS) L1754359-01 07/11/24 16:58 • (MS) R4092740-3 07/11/24 16:58 • (MSD) R4092740-4 07/11/24 16:58

Analyte	Spike Amount mg/l	Original Result mg/l	MS Result mg/l	MSD Result mg/l	MS Rec. %	MSD Rec. %	Dilution	Rec. Limits %	MS Qualifier	MSD Qualifier	RPD %	RPD Limits %
Cyanide	0.100	U	0.0928	0.0928	92.8	92.8	1	85.0-115			0.000	20

Method Blank (MB)

(MB) R4091941-1 07/10/24 10:09

Analyte	MB Result mg/l	MB Qualifier	MB MDL mg/l	MB RDL mg/l
Phosphorus,Total	U		0.0152	0.0500

Laboratory Control Sample (LCS)

(LCS) R4091941-2 07/10/24 10:09

Analyte	Spike Amount mg/l	LCS Result mg/l	LCS Rec. %	Rec. Limits %	LCS Qualifier
Phosphorus,Total	0.500	0.522	104	80.0-120	

L1753186-01 Original Sample (OS) • Matrix Spike (MS) • Matrix Spike Duplicate (MSD)

(OS) L1753186-01 07/10/24 10:09 • (MS) R4091941-3 07/10/24 10:11 • (MSD) R4091941-4 07/10/24 10:11

Analyte	Spike Amount mg/l	Original Result mg/l	MS Result mg/l	MSD Result mg/l	MS Rec. %	MSD Rec. %	Dilution	Rec. Limits %	MS Qualifier	MSD Qualifier	RPD %	RPD Limits %
Phosphorus,Total	0.500	2.51	2.70	2.79	38.4	55.9	5	80.0-120	V	V	3.18	20

L1753974-01 Original Sample (OS) • Matrix Spike (MS) • Matrix Spike Duplicate (MSD)

(OS) L1753974-01 07/10/24 10:10 • (MS) R4091941-5 07/10/24 10:11 • (MSD) R4091941-6 07/10/24 10:11

Analyte	Spike Amount mg/l	Original Result mg/l	MS Result mg/l	MSD Result mg/l	MS Rec. %	MSD Rec. %	Dilution	Rec. Limits %	MS Qualifier	MSD Qualifier	RPD %	RPD Limits %
Phosphorus,Total	0.500	0.0327	0.564	0.548	106	103	1	80.0-120			2.93	20

Method Blank (MB)

(MB) R4091612-1 07/09/24 15:00

Analyte	MB Result mg/l	MB Qualifier	MB MDL mg/l	MB RDL mg/l
Sulfide	U		0.0230	0.100

Laboratory Control Sample (LCS)

(LCS) R4091612-2 07/09/24 15:00

Analyte	Spike Amount mg/l	LCS Result mg/l	LCS Rec. %	Rec. Limits %	LCS Qualifier
Sulfide	0.800	0.850	106	80.0-120	

L1753522-01 Original Sample (OS) • Matrix Spike (MS) • Matrix Spike Duplicate (MSD)

(OS) L1753522-01 07/09/24 15:00 • (MS) R4091612-3 07/09/24 15:03 • (MSD) R4091612-4 07/09/24 15:03

Analyte	Spike Amount mg/l	Original Result mg/l	MS Result mg/l	MSD Result mg/l	MS Rec. %	MSD Rec. %	Dilution	Rec. Limits %	MS Qualifier	MSD Qualifier	RPD %	RPD Limits %
Sulfide	0.800	U	0.772	0.769	96.5	96.1	1	80.0-120			0.453	20

Method Blank (MB)

(MB) R4093789-1 07/15/24 11:20

Analyte	MB Result mg/l	MB Qualifier	MB MDL mg/l	MB RDL mg/l
Sulfite	U		1.19	3.00

L1754191-01 Original Sample (OS) • Duplicate (DUP)

(OS) L1754191-01 07/15/24 11:20 • (DUP) R4093789-3 07/15/24 11:20

Analyte	Original Result mg/l	DUP Result mg/l	Dilution	DUP RPD %	DUP Qualifier	DUP RPD Limits %
Sulfite	U	U	1	0.000		20

Laboratory Control Sample (LCS)

(LCS) R4093789-2 07/15/24 11:20

Analyte	Spike Amount mg/l	LCS Result mg/l	LCS Rec. %	Rec. Limits %	LCS Qualifier
Sulfite	20.0	18.0	90.0	85.0-115	

L1754283-01 Original Sample (OS) • Matrix Spike (MS) • Matrix Spike Duplicate (MSD)

(OS) L1754283-01 07/15/24 11:20 • (MS) R4093789-4 07/15/24 11:20 • (MSD) R4093789-5 07/15/24 11:20

Analyte	Spike Amount mg/l	Original Result mg/l	MS Result mg/l	MSD Result mg/l	MS Rec. %	MSD Rec. %	Dilution	Rec. Limits %	MS Qualifier	MSD Qualifier	RPD %	RPD Limits %
Sulfite	20.0	U	19.0	18.5	95.0	92.5	1	85.0-115			2.67	20

Method Blank (MB)

(MB) R4093354-1 07/13/24 09:30

Analyte	MB Result mg/l	MB Qualifier	MB MDL mg/l	MB RDL mg/l
BOD	U		0.200	0.200

L1754142-01 Original Sample (OS) • Duplicate (DUP)

(OS) L1754142-01 07/13/24 09:40 • (DUP) R4093354-3 07/13/24 09:44

Analyte	Original Result mg/l	DUP Result mg/l	Dilution	DUP RPD %	DUP Qualifier	DUP RPD Limits %
BOD	349	332	1	5.11		20

Laboratory Control Sample (LCS)

(LCS) R4093354-2 07/13/24 09:36

Analyte	Spike Amount mg/l	LCS Result mg/l	LCS Rec. %	Rec. Limits %	LCS Qualifier
BOD	198	188	95	85-115	

Method Blank (MB)

(MB) R4093367-1 07/13/24 09:54

Analyte	MB Result mg/l	MB Qualifier	MB MDL mg/l	MB RDL mg/l
CBOD	U		0.200	0.200

L1754163-02 Original Sample (OS) • Duplicate (DUP)

(OS) L1754163-02 07/13/24 10:21 • (DUP) R4093367-3 07/13/24 10:22

Analyte	Original Result mg/l	DUP Result mg/l	Dilution	DUP RPD %	DUP Qualifier	DUP RPD Limits %
CBOD	1.57	1.62	1	3.13		20

Laboratory Control Sample (LCS)

(LCS) R4093367-2 07/13/24 09:59

Analyte	Spike Amount mg/l	LCS Result mg/l	LCS Rec. %	Rec. Limits %	LCS Qualifier
CBOD	198	189	95.3	85-115	

Method Blank (MB)

(MB) R4091496-1 07/09/24 12:02

Analyte	MB Result mg/l	MB Qualifier	MB MDL mg/l	MB RDL mg/l
COD	U		16.1	35.0

Laboratory Control Sample (LCS)

(LCS) R4091496-2 07/09/24 12:02

Analyte	Spike Amount mg/l	LCS Result mg/l	LCS Rec. %	Rec. Limits %	LCS Qualifier
COD	500	509	102	80.0-120	

L1754191-01 Original Sample (OS) • Matrix Spike (MS) • Matrix Spike Duplicate (MSD)

(OS) L1754191-01 07/09/24 12:02 • (MS) R4091496-3 07/09/24 12:02 • (MSD) R4091496-4 07/09/24 12:02

Analyte	Spike Amount mg/l	Original Result mg/l	MS Result mg/l	MSD Result mg/l	MS Rec. %	MSD Rec. %	Dilution	Rec. Limits %	MS Qualifier	MSD Qualifier	RPD %	RPD Limits %
COD	500	25.4	526	532	100	101	1	80.0-120			1.20	20

Method Blank (MB)

(MB) R4092962-1 07/11/24 16:22

Analyte	MB Result mg/l	MB Qualifier	MB MDL mg/l	MB RDL mg/l
TOC (Total Organic Carbon)	U		0.270	0.700

Laboratory Control Sample (LCS)

(LCS) R4092962-2 07/11/24 16:42

Analyte	Spike Amount mg/l	LCS Result mg/l	LCS Rec. %	Rec. Limits %	LCS Qualifier
TOC (Total Organic Carbon)	10.0	10.4	104	90.0-110	

L1754776-01 Original Sample (OS) • Matrix Spike (MS) • Matrix Spike Duplicate (MSD)

(OS) L1754776-01 07/11/24 17:08 • (MS) R4092962-3 07/11/24 17:54 • (MSD) R4092962-4 07/11/24 18:14

Analyte	Spike Amount mg/l	Original Result mg/l	MS Result mg/l	MSD Result mg/l	MS Rec. %	MSD Rec. %	Dilution	Rec. Limits %	MS Qualifier	MSD Qualifier	RPD %	RPD Limits %
TOC (Total Organic Carbon)	100	30.8	127	127	96.3	96.3	10	80.0-120			0.000	20

Method Blank (MB)

(MB) R4092475-1 07/09/24 19:02

Analyte	MB Result mg/l	MB Qualifier	MB MDL mg/l	MB RDL mg/l
MBAS	U		0.360	0.500

Laboratory Control Sample (LCS)

(LCS) R4092475-2 07/09/24 19:02

Analyte	Spike Amount mg/l	LCS Result mg/l	LCS Rec. %	Rec. Limits %	LCS Qualifier
MBAS	1.00	1.17	117	80.0-120	

L1754283-01 Original Sample (OS) • Matrix Spike (MS) • Matrix Spike Duplicate (MSD)

(OS) L1754283-01 07/09/24 19:02 • (MS) R4092475-3 07/09/24 19:02 • (MSD) R4092475-4 07/09/24 19:02

Analyte	Spike Amount mg/l	Original Result mg/l	MS Result mg/l	MSD Result mg/l	MS Rec. %	MSD Rec. %	Dilution	Rec. Limits %	MS Qualifier	MSD Qualifier	RPD %	RPD Limits %
MBAS	1.00	U	1.20	1.25	120	125	1	80.0-120		J5	3.87	20

L1754340-01 Original Sample (OS) • Duplicate (DUP)

(OS) L1754340-01 07/11/24 09:01 • (DUP) R4092476-2 07/11/24 09:01

Analyte	Original Result	DUP Result	Dilution	DUP RPD	DUP Qualifier	DUP RPD Limits
	su	su		%		%
pH	7.61	7.62	1	0.131		20

Sample Narrative:
OS: 7.61 at 19.6C
DUP: 7.62 at 19.3C

Laboratory Control Sample (LCS)

(LCS) R4092476-1 07/11/24 09:01

Analyte	Spike Amount	LCS Result	LCS Rec.	Rec. Limits	LCS Qualifier
	su	su	%	%	
pH	6.00	5.99	99.8	99.0-101	

Sample Narrative:
LCS: 5.99 at 22C

Method Blank (MB)

(MB) R4092766-1 07/11/24 16:29

Analyte	MB Result mg/l	MB Qualifier	MB MDL mg/l	MB RDL mg/l
Ammonia Nitrogen	0.0285	J	0.0280	0.100

Laboratory Control Sample (LCS)

(LCS) R4092766-2 07/11/24 16:30

Analyte	Spike Amount mg/l	LCS Result mg/l	LCS Rec. %	Rec. Limits %	LCS Qualifier
Ammonia Nitrogen	5.00	5.28	106	80.0-120	

L1754163-02 Original Sample (OS) • Matrix Spike (MS) • Matrix Spike Duplicate (MSD)

(OS) L1754163-02 07/11/24 16:39 • (MS) R4092766-3 07/11/24 16:32 • (MSD) R4092766-4 07/11/24 16:34

Analyte	Spike Amount mg/l	Original Result mg/l	MS Result mg/l	MSD Result mg/l	MS Rec. %	MSD Rec. %	Dilution	Rec. Limits %	MS Qualifier	MSD Qualifier	RPD %	RPD Limits %
Ammonia Nitrogen	5.00	0.369	5.44	5.43	101	101	1	80.0-120			0.184	20

L1754191-01 Original Sample (OS) • Matrix Spike (MS) • Matrix Spike Duplicate (MSD)

(OS) L1754191-01 07/11/24 16:41 • (MS) R4092766-5 07/11/24 16:36 • (MSD) R4092766-6 07/11/24 16:37

Analyte	Spike Amount mg/l	Original Result mg/l	MS Result mg/l	MSD Result mg/l	MS Rec. %	MSD Rec. %	Dilution	Rec. Limits %	MS Qualifier	MSD Qualifier	RPD %	RPD Limits %
Ammonia Nitrogen	5.00	U	5.12	5.15	102	103	1	80.0-120			0.584	20

Method Blank (MB)

(MB) R4092198-3 07/10/24 16:35

Analyte	MB Result mg/l	MB Qualifier	MB MDL mg/l	MB RDL mg/l
Mercury	0.0000450	J	0.0000450	0.000200

Laboratory Control Sample (LCS)

(LCS) R4092198-4 07/10/24 16:37

Analyte	Spike Amount mg/l	LCS Result mg/l	LCS Rec. %	Rec. Limits %	LCS Qualifier
Mercury	0.00250	0.00227	90.8	85.0-115	

L1753552-01 Original Sample (OS) • Matrix Spike (MS) • Matrix Spike Duplicate (MSD)

(OS) L1753552-01 07/10/24 16:40 • (MS) R4092198-5 07/10/24 16:42 • (MSD) R4092198-6 07/10/24 16:44

Analyte	Spike Amount mg/l	Original Result mg/l	MS Result mg/l	MSD Result mg/l	MS Rec. %	MSD Rec. %	Dilution	Rec. Limits %	MS Qualifier	MSD Qualifier	RPD %	RPD Limits %
Mercury	0.00250	0.0000520	0.00170	0.00171	65.9	66.3	1	70.0-130	J6	J6	0.587	20

Method Blank (MB)

(MB) R4092733-2 07/11/24 13:15

Analyte	MB Result mg/l	MB Qualifier	MB MDL mg/l	MB RDL mg/l
Boron	U		0.0186	0.100
Tin	U		0.00240	0.0250
Titanium	U		0.00835	0.100

Laboratory Control Sample (LCS)

(LCS) R4092733-1 07/11/24 13:12

Analyte	Spike Amount mg/l	LCS Result mg/l	LCS Rec. %	Rec. Limits %	LCS Qualifier
Boron	1.00	0.962	96.2	85.0-115	
Tin	1.00	0.999	99.9	85.0-115	
Titanium	1.00	0.996	99.6	85.0-115	

Method Blank (MB)

(MB) R4092396-1 07/10/24 19:45

Analyte	MB Result mg/l	MB Qualifier	MB MDL mg/l	MB RDL mg/l
Antimony	U		0.000580	0.00500
Arsenic	0.000137	J	0.000100	0.000500
Barium	U		0.000440	0.00300
Beryllium	U		0.0000600	0.000500
Cadmium	U		0.000120	0.00100
Chromium	U		0.000510	0.00300
Cobalt	0.0000413	J	0.0000400	0.000300
Iron	0.00498	J	0.00432	0.00700
Lead	U		0.000140	0.000500
Magnesium	U		0.0121	0.0200
Manganese	0.000528		0.000330	0.000500
Molybdenum	U		0.000530	0.00100
Nickel	U		0.000640	0.00200
Selenium	U		0.000740	0.00500
Silver	U		0.0000800	0.000500

Method Blank (MB)

(MB) R4092655-1 07/11/24 14:06

Analyte	MB Result mg/l	MB Qualifier	MB MDL mg/l	MB RDL mg/l
Aluminum	0.00824		0.00186	0.00250
Copper	U		0.000900	0.00200
Thallium	U		0.000190	0.000500
Zinc	U		0.00265	0.00500

Laboratory Control Sample (LCS)

(LCS) R4092396-2 07/10/24 19:51

Analyte	Spike Amount mg/l	LCS Result mg/l	LCS Rec. %	Rec. Limits %	LCS Qualifier
Antimony	0.100	0.0953	95.3	85.0-115	
Arsenic	0.100	0.0925	92.5	85.0-115	
Barium	0.100	0.0975	97.5	85.0-115	
Beryllium	0.100	0.0906	90.6	85.0-115	
Cadmium	0.100	0.0946	94.6	85.0-115	
Chromium	0.100	0.0950	95.0	85.0-115	
Cobalt	0.100	0.0927	92.7	85.0-115	
Iron	1.00	0.940	94.0	85.0-115	

Laboratory Control Sample (LCS)

(LCS) R4092396-2 07/10/24 19:51

Analyte	Spike Amount mg/l	LCS Result mg/l	LCS Rec. %	Rec. Limits %	LCS Qualifier
Lead	0.100	0.0928	92.8	85.0-115	
Magnesium	1.00	0.959	95.9	85.0-115	
Manganese	0.100	0.0958	95.8	85.0-115	
Molybdenum	0.100	0.0960	96.0	85.0-115	
Nickel	0.100	0.0908	90.8	85.0-115	
Selenium	0.100	0.0938	93.8	85.0-115	
Silver	0.0500	0.0477	95.3	85.0-115	

Laboratory Control Sample (LCS)

(LCS) R4092655-2 07/11/24 14:12

Analyte	Spike Amount mg/l	LCS Result mg/l	LCS Rec. %	Rec. Limits %	LCS Qualifier
Aluminum	1.00	0.973	97.3	85.0-115	
Copper	0.100	0.102	102	85.0-115	
Thallium	0.100	0.0921	92.1	85.0-115	
Zinc	0.100	0.0972	97.2	85.0-115	

L1752768-10 Original Sample (OS) • Matrix Spike (MS) • Matrix Spike Duplicate (MSD)

(OS) L1752768-10 07/10/24 20:10 • (MS) R4092396-3 07/10/24 20:16 • (MSD) R4092396-4 07/10/24 20:22

Analyte	Spike Amount mg/l	Original Result mg/l	MS Result mg/l	MSD Result mg/l	MS Rec. %	MSD Rec. %	Dilution	Rec. Limits %	MS Qualifier	MSD Qualifier	RPD %	RPD Limits %
Antimony	0.100	0.000718	0.0936	0.0921	92.9	91.3	1	70.0-130			1.66	20
Arsenic	0.100	0.00198	0.0912	0.0924	89.2	90.4	1	70.0-130			1.35	20
Barium	0.100	0.0649	0.156	0.157	90.8	91.7	1	70.0-130			0.574	20
Beryllium	0.100	U	0.0895	0.0896	89.5	89.6	1	70.0-130			0.215	20
Cadmium	0.100	U	0.0859	0.0894	85.9	89.4	1	70.0-130			3.93	20
Chromium	0.100	0.000624	0.0883	0.0890	87.7	88.3	1	70.0-130			0.752	20
Cobalt	0.100	0.000235	0.0864	0.0882	86.1	88.0	1	70.0-130			2.08	20
Iron	1.00	0.0356	0.891	0.912	85.5	87.6	1	70.0-130			2.33	20
Lead	0.100	U	0.0870	0.0869	87.0	86.9	1	70.0-130			0.0364	20
Magnesium	1.00	14.9	15.1	15.7	16.7	73.0	1	70.0-130	V		3.66	20
Manganese	0.100	0.0249	0.110	0.113	84.9	88.6	1	70.0-130			3.30	20
Molybdenum	0.100	0.00356	0.0956	0.0981	92.0	94.6	1	70.0-130			2.62	20
Nickel	0.100	0.00232	0.0862	0.0876	83.9	85.2	1	70.0-130			1.59	20
Selenium	0.100	0.00164	0.0918	0.0942	90.2	92.6	1	70.0-130			2.53	20
Silver	0.0500	U	0.0443	0.0452	88.5	90.4	1	70.0-130			2.12	20

L1753977-02 Original Sample (OS) • Matrix Spike (MS) • Matrix Spike Duplicate (MSD)

(OS) L1753977-02 07/10/24 21:31 • (MS) R4092396-5 07/10/24 21:38 • (MSD) R4092396-6 07/10/24 21:44

Analyte	Spike Amount mg/l	Original Result mg/l	MS Result mg/l	MSD Result mg/l	MS Rec. %	MSD Rec. %	Dilution	Rec. Limits %	MS Qualifier	MSD Qualifier	RPD %	RPD Limits %
Antimony	0.100	U	0.103	0.0995	103	99.5	1	70.0-130			3.92	20
Barium	0.100	0.0577	0.162	0.157	104	99.2	1	70.0-130			3.09	20
Cadmium	0.100	U	0.102	0.0985	102	98.5	1	70.0-130			3.77	20
Chromium	0.100	0.00109	0.105	0.102	104	101	1	70.0-130			3.07	20
Lead	0.100	0.000216	0.101	0.0982	101	98.0	1	70.0-130			2.79	20
Manganese	0.100	0.171	0.274	0.268	103	97.6	1	70.0-130			2.02	20
Molybdenum	0.100	0.00727	0.113	0.110	105	103	1	70.0-130			2.31	20
Selenium	0.100	U	0.0945	0.105	94.5	105	1	70.0-130			10.0	20
Silver	0.0500	U	0.0507	0.0494	101	98.8	1	70.0-130			2.50	20

L1752768-10 Original Sample (OS) • Matrix Spike (MS) • Matrix Spike Duplicate (MSD)

(OS) L1752768-10 07/11/24 14:31 • (MS) R4092655-3 07/11/24 14:37 • (MSD) R4092655-4 07/11/24 14:43

Analyte	Spike Amount mg/l	Original Result mg/l	MS Result mg/l	MSD Result mg/l	MS Rec. %	MSD Rec. %	Dilution	Rec. Limits %	MS Qualifier	MSD Qualifier	RPD %	RPD Limits %
Aluminum	1.00	0.0394	0.972	0.996	93.3	95.7	1	70.0-130			2.43	20
Copper	0.100	0.00526	0.102	0.104	97.1	98.3	1	70.0-130			1.17	20
Thallium	0.100	U	0.0893	0.0923	89.3	92.3	1	70.0-130			3.28	20
Zinc	0.100	0.0484	0.141	0.142	92.3	93.7	1	70.0-130			1.02	20

L1753977-02 Original Sample (OS) • Matrix Spike (MS) • Matrix Spike Duplicate (MSD)

(OS) L1753977-02 07/11/24 17:03 • (MS) R4092655-5 07/11/24 17:10 • (MSD) R4092655-6 07/11/24 17:17

Analyte	Spike Amount mg/l	Original Result mg/l	MS Result mg/l	MSD Result mg/l	MS Rec. %	MSD Rec. %	Dilution	Rec. Limits %	MS Qualifier	MSD Qualifier	RPD %	RPD Limits %
Arsenic	0.100	0.00126	0.0982	0.0969	96.9	95.7	1	70.0-130			1.25	20
Beryllium	0.100	U	0.0979	0.0965	97.9	96.5	1	70.0-130			1.45	20
Cobalt	0.100	0.000213	0.0996	0.0988	99.4	98.6	1	70.0-130			0.823	20
Copper	0.100	U	0.101	0.100	101	100	1	70.0-130			0.503	20
Iron	1.00	0.538	1.51	1.47	97.0	93.5	1	70.0-130			2.37	20
Magnesium	1.00	3.86	4.82	4.73	96.1	86.6	1	70.0-130			1.99	20
Nickel	0.100	0.00152	0.102	0.0996	100	98.1	1	70.0-130			2.11	20
Thallium	0.100	U	0.0888	0.0907	88.8	90.7	1	70.0-130			2.15	20
Zinc	0.100	U	0.0953	0.0957	95.3	95.7	1	70.0-130			0.385	20

Method Blank (MB)

(MB) R4091976-2 07/09/24 17:32

Analyte	MB Result mg/l	MB Qualifier	MB MDL mg/l	MB RDL mg/l
1,1,1-Trichloroethane	U		0.00335	0.00500
1,1,2,2-Tetrachloroethane	U		0.000596	0.00500
1,1,2-Trichloroethane	U		0.00145	0.00500
1,1-Dichloroethene	U		0.00367	0.00500
1,1-Dichloroethane	U		0.00292	0.00500
1,2-Dibromoethane	U		0.000549	0.00200
1,2-Dichlorobenzene	U		0.00172	0.00200
1,2-Dichloroethane	U		0.00195	0.00500
1,2-Dichloropropane	U		0.000804	0.00200
1,3-Dichlorobenzene	U		0.00419	0.00500
1,4-Dichlorobenzene	U		0.00173	0.00200
2-Butanone (MEK)	U		0.00822	0.0250
2-Chloroethyl vinyl ether	U		0.00652	0.0100
Acrolein	U		0.00544	0.0100
Acrylonitrile	U		0.00709	0.0100
Benzene	U		0.00207	0.00500
Bromodichloromethane	U		0.00179	0.00200
Bromoform	U		0.000960	0.0100
Bromomethane	U		0.00347	0.00500
Carbon tetrachloride	U		0.00159	0.00200
Chlorobenzene	U		0.00276	0.0100
Chloroethane	U		0.00296	0.00500
Chloroform	U		0.00212	0.00500
Chloromethane	U		0.00361	0.00500
cis-1,3-Dichloropropene	U		0.00492	0.0100
Dibromochloromethane	U		0.00327	0.00500
Ethylbenzene	U		0.000401	0.00200
Methylene Chloride	U		0.0118	0.0200
Tetrachloroethene	U		0.00486	0.0100
Toluene	0.00317	J	0.00219	0.00500
trans-1,2-Dichloroethene	U		0.00501	0.0100
Trichloroethene	U		0.00262	0.00500
Vinyl chloride	U		0.00466	0.00500
(S) 1,2-Dichloroethane-d4	*93.5*			*70.0-130*
(S) 4-Bromofluorobenzene	*99.6*			*70.0-130*
(S) Toluene-d8	*97.4*			*70.0-130*

Laboratory Control Sample (LCS)

(LCS) R4091976-1 07/09/24 16:24

Analyte	Spike Amount mg/l	LCS Result mg/l	LCS Rec. %	Rec. Limits %	LCS Qualifier
1,1,1-Trichloroethane	0.0200	0.0201	101	70.0-130	
1,1,2,2-Tetrachloroethane	0.0200	0.0185	92.5	60.0-140	
1,1,2-Trichloroethane	0.0200	0.0190	95.0	70.0-130	
1,1-Dichloroethene	0.0200	0.0195	97.5	50.0-150	
1,1-Dichloroethane	0.0200	0.0203	102	70.0-130	
1,2-Dibromoethane	0.0200	0.0186	93.0	70.0-130	
1,2-Dichlorobenzene	0.0200	0.0203	102	65.0-135	
1,2-Dichloroethane	0.0200	0.0202	101	70.0-130	
1,2-Dichloropropane	0.0200	0.0181	90.5	35.0-165	
1,3-Dichlorobenzene	0.0200	0.0195	97.5	70.0-130	
1,4-Dichlorobenzene	0.0200	0.0192	96.0	65.0-135	
2-Butanone (MEK)	0.100	0.0829	82.9	70.0-130	
2-Chloroethyl vinyl ether	0.100	0.0529	52.9	1.00-225	
Acrolein	0.100	0.105	105	64.0-139	
Acrylonitrile	0.100	0.104	104	67.0-136	
Benzene	0.0200	0.0197	98.5	65.0-135	
Bromodichloromethane	0.0200	0.0203	102	65.0-135	
Bromoform	0.0200	0.0233	117	70.0-130	
Bromomethane	0.0200	0.0329	165	15.0-185	
Carbon tetrachloride	0.0200	0.0216	108	70.0-130	
Chlorobenzene	0.0200	0.0196	98.0	65.0-135	
Chloroethane	0.0200	0.0214	107	40.0-160	
Chloroform	0.0200	0.0207	104	70.0-135	
Chloromethane	0.0200	0.0159	79.5	1.00-205	
cis-1,3-Dichloropropene	0.0200	0.0177	88.5	25.0-175	
Dibromochloromethane	0.0200	0.0202	101	70.0-135	
Ethylbenzene	0.0200	0.0197	98.5	60.0-140	
Methylene Chloride	0.0200	0.0221	111	60.0-140	
Tetrachloroethene	0.0200	0.0181	90.5	70.0-130	
Toluene	0.0200	0.0196	98.0	70.0-130	
trans-1,2-Dichloroethene	0.0200	0.0206	103	70.0-130	
Trichloroethene	0.0200	0.0201	101	65.0-135	
Vinyl chloride	0.0200	0.0208	104	5.00-195	
(S) 1,2-Dichloroethane-d4			*95.4*	*70.0-130*	
(S) 4-Bromofluorobenzene			*91.3*	*70.0-130*	
(S) Toluene-d8			*99.6*	*70.0-130*	

L1754191-01 Original Sample (OS) • Matrix Spike (MS) • Matrix Spike Duplicate (MSD)

(OS) L1754191-01 07/09/24 18:02 • (MS) R4091976-3 07/09/24 18:26 • (MSD) R4091976-4 07/09/24 18:51

Analyte	Spike Amount mg/l	Original Result mg/l	MS Result mg/l	MSD Result mg/l	MS Rec. %	MSD Rec. %	Dilution	Rec. Limits %	MS Qualifier	MSD Qualifier	RPD %	RPD Limits %
1,1,1-Trichloroethane	0.0199	U	0.0200	0.0203	101	102	1	52.0-162			1.49	36
1,1,2,2-Tetrachloroethane	0.0201	U	0.0183	0.0188	91.0	93.5	1	46.0-157			2.70	61
1,1,2-Trichloroethane	0.0199	U	0.0194	0.0193	97.5	97.0	1	52.0-150			0.517	45
1,1-Dichloroethene	0.0200	U	0.0203	0.0203	102	102	1	1.00-234			0.000	32
1,1-Dichloroethane	0.0200	U	0.0214	0.0211	107	105	1	59.0-155			1.41	40
1,2-Dibromoethane	0.0200	U	0.0184	0.0187	92.0	93.5	1	70.0-130			1.62	20
1,2-Dichlorobenzene	0.0200	U	0.0212	0.0213	106	106	1	18.0-190			0.471	57
1,2-Dichloroethane	0.0200	U	0.0208	0.0209	104	105	1	49.0-155			0.480	49
1,2-Dichloropropane	0.0199	U	0.0185	0.0185	93.0	93.0	1	1.00-210			0.000	55
1,3-Dichlorobenzene	0.0199	U	0.0203	0.0205	102	103	1	59.0-156			0.980	43
1,4-Dichlorobenzene	0.0200	U	0.0201	0.0201	101	101	1	18.0-190			0.000	57
2-Butanone (MEK)	0.100	U	0.0762	0.0774	76.2	77.4	1	70.0-130			1.56	20
2-Chloroethyl vinyl ether	0.100	U	U	U	0.000	0.000	1	1.00-305	J6	J6	0.000	71
Acrolein	0.100	U	0.0936	0.0921	93.6	92.1	1	4.00-172			1.62	20
Acrylonitrile	0.100	U	0.0986	0.104	98.6	104	1	22.0-189			5.33	20
Benzene	0.0200	U	0.0204	0.0202	102	101	1	37.0-151			0.985	61
Bromodichloromethane	0.0199	U	0.0203	0.0199	102	100	1	35.0-155			1.99	56
Bromoform	0.0198	U	0.0225	0.0229	114	116	1	70.0-130			1.76	42
Bromomethane	0.0200	U	0.0261	0.0283	131	142	1	15.0-185			8.09	61
Carbon tetrachloride	0.0200	U	0.0224	0.0225	112	113	1	70.0-140			0.445	41
Chlorobenzene	0.0200	U	0.0203	0.0205	102	103	1	37.0-160			0.980	53
Chloroethane	0.0200	U	0.0203	0.0198	102	99.0	1	14.0-230			2.49	78
Chloroform	0.0200	U	0.0212	0.0215	106	108	1	51.0-138			1.41	54
Chloromethane	0.0200	U	0.0133	0.0137	66.5	68.5	1	1.00-273			2.96	20
cis-1,3-Dichloropropene	0.0200	U	0.0179	0.0181	89.5	90.5	1	1.00-227			1.11	58
Dibromochloromethane	0.0198	U	0.0204	0.0202	103	102	1	53.0-149			0.985	50
Ethylbenzene	0.0200	U	0.0211	0.0209	105	105	1	37.0-162			0.952	63
Methylene Chloride	0.0204	U	0.0193	0.0198	94.6	97.1	1	1.00-221	J	J	2.56	28
Tetrachloroethene	0.0200	U	0.0194	0.0193	97.0	96.5	1	64.0-148			0.517	39
Toluene	0.0200	U	0.0208	0.0206	104	103	1	47.0-150			0.966	41
trans-1,2-Dichloroethene	0.0200	U	0.0213	0.0213	106	106	1	54.0-156			0.000	45
Trichloroethene	0.0200	U	0.0215	0.0213	108	106	1	70.0-157			0.935	48
Vinyl chloride	0.0200	U	0.0189	0.0187	94.5	93.5	1	1.00-251			1.06	66
(S) 1,2-Dichloroethane-d4					*97.2*	*97.9*		*70.0-130*				
(S) 4-Bromofluorobenzene					*90.3*	*91.8*		*70.0-130*				
(S) Toluene-d8					*101*	*100*		*70.0-130*				

Method Blank (MB)

(MB) R4093629-1 07/14/24 04:29

Analyte	MB Result mg/l	MB Qualifier	MB MDL mg/l	MB RDL mg/l
PCB 1016	U		0.000270	0.000500
PCB 1221	U		0.000270	0.000500
PCB 1232	U		0.000270	0.000500
PCB 1242	U		0.000270	0.000500
PCB 1248	U		0.000173	0.000500
PCB 1254	U		0.000173	0.000500
PCB 1260	U		0.000173	0.000500
Total PCBs	U		0.000173	0.000500
(S) Decachlorobiphenyl	*40.9*			*10.0-144*
(S) Tetrachloro-m-xylene	*77.2*			*10.0-135*

Laboratory Control Sample (LCS)

(LCS) R4093629-5 07/14/24 04:50

Analyte	Spike Amount mg/l	LCS Result mg/l	LCS Rec. %	Rec. Limits %	LCS Qualifier
PCB 1016	0.00250	0.00226	90.4	50.0-140	
PCB 1260	0.00250	0.00211	84.4	8.00-140	
(S) Decachlorobiphenyl			*69.4*	*10.0-144*	
(S) Tetrachloro-m-xylene			*79.7*	*10.0-135*	

L1754575-01 Original Sample (OS) • Matrix Spike (MS) • Matrix Spike Duplicate (MSD)

(OS) L1754575-01 07/14/24 06:36 • (MS) R4093629-6 07/14/24 07:08 • (MSD) R4093629-7 07/14/24 07:20

Analyte	Spike Amount mg/l	Original Result mg/l	MS Result mg/l	MSD Result mg/l	MS Rec. %	MSD Rec. %	Dilution	Rec. Limits %	MS Qualifier	MSD Qualifier	RPD %	RPD Limits %
PCB 1016	0.00250	U	0.00210	0.00204	84.0	81.6	1	50.0-140			2.90	36
PCB 1260	0.00250	U	0.00139	0.00146	55.6	58.4	1	8.00-140			4.91	38
(S) Decachlorobiphenyl					*39.5*	*42.5*		*10.0-144*				
(S) Tetrachloro-m-xylene					*69.7*	*70.6*		*10.0-135*				

Method Blank (MB)

(MB) R4093641-1 07/13/24 14:45

Analyte	MB Result mg/l	MB Qualifier	MB MDL mg/l	MB RDL mg/l
1,2,4,5-Tetrachlorobenzene	U		0.000200	0.00200
2,4,6-Trichlorophenol	U		0.000238	0.00200
2,4-Dichlorophenol	U		0.000336	0.00400
2,4-Dimethylphenol	U		0.000613	0.00200
2,4-Dinitrophenol	U		0.00154	0.0100
2-Chlorophenol	U		0.000307	0.00200
2-Methylphenol	U		0.000238	0.00200
2-Nitrophenol	U		0.000247	0.00200
3&4-Methyl Phenol	U		0.000238	0.00200
3,3-Dichlorobenzidine	U		0.000788	0.00400
4,6-Dinitro-2-methylphenol	U		0.00202	0.0100
4-Chloro-3-methylphenol	U		0.000217	0.00200
4-Nitrophenol	U		0.00123	0.0100
Anthracene	U		0.000168	0.00200
Benzidine	U		0.000350	0.00400
Benzo(a)anthracene	U		0.000307	0.00200
Benzo(a)pyrene	U		0.000470	0.00200
Bis(2-chloroethyl)ether	U		0.000168	0.00200
Bis(2-Ethylhexyl)phthalate	U		0.00180	0.00200
Chrysene	U		0.000257	0.00200
Di-n-butyl phthalate	U		0.00160	0.00200
Hexachloro-1,3-butadiene	U		0.000217	0.00200
Hexachlorobenzene	U		0.000307	0.00200
Hexachlorocyclopentadiene	U		0.000299	0.00200
Hexachloroethane	U		0.000247	0.00200
n-Nitrosodi-n-butylamine	U		0.00110	0.00200
n-Nitrosodiethylamine	U		0.000696	0.00200
Nitrobenzene	U		0.000314	0.00200
Nonylphenol	U		0.000168	0.00200
Pentachlorobenzene	U		0.000247	0.00200
Pentachlorophenol	U		0.000283	0.00200
Phenanthrene	U		0.000200	0.00200
Phenol	U		0.000500	0.00200
Pyridine	U		0.00174	0.00400
Total Cresols	U		0.00153	0.00800
(S) 2,4,6-Tribromophenol	*55.0*			*29.0-132*
(S) 2-Fluorobiphenyl	*81.5*			*26.0-102*
(S) 2-Fluorophenol	*72.5*	J1		*10.0-66.0*
(S) Nitrobenzene-d5	*82.5*			*15.0-106*
(S) p-Terphenyl-d14	*95.0*			*10.0-120*

Method Blank (MB)

(MB) R4093641-1 07/13/24 14:45

Analyte	MB Result mg/l	MB Qualifier	MB MDL mg/l	MB RDL mg/l
(S) Phenol-d6	*69.0*	J1		*10.0-54.0*

Laboratory Control Sample (LCS)

(LCS) R4093641-2 07/13/24 15:15

Analyte	Spike Amount mg/l	LCS Result mg/l	LCS Rec. %	Rec. Limits %	LCS Qualifier
1,2,4,5-Tetrachlorobenzene	0.200	0.141	70.5	31.0-120	
2,4,6-Trichlorophenol	0.200	0.175	87.5	37.0-144	
2,4-Dichlorophenol	0.200	0.168	84.0	39.0-135	
2,4-Dimethylphenol	0.200	0.171	85.5	32.0-120	
2,4-Dinitrophenol	0.200	0.123	61.5	1.00-191	
2-Chlorophenol	0.200	0.172	86.0	23.0-134	
2-Methylphenol	0.200	0.179	89.5	26.0-120	
2-Nitrophenol	0.200	0.160	80.0	29.0-182	
3&4-Methyl Phenol	0.200	0.169	84.5	27.0-120	
3,3-Dichlorobenzidine	0.400	0.401	100	1.00-262	
4,6-Dinitro-2-methylphenol	0.200	0.152	76.0	1.00-181	
4-Chloro-3-methylphenol	0.200	0.170	85.0	22.0-147	
4-Nitrophenol	0.200	0.121	60.5	1.00-132	
Anthracene	0.200	0.184	92.0	27.0-133	
Benzidine	0.400	0.125	31.3	1.00-120	
Benzo(a)anthracene	0.200	0.189	94.5	33.0-143	
Benzo(a)pyrene	0.200	0.200	100	17.0-163	
Bis(2-chloroethyl)ether	0.200	0.163	81.5	33.0-185	
Bis(2-Ethylhexyl)phthalate	0.200	0.213	106	8.00-158	
Chrysene	0.200	0.178	89.0	17.0-168	
Di-n-butyl phthalate	0.200	0.196	98.0	1.00-120	
Hexachloro-1,3-butadiene	0.200	0.128	64.0	24.0-120	
Hexachlorobenzene	0.200	0.150	75.0	1.00-152	
Hexachlorocyclopentadiene	0.200	0.120	60.0	10.0-120	
Hexachloroethane	0.200	0.142	71.0	40.0-120	
n-Nitrosodi-n-butylamine	0.200	0.174	87.0	39.0-127	
n-Nitrosodiethylamine	0.200	0.182	91.0	10.0-142	
Nitrobenzene	0.200	0.169	84.5	35.0-180	
Nonylphenol	0.200	0.189	94.5	57.0-136	
Pentachlorobenzene	0.200	0.138	69.0	10.0-151	
Pentachlorophenol	0.200	0.163	81.5	14.0-176	
Phenanthrene	0.200	0.173	86.5	54.0-120	

Laboratory Control Sample (LCS)

(LCS) R4093641-2 07/13/24 15:15

Analyte	Spike Amount mg/l	LCS Result mg/l	LCS Rec. %	Rec. Limits %	LCS Qualifier
Phenol	0.200	0.137	68.5	5.00-120	
Pyridine	0.200	0.0338	16.9	10.0-120	
Total Cresols	0.400	0.348	87.0	36.0-110	
(S) 2,4,6-Tribromophenol			*67.5*	*29.0-132*	
(S) 2-Fluorobiphenyl			*81.5*	*26.0-102*	
(S) 2-Fluorophenol			*75.5*	*10.0-66.0*	J1
(S) Nitrobenzene-d5			*81.5*	*15.0-106*	
(S) p-Terphenyl-d14			*92.0*	*10.0-120*	
(S) Phenol-d6			*73.5*	*10.0-54.0*	J1

GLOSSARY OF TERMS

Guide to Reading and Understanding Your Laboratory Report

The information below is designed to better explain the various terms used in your report of analytical results from the Laboratory. This is not intended as a comprehensive explanation, and if you have additional questions please contact your project representative.

Results Disclaimer - Information that may be provided by the customer, and contained within this report, include Permit Limits, Project Name, Sample ID, Sample Matrix, Sample Preservation, Field Blanks, Field Spikes, Field Duplicates, On-Site Data, Sampling Collection Dates/Times, and Sampling Location. Results relate to the accuracy of this information provided, and as the samples are received.

Abbreviations and Definitions

MDL	Method Detection Limit.
RDL	Reported Detection Limit.
Rec.	Recovery.
RPD	Relative Percent Difference.
SDG	Sample Delivery Group.
(S)	Surrogate (Surrogate Standard) - Analytes added to every blank, sample, Laboratory Control Sample/Duplicate and Matrix Spike/Duplicate; used to evaluate analytical efficiency by measuring recovery. Surrogates are not expected to be detected in all environmental media.
U	Not detected at the Reporting Limit (or MDL where applicable).
Analyte	The name of the particular compound or analysis performed. Some Analyses and Methods will have multiple analytes reported.
Dilution	If the sample matrix contains an interfering material, the sample preparation volume or weight values differ from the standard, or if concentrations of analytes in the sample are higher than the highest limit of concentration that the laboratory can accurately report, the sample may be diluted for analysis. If a value different than 1 is used in this field, the result reported has already been corrected for this factor.
Limits	These are the target % recovery ranges or % difference value that the laboratory has historically determined as normal for the method and analyte being reported. Successful QC Sample analysis will target all analytes recovered or duplicated within these ranges.
Original Sample	The non-spiked sample in the prep batch used to determine the Relative Percent Difference (RPD) from a quality control sample. The Original Sample may not be included within the reported SDG.
Qualifier	This column provides a letter and/or number designation that corresponds to additional information concerning the result reported. If a Qualifier is present, a definition per Qualifier is provided within the Glossary and Definitions page and potentially a discussion of possible implications of the Qualifier in the Case Narrative if applicable.
Result	The actual analytical final result (corrected for any sample specific characteristics) reported for your sample. If there was no measurable result returned for a specific analyte, the result in this column may state "ND" (Not Detected) or "BDL" (Below Detectable Levels). The information in the results column should always be accompanied by either an MDL (Method Detection Limit) or RDL (Reporting Detection Limit) that defines the lowest value that the laboratory could detect or report for this analyte.
Uncertainty (Radiochemistry)	Confidence level of 2 sigma.
Case Narrative (Cn)	A brief discussion about the included sample results, including a discussion of any non-conformances to protocol observed either at sample receipt by the laboratory from the field or during the analytical process. If present, there will be a section in the Case Narrative to discuss the meaning of any data qualifiers used in the report.
Quality Control Summary (Qc)	This section of the report includes the results of the laboratory quality control analyses required by procedure or analytical methods to assist in evaluating the validity of the results reported for your samples. These analyses are not being performed on your samples typically, but on laboratory generated material.
Sample Chain of Custody (Sc)	This is the document created in the field when your samples were initially collected. This is used to verify the time and date of collection, the person collecting the samples, and the analyses that the laboratory is requested to perform. This chain of custody also documents all persons (excluding commercial shippers) that have had control or possession of the samples from the time of collection until delivery to the laboratory for analysis.
Sample Results (Sr)	This section of your report will provide the results of all testing performed on your samples. These results are provided by sample ID and are separated by the analyses performed on each sample. The header line of each analysis section for each sample will provide the name and method number for the analysis reported.
Sample Summary (Ss)	This section of the Analytical Report defines the specific analyses performed for each sample ID, including the dates and times of preparation and/or analysis.

Qualifier	Description
B	The same analyte is found in the associated blank.
J	The identification of the analyte is acceptable; the reported value is an estimate.
J1	Surrogate recovery limits have been exceeded; values are outside upper control limits.
J5	The sample matrix interfered with the ability to make any accurate determination; spike value is high.
J6	The sample matrix interfered with the ability to make any accurate determination; spike value is low.
P1	RPD value not applicable for sample concentrations less than 5 times the reporting limit.
Q	Sample was prepared and/or analyzed past holding time as defined in the method. Concentrations should be considered minimum values.
T8	Sample(s) received past/too close to holding time expiration.
V	The sample concentration is too high to evaluate accurate spike recoveries.

ACCREDITATIONS & LOCATIONS

Pace Analytical National 12065 Lebanon Rd Mount Juliet, TN 37122

Alabama	40660	Nebraska	NE-OS-15-05
Alaska	17-026	Nevada	TN000032021-1
Arizona	AZ0612	New Hampshire	2975
Arkansas	88-0469	New Jersey–NELAP	TN002
California	2932	New Mexico [1]	TN00003
Colorado	TN00003	New York	11742
Connecticut	PH-0197	North Carolina	Env375
Florida	E87487	North Carolina [1]	DW21704
Georgia	NELAP	North Carolina [3]	41
Georgia [1]	923	North Dakota	R-140
Idaho	TN00003	Ohio–VAP	CL0069
Illinois	200008	Oklahoma	9915
Indiana	C-TN-01	Oregon	TN200002
Iowa	364	Pennsylvania	68-02979
Kansas	E-10277	Rhode Island	LA000356
Kentucky [1 6]	KY90010	South Carolina	84004002
Kentucky [2]	16	South Dakota	n/a
Louisiana	AI30792	Tennessee [1 4]	2006
Louisiana	LA018	Texas	T104704245-20-18
Maine	TN00003	Texas [5]	LAB0152
Maryland	324	Utah	TN000032021-11
Massachusetts	M-TN003	Vermont	VT2006
Michigan	9958	Virginia	110033
Minnesota	047-999-395	Washington	C847
Mississippi	TN00003	West Virginia	233
Missouri	340	Wisconsin	998093910
Montana	CERT0086	Wyoming	A2LA
A2LA – ISO 17025	1461.01	AIHA-LAP,LLC EMLAP	100789
A2LA – ISO 17025 [5]	1461.02	DOD	1461.01
Canada	1461.01	USDA	P330-15-00234
EPA–Crypto	TN00003		

Pace Analytical Services, LLC -Dallas 400 W. Bethany Drive Suite 190 Allen, TX 75013

Arkansas	88-0647	Kansas	E10388
Florida	E871118	Texas	T104704232-23-39
Iowa	408	Oklahoma	8727
Louisiana	30686		

[1] Drinking Water [2] Underground Storage Tanks [3] Aquatic Toxicity [4] Chemical/Microbiological [5] Mold [6] Wastewater n/a Accreditation not applicable

* Not all certifications held by the laboratory are applicable to the results reported in the attached report.

* Accreditation is only applicable to the test methods specified on each scope of accreditation held by Pace Analytical.

Pace Analytical®

CHAIN-OF-CUSTODY Analytical Request Document

Chain-of-Custody is a LEGAL DOCUMENT - Complete all relevent fields

LAB USE ONLY- Affix Workorder/Login Label Here or List Pace Workorder Number or MTJL Log-in Number Here

ALL SHADED AREAS are for LAB USE ONLY

Company: GPL | Billing Information:

Address: 13835 CR 489

Report To: | Email To:

Copy To: | Site Collection Info/Address:

Customer Project Name/Number: | State: / | County/City: | Time Zone Collected: [ ] PT [ ] MT [ ] CT [ ] ET

Phone:
Email:

Site/Facility ID #:

Compliance Monitoring? [ ] Yes [ ] No

Collected By (print):

Purchase Order #:
Quote #:

DW PWS ID #:
DW Location Code:

Collected By (signature):

Turnaround Date Required:

Immediately Packed on Ice: [ ] Yes [ ] No

Sample Disposal: [ ] Dispose as appropriate [ ] Return [ ] Archive: ________ [ ] Hold: ________

Rush: [ ] Same Day [ ] Next Day [ ] 2 Day [ ] 3 Day [ ] 4 Day [ ] 5 Day (Expedite Charges Apply)

Field Filtered (if applicable): [ ] Yes [ ] No

Analysis: ________

Container Preservative Type **

Lab Project Manager:

** Preservative Types: (1) nitric acid, (2) sulfuric acid, (3) hydrochloric acid, (4) sodium hydroxide, (5) zinc acetate, (6) methanol, (7) sodium bisulfate, (8) sodium thiosulfate, (9) hexane, (A) ascorbic acid, (B) ammonium sulfate, (C) ammonium hydroxide, (D) TSP, (U) Unpreserved, (O) Other ________

Analyses: See Attached

Lab Profile/Line:

Lab Sample Receipt Checklist:

Custody Seals Present/Intact	Y N NA
Custody Signatures Present	Y N NA
Collector Signature Present	Y N NA
Bottles Intact	Y N NA
Correct Bottles	Y N NA
Sufficient Volume	Y N NA
Samples Received on Ice	Y N NA
VOA - Headspace Acceptable	Y N NA
USDA Regulated Soils	Y N NA
Samples in Holding Time	Y N NA
Residual Chlorine Present	Y N NA
Cl Strips: ________	
Sample pH Acceptable	Y N NA
pH Strips: ________	
Sulfide Present	Y N NA
Lead Acetate Strips: ________	

* Matrix Codes (Insert in Matrix box below): Drinking Water (DW), Ground Water (GW), Wastewater (WW), Product (P), Soil/Solid (SL), Oil (OL), Wipe (WP), Air (AR), Tissue (TS), Bioassay (B), Vapor (V), Other (OT)

Customer Sample ID	Matrix *	Comp / Grab	Collected (or Composite Start) Date	Collected Time	Composite End Date	Composite End Time	Res Cl	# of Ctns	Analyses	LAB USE ONLY: Lab Sample # / Comments:
Outfall 001	WW	G			7/6/24	2307		4	X	L1754191-01

Customer Remarks / Special Conditions / Possible Hazards:

EDAT 1.2+0.3=1.5

Type of Ice Used: Wet Blue Dry None

Packing Material Used:

Radchem sample(s) screened (<500 cpm): Y N NA

SHORT HOLDS PRESENT (<72 hours): Y N N/A

Lab Tracking #: 2893516

Samples received via: FEDEX UPS Client Courier Pace Courier

Lab Sample Temperature Info:
Temp Blank Received: Y N NA
Therm ID#: ________
Cooler 1 Temp Upon Receipt: ____oC
Cooler 1 Therm Corr. Factor: ____oC
Cooler 1 Corrected Temp: ____oC
Comments:

Relinquished by/Company: (Signature)	Date/Time:	Received by/Company: (Signature)	Date/Time:
JMcCain	7/8/24 0951	[signature] 7/8/24 0951	
Austin Ramos PACE	7/9/24 1700	FedEx 7/9/24 1700	
FedEx		[signature]	7-10-24 0900

MTJL LAB USE ONLY
Table #:
Acctnum:
Template:
Prelogin:
PM:

Trip Blank Received: Y N NA
HCL MeOH TSP Other

Non Conformance(s): | Page: ____

Pace ANALYTICAL SERVICES	DC#_Title: ENV-FRM-ALLE-0017 v15_Sample Condition Upon Receipt
	Effective Date: 12/18/2023

Sample Condition Upon Receipt

☐Dallas ☐Ft Worth ☐Corpus Christi ☐Austin

Client Name: GPL Project Work order (place label):

Courier: FedEX ☐ UPS ☐ USPS ☐ Client ☑ LSO ☐ PACE ☐ Other: _____

Tracking #: _____

Custody Seal on Cooler/Box: Yes ☐ No ☑

Received on ice: Wet ☐ Blue ☐ No ice ☐

Receiving Lab 1 Thermometer Used: IR18 **Cooler Temp °C:** 6.6 (Recorded) +0.3 (Correction Factor) 6.9 (Actual) — 7.9 / 8.2

Receiving Lab 2 Thermometer Used: _____ **Cooler Temp °C:** _____ (Recorded) _____ (Correction Factor) _____ (Actual)

Chain of Custody relinquished	Yes ☑ No ☐
Sampler name & signature on COC	Yes ☐ No ☑
Short HT analyses (<72 hrs)	Yes ☑ No ☐

Temperature should be above freezing to 6°C unless collected same day as receipt in which evidence of cooling is acceptable.

Triage Person: AR Date: 7/8

Sufficient Volume received	Yes ☑ No ☐
Correct Container used	Yes ☑ No ☐
Container Intact	Yes ☑ No ☐
Sample pH Acceptable pH Strips: 64U2007	Yes ☑ No ☐ NA ☐
Residual Chlorine Present Cl Strips: _____	Yes ☐ No ☐ NA ☑
Sulfide Present Lead Acetate Strips: _____	Yes ☐ No ☐ NA ☑
Are soil samples (volatiles, TPH) received in 5035A Kits (not applicable to TCLP VOA or PST Program TPH)	Yes ☐ No ☐ NA ☑
Unpreserved 5035A soil frozen within 48 hrs	Yes ☐ No ☐ NA ☑
Headspace in VOA (>6mm)	Yes ☐ No ☑ NA ☐
Project sampled in USDA Regulated Area outside of Texas State Sampled: _____	Yes ☐ No ☐ NA ☑
Non-Conformance(s):	Yes ☑ No ☐

Login Person: JW Date: 7/8

Labeling Person (if different than log-in): _____ Date: _____

DAL - L1754191 DSGARLWNTX NCF - JWW 7/9 Shortholds

Time estimate: oh **Time spent:** oh

Members

V Jeremy Watkins (responsible) DPR Dorothy Roberts

- [ ] 1 . If Chain-of-custody (COC) is not received: contact client and if necessary, fill out a COC and indicate that it was filled out by lab personnel. Note issues on this NCF.
- [ ] 2. If COC is incomplete, check applicable issues below and add details where appropiate:
- [ ] *Collection date/time missing or incorrect
- [ ] *Analyses or analytes: missing or Clarification needed
- [ ] *Samples listed on COC do not match samples recieved (missing, additional,etc.)
- [ ] *Sample IDs on COC do not match sample Labels
- [ ] *Required trip blanks were not received
- [ ] *Required signatures are missing
- [x] 3. Sample integrity issues: check applicable issues below and add details where appropriate:
- [x] *Samples: Past holding time
- [ ] *Samples: Not Field Filtered
- [ ] *samples: Insufficent volume received
- [ ] *Samples: Cooler damaged or compromised
- [ ] *Samples: contain Chlorine or Sulfide
- [ ] *Samples: condition needs to be brought to lab personnel's attention (details below)
- [ ] *Containers: Broken or compromised
- [ ] *Containers: Incorrect
- [ ] *Custody Seals: missing or compromised on samples, trip blanks or coolers
- [ ] *Packing Material: Insufficient/Improper
- [x] *Preservation: improper
- [ ] *Temperature:not witin acceptance criteria (typically 0-6C)
- [ ] *Temperature: Samples arrived frozen
- [ ] *Vials received with improper headspace
- [ ] *Other:
- [ ] 4. If Samples not preserved properly and Sample Receiving adjusts pH, add details below:
- [ ] Sample ID:_____
- [ ] Preserved by:_____
- [ ] Date/Time:_____
- [ ] Initial and Final pH:_____
- [ ] Amount/type pres added:_____
- [ ] Lot # of Pres added:_____
- [ ] 5. Client contact: If Client is Contacted for any issue listed above, fill in details below:
- [x] Client:
- [x] PM Initials: DPR
- [x] Contacted per: JMcClain
- [x] Date/Time: 7/9 1051

Comments

Jeremy Watkins *9 July 2024 8:48 AM*

1. MBAS, NITRATE, CR6 all out of hold
2. CN and SULFIDE recieved unpreserved.

Dorothy Roberts *10 July 2024 9:34 AM*

Proceed / may not report if replacements can be collected

also sending replacement bottles to recollect T256352

ANALYTICAL REPORT

July 23, 2024

Garland Power & Light

Sample Delivery Group:	L1754283
Samples Received:	07/08/2024
Project Number:	
Description:	TPDES

Report To: Jeff McClain
13835 County Rd 489
Nevada, TX 75173

Entire Report Reviewed By: Dorothy P Roberts

Dorothy P Roberts
Project Manager

Pace Analytical National
12065 Lebanon Rd Mount Juliet, TN 37122 615-758-5858 800-767-5859 mydata.pacelabs.com

TABLE OF CONTENTS

SAMPLE SUMMARY

OUTFALL 001 L1754283-01 WW

	Collected by	Collected date/time	Received date/time
		07/08/24 12:34	07/08/24 14:30

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst	Location
Calculated Results	WG2321072	1	07/12/24 19:03	07/12/24 19:03	KCM	Allen, TX
Calculated Results	WG2323027	1	07/15/24 20:11	07/15/24 20:11	EIG	Allen, TX
Gravimetric Analysis by Method 2540C	WG2321280	1	07/11/24 13:04	07/11/24 15:55	QQT	Allen, TX
Gravimetric Analysis by Method 2540D	WG2322092	1	07/12/24 15:40	07/12/24 17:30	QQT	Allen, TX
Wet Chemistry by Method 1664A	WG2320716	1	07/12/24 05:40	07/12/24 07:26	TK	Allen, TX
Wet Chemistry by Method 2120B	WG2320288	1	07/10/24 10:40	07/10/24 10:40	EIG	Allen, TX
Wet Chemistry by Method 2320B	WG2320255	1	07/10/24 09:19	07/10/24 09:19	SEN	Allen, TX
Wet Chemistry by Method 300.0	WG2320279	1	07/10/24 23:07	07/10/24 23:07	DLH	Mt. Juliet, TN
Wet Chemistry by Method 3500Cr-B	WG2322157	1	07/12/24 19:03	07/12/24 19:03	KCM	Allen, TX
Wet Chemistry by Method 351.2	WG2323027	1	07/15/24 11:10	07/15/24 20:11	EIG	Allen, TX
Wet Chemistry by Method 353.2	WG2321792	1	07/12/24 12:55	07/12/24 12:55	EIG	Allen, TX
Wet Chemistry by Method 360.1	WG2324067	1	07/16/24 14:05	07/16/24 14:05	JBS	Allen, TX
Wet Chemistry by Method 4500Cl G-2011	WG2322664	1	07/14/24 12:15	07/14/24 12:15	CAH	Mt. Juliet, TN
Wet Chemistry by Method 4500CN-E	WG2321047	1	07/11/24 11:30	07/11/24 16:58	KCM	Allen, TX
Wet Chemistry by Method 4500CN-G	WG2323646	1	07/16/24 16:14	07/16/24 16:14	KCM	Allen, TX
Wet Chemistry by Method 4500P-E	WG2320999	1	07/11/24 14:26	07/11/24 14:26	SMC	Allen, TX
Wet Chemistry by Method 4500-S2 D	WG2319662	1	07/09/24 15:00	07/09/24 15:00	EIG	Allen, TX
Wet Chemistry by Method 4500SO3 B-2011	WG2323050	1	07/15/24 11:20	07/15/24 11:20	JAR	Mt. Juliet, TN
Wet Chemistry by Method 5210 B-2016	WG2319546	1	07/09/24 14:09	07/14/24 13:01	QQT	Allen, TX
Wet Chemistry by Method 5210 B-2016	WG2319551	1	07/09/24 15:54	07/14/24 14:30	SEN	Allen, TX
Wet Chemistry by Method 5220D	WG2323013	1	07/15/24 10:31	07/15/24 13:10	JBS	Allen, TX
Wet Chemistry by Method 5310C	WG2320357	2	07/11/24 21:00	07/11/24 21:00	EIG	Allen, TX
Wet Chemistry by Method 5540C	WG2319936	1	07/09/24 18:54	07/09/24 19:02	EIG	Allen, TX
Wet Chemistry by Method SM 4500-H+B	WG2321035	1	07/11/24 09:01	07/11/24 09:01	JBS	Allen, TX
Wet Chemistry by Method SM4500NH3H	WG2321326	1	07/11/24 16:43	07/11/24 16:43	EIG	Allen, TX
Mercury by Method 245.1	WG2320254	1	07/10/24 09:46	07/10/24 16:09	TDM	Allen, TX
Metals (ICP) by Method 200.7	WG2320626	1	07/10/24 16:30	07/11/24 15:43	TJG	Allen, TX
Metals (ICPMS) by Method 200.8	WG2321072	1	07/11/24 10:47	07/11/24 21:58	NA	Allen, TX
Volatile Organic Compounds (GC/MS) by Method 624.1	WG2319924	1	07/09/24 19:15	07/09/24 19:15	ZST	Allen, TX
Polychlorinated Biphenyls (GC) by Method EPA-608.3	WG2322292	1	07/13/24 19:04	07/14/24 06:24	LJD	Mt. Juliet, TN
Semi Volatile Organic Compounds (GC/MS) by Method 625.1	WG2320434	1	07/10/24 12:55	07/13/24 16:14	XLY	Allen, TX

CASE NARRATIVE

All sample aliquots were received at the correct temperature, in the proper containers, with the appropriate preservatives, and within method specified holding times, unless qualified or notated within the report. Where applicable, all MDL (LOD) and RDL (LOQ) values reported for environmental samples have been corrected for the dilution factor used in the analysis. All Method and Batch Quality Control are within established criteria except where addressed in this case narrative, a non-conformance form or properly qualified within the sample results. By my digital signature below, I affirm to the best of my knowledge, all problems/anomalies observed by the laboratory as having the potential to affect the quality of the data have been identified by the laboratory, and no information or data have been knowingly withheld that would affect the quality of the data.

Dorothy P Roberts
Project Manager

Sample Delivery Group (SDG) Narrative

The following analysis were performed from an unpreserved, insufficiently or inadequately preserved sample.

Lab Sample ID	Project Sample ID	Method
L1754283-01	OUTFALL 001	4500-S2 D, 4500CN-E

The Laboratory is not accredited for specific analytes on the associated Sample/Method. These analytes are flagged in the Sample Results section of the report with an asterisk (*).

Lab Sample ID	Project Sample ID	Method
L1754283-01	OUTFALL 001	300.0

Analysis was filtered in the laboratory.

Lab Sample ID	Project Sample ID	Method
L1754283-01	OUTFALL 001	3500Cr-B

No extra volume received to perform Matrix Spike samples.

Lab Sample ID	Project Sample ID	Method
L1754283-01	OUTFALL 001	625.1

Calculated Results

Analyte	Result mg/l	Qualifier	MDL mg/l	RDL mg/l	Dilution	Analysis date / time	Batch
Chromium,Trivalent	U		0.000510	0.00300	1	07/12/2024 19:03	WG2321072
Organic Nitrogen	0.343		0.0280	0.100	1	07/15/2024 20:11	WG2323027

Gravimetric Analysis by Method 2540C

Analyte	Result mg/l	Qualifier	RDL mg/l	Dilution	Analysis date / time	Batch
Total Dissolved Solids	159		25.0	1	07/11/2024 15:55	WG2321280

Gravimetric Analysis by Method 2540D

Analyte	Result mg/l	Qualifier	RDL mg/l	Dilution	Analysis date / time	Batch
Suspended Solids	6.20		2.93	1	07/12/2024 17:30	WG2322092

Wet Chemistry by Method 1664A

Analyte	Result mg/l	Qualifier	MDL mg/l	RDL mg/l	Dilution	Analysis date / time	Batch
Oil & Grease (Hexane Extr)	U		0.350	5.00	1	07/12/2024 07:26	WG2320716

Wet Chemistry by Method 2120B

Analyte	Result units	Qualifier	RDL units	Dilution	Analysis date / time	Batch
Color	20.0		5.00	1	07/10/2024 10:40	WG2320288

Sample Narrative:

L1754283-01 WG2320288: 7

Wet Chemistry by Method 2320B

Analyte	Result mg/l	Qualifier	MDL mg/l	RDL mg/l	Dilution	Analysis date / time	Batch
Alkalinity	120		20.0	20.0	1	07/10/2024 09:19	WG2320255

Wet Chemistry by Method 300.0

Analyte	Result mg/l	Qualifier	MDL mg/l	RDL mg/l	Dilution	Analysis date / time	Batch
*Bromide	U		0.353	1.00	1	07/10/2024 23:07	WG2320279
Chloride	14.4		0.379	1.00	1	07/10/2024 23:07	WG2320279
Fluoride	0.172		0.0640	0.150	1	07/10/2024 23:07	WG2320279
Nitrate as (N)	U	Q	0.0480	0.100	1	07/10/2024 23:07	WG2320279
Sulfate	23.3		0.594	5.00	1	07/10/2024 23:07	WG2320279

Wet Chemistry by Method 3500Cr-B

Analyte	Result mg/l	Qualifier	MDL mg/l	RDL mg/l	Dilution	Analysis date / time	Batch
Chromium,Hexavalent	U		0.00200	0.00300	1	07/12/2024 19:03	WG2322157

Sample Narrative:

L1754283-01 WG2322157: Sample preserved in lab w/in 24 hrs of collection

Wet Chemistry by Method 351.2

Analyte	Result mg/l	Qualifier	MDL mg/l	RDL mg/l	Dilution	Analysis date / time	Batch
Kjeldahl Nitrogen, TKN	0.343	J5	0.140	0.250	1	07/15/2024 20:11	WG2323027

Wet Chemistry by Method 353.2

Analyte	Result	Qualifier	MDL	RDL	Dilution	Analysis	Batch
	mg/l		mg/l	mg/l		date / time	
Nitrate-Nitrite	U		0.0300	0.0500	1	07/12/2024 12:55	WG2321792

Wet Chemistry by Method 360.1

Analyte	Result	Qualifier	RDL	Dilution	Analysis	Batch
	mg/l		mg/l		date / time	
Dissolved Oxygen	10.2	T8	1	1	07/16/2024 14:05	WG2324067

Wet Chemistry by Method 4500Cl G-2011

Analyte	Result	Qualifier	MDL	RDL	Dilution	Analysis	Batch
	mg/l		mg/l	mg/l		date / time	
Chlorine,residual	0.108	T8	0.0260	0.100	1	07/14/2024 12:15	WG2322664

Wet Chemistry by Method 4500CN-E

Analyte	Result	Qualifier	MDL	RDL	Dilution	Analysis	Batch
	mg/l		mg/l	mg/l		date / time	
Cyanide	U		0.00430	0.0100	1	07/11/2024 16:58	WG2321047

Wet Chemistry by Method 4500CN-G

Analyte	Result	Qualifier	MDL	RDL	Dilution	Analysis	Batch
	mg/l		mg/l	mg/l		date / time	
Cyanide,amenable	U		0.00350	0.0100	1	07/16/2024 16:14	WG2323646

Wet Chemistry by Method 4500P-E

Analyte	Result	Qualifier	MDL	RDL	Dilution	Analysis	Batch
	mg/l		mg/l	mg/l		date / time	
Phosphorus,Total	0.0443	J	0.0152	0.0500	1	07/11/2024 14:26	WG2320999

Wet Chemistry by Method 4500-S2 D

Analyte	Result	Qualifier	MDL	RDL	Dilution	Analysis	Batch
	mg/l		mg/l	mg/l		date / time	
Sulfide	U		0.0230	0.100	1	07/09/2024 15:00	WG2319662

Wet Chemistry by Method 4500SO3 B-2011

Analyte	Result	Qualifier	MDL	RDL	Dilution	Analysis	Batch
	mg/l		mg/l	mg/l		date / time	
Sulfite	U	T8	1.19	3.00	1	07/15/2024 11:20	WG2323050

Wet Chemistry by Method 5210 B-2016

Analyte	Result	Qualifier	RDL	Dilution	Analysis	Batch
	mg/l		mg/l		date / time	
BOD	1.39		1.00	1	07/14/2024 13:01	WG2319546
CBOD	1.44	B1	1.00	1	07/14/2024 14:30	WG2319551

Wet Chemistry by Method 5220D

Analyte	Result	Qualifier	MDL	RDL	Dilution	Analysis	Batch
	mg/l		mg/l	mg/l		date / time	
COD	19.0	J	16.1	35.0	1	07/15/2024 13:10	WG2323013

Wet Chemistry by Method 5310C

Analyte	Result	Qualifier	MDL	RDL	Dilution	Analysis	Batch
	mg/l		mg/l	mg/l		date / time	

Wet Chemistry by Method 5310C

Analyte	Result	Qualifier	MDL	RDL	Dilution	Analysis	Batch
	mg/l		mg/l	mg/l		date / time	
TOC (Total Organic Carbon)	11.2		0.540	1.40	2	07/11/2024 21:00	WG2320357

Wet Chemistry by Method 5540C

Analyte	Result	Qualifier	MDL	RDL	Dilution	Analysis	Batch
	mg/l		mg/l	mg/l		date / time	
MBAS	U	J5	0.360	0.500	1	07/09/2024 19:02	WG2319936

Wet Chemistry by Method SM 4500-H+B

Analyte	Result	Qualifier	Dilution	Analysis	Batch
	su			date / time	
pH	7.83	T8	1	07/11/2024 09:01	WG2321035

Sample Narrative:

L1754283-01 WG2321035: 7.83 at 19.6C

Wet Chemistry by Method SM4500NH3H

Analyte	Result	Qualifier	MDL	RDL	Dilution	Analysis	Batch
	mg/l		mg/l	mg/l		date / time	
Ammonia Nitrogen	U		0.0280	0.100	1	07/11/2024 16:43	WG2321326

Mercury by Method 245.1

Analyte	Result	Qualifier	MDL	RDL	Dilution	Analysis	Batch
	mg/l		mg/l	mg/l		date / time	
Mercury	U		0.0000450	0.000200	1	07/10/2024 16:09	WG2320254

Metals (ICP) by Method 200.7

Analyte	Result	Qualifier	MDL	RDL	Dilution	Analysis	Batch
	mg/l		mg/l	mg/l		date / time	
Boron	0.0759	J	0.0186	0.100	1	07/11/2024 15:43	WG2320626
Tin	U		0.00240	0.0250	1	07/11/2024 15:43	WG2320626
Titanium	U		0.00835	0.100	1	07/11/2024 15:43	WG2320626

Metals (ICPMS) by Method 200.8

Analyte	Result	Qualifier	MDL	RDL	Dilution	Analysis	Batch
	mg/l		mg/l	mg/l		date / time	
Aluminum	0.115		0.00186	0.00250	1	07/11/2024 21:58	WG2321072
Antimony	U		0.000580	0.00500	1	07/11/2024 21:58	WG2321072
Arsenic	0.00518		0.000100	0.000500	1	07/11/2024 21:58	WG2321072
Barium	0.0659		0.000440	0.00300	1	07/11/2024 21:58	WG2321072
Beryllium	U		0.0000600	0.000500	1	07/11/2024 21:58	WG2321072
Cadmium	U		0.000120	0.00100	1	07/11/2024 21:58	WG2321072
Chromium	U		0.000510	0.00300	1	07/11/2024 21:58	WG2321072
Cobalt	0.000199	B J	0.0000400	0.000300	1	07/11/2024 21:58	WG2321072
Copper	0.00609		0.000900	0.00200	1	07/11/2024 21:58	WG2321072
Iron	0.119		0.00432	0.00700	1	07/11/2024 21:58	WG2321072
Lead	U		0.000140	0.000500	1	07/11/2024 21:58	WG2321072
Magnesium	3.78		0.0121	0.0200	1	07/11/2024 21:58	WG2321072
Manganese	0.135		0.000330	0.000500	1	07/11/2024 21:58	WG2321072
Molybdenum	0.00103		0.000530	0.00100	1	07/11/2024 21:58	WG2321072
Nickel	0.00161	J	0.000640	0.00200	1	07/11/2024 21:58	WG2321072
Selenium	U		0.000740	0.00500	1	07/11/2024 21:58	WG2321072
Silver	U		0.0000800	0.000500	1	07/11/2024 21:58	WG2321072
Thallium	U		0.000190	0.000500	1	07/11/2024 21:58	WG2321072

Metals (ICPMS) by Method 200.8

Analyte	Result	Qualifier	MDL	RDL	Dilution	Analysis	Batch
	mg/l		mg/l	mg/l		date / time	
Zinc	U		0.00265	0.00500	1	07/11/2024 21:58	WG2321072

Volatile Organic Compounds (GC/MS) by Method 624.1

Analyte	Result	Qualifier	MDL	RDL	Dilution	Analysis	Batch
	mg/l		mg/l	mg/l		date / time	
1,1,1-Trichloroethane	U		0.00335	0.00500	1	07/09/2024 19:15	WG2319924
1,1,2,2-Tetrachloroethane	U		0.000596	0.00500	1	07/09/2024 19:15	WG2319924
1,1,2-Trichloroethane	U		0.00145	0.00500	1	07/09/2024 19:15	WG2319924
1,1-Dichloroethene	U		0.00367	0.00500	1	07/09/2024 19:15	WG2319924
1,1-Dichloroethane	U		0.00292	0.00500	1	07/09/2024 19:15	WG2319924
1,2-Dibromoethane	U		0.000549	0.00200	1	07/09/2024 19:15	WG2319924
1,2-Dichlorobenzene	U		0.00172	0.00200	1	07/09/2024 19:15	WG2319924
1,2-Dichloroethane	U		0.00195	0.00500	1	07/09/2024 19:15	WG2319924
1,2-Dichloropropane	U		0.000804	0.00200	1	07/09/2024 19:15	WG2319924
1,3-Dichlorobenzene	U		0.00419	0.00500	1	07/09/2024 19:15	WG2319924
1,4-Dichlorobenzene	U		0.00173	0.00200	1	07/09/2024 19:15	WG2319924
2-Butanone (MEK)	U		0.00822	0.0250	1	07/09/2024 19:15	WG2319924
2-Chloroethyl vinyl ether	U		0.00652	0.0100	1	07/09/2024 19:15	WG2319924
Acrolein	U		0.00544	0.0100	1	07/09/2024 19:15	WG2319924
Acrylonitrile	U		0.00709	0.0100	1	07/09/2024 19:15	WG2319924
Benzene	U		0.00207	0.00500	1	07/09/2024 19:15	WG2319924
Bromodichloromethane	U		0.00179	0.00200	1	07/09/2024 19:15	WG2319924
Bromoform	U		0.000960	0.0100	1	07/09/2024 19:15	WG2319924
Bromomethane	U		0.00347	0.00500	1	07/09/2024 19:15	WG2319924
Carbon tetrachloride	U		0.00159	0.00200	1	07/09/2024 19:15	WG2319924
Chlorobenzene	U		0.00276	0.0100	1	07/09/2024 19:15	WG2319924
Chloroethane	U		0.00296	0.00500	1	07/09/2024 19:15	WG2319924
Chloroform	U		0.00212	0.00500	1	07/09/2024 19:15	WG2319924
Chloromethane	U		0.00361	0.00500	1	07/09/2024 19:15	WG2319924
cis-1,3-Dichloropropene	U		0.00492	0.0100	1	07/09/2024 19:15	WG2319924
Dibromochloromethane	U		0.00327	0.00500	1	07/09/2024 19:15	WG2319924
Ethylbenzene	U		0.000401	0.00200	1	07/09/2024 19:15	WG2319924
Methylene Chloride	U		0.0117	0.0200	1	07/09/2024 19:15	WG2319924
Tetrachloroethene	U		0.00486	0.0100	1	07/09/2024 19:15	WG2319924
Toluene	U		0.00219	0.00500	1	07/09/2024 19:15	WG2319924
trans-1,2-Dichloroethene	U		0.00501	0.0100	1	07/09/2024 19:15	WG2319924
Trichloroethene	U		0.00262	0.00500	1	07/09/2024 19:15	WG2319924
Vinyl chloride	U		0.00466	0.00500	1	07/09/2024 19:15	WG2319924
(S) 1,2-Dichloroethane-d4	*93.2*			*70.0-130*		*07/09/2024 19:15*	WG2319924
(S) 4-Bromofluorobenzene	*93.1*			*70.0-130*		*07/09/2024 19:15*	WG2319924
(S) Toluene-d8	*100*			*70.0-130*		*07/09/2024 19:15*	WG2319924

Polychlorinated Biphenyls (GC) by Method EPA-608.3

Analyte	Result	Qualifier	MDL	RDL	Dilution	Analysis	Batch
	mg/l		mg/l	mg/l		date / time	
PCB 1016	U		0.000270	0.000500	1	07/14/2024 06:24	WG2322292
PCB 1221	U		0.000270	0.000500	1	07/14/2024 06:24	WG2322292
PCB 1232	U		0.000270	0.000500	1	07/14/2024 06:24	WG2322292
PCB 1242	U		0.000270	0.000500	1	07/14/2024 06:24	WG2322292
PCB 1248	U		0.000173	0.000500	1	07/14/2024 06:24	WG2322292
PCB 1254	U		0.000173	0.000500	1	07/14/2024 06:24	WG2322292
PCB 1260	U		0.000173	0.000500	1	07/14/2024 06:24	WG2322292
Total PCBs	U		0.000173	0.000500	1	07/14/2024 06:24	WG2322292
(S) Decachlorobiphenyl	*43.0*			*10.0-144*		*07/14/2024 06:24*	WG2322292
(S) Tetrachloro-m-xylene	*71.7*			*10.0-135*		*07/14/2024 06:24*	WG2322292

Semi Volatile Organic Compounds (GC/MS) by Method 625.1

Analyte	Result	Qualifier	MDL	RDL	Dilution	Analysis	Batch
	mg/l		mg/l	mg/l		date / time	
1,2,4,5-Tetrachlorobenzene	U		0.000200	0.00200	1	07/13/2024 16:14	WG2320434
2,4,6-Trichlorophenol	U		0.000238	0.00200	1	07/13/2024 16:14	WG2320434
2,4-Dichlorophenol	U		0.000336	0.00400	1	07/13/2024 16:14	WG2320434
2,4-Dimethylphenol	U		0.000613	0.00200	1	07/13/2024 16:14	WG2320434
2,4-Dinitrophenol	U		0.00154	0.0100	1	07/13/2024 16:14	WG2320434
2-Chlorophenol	U		0.000307	0.00200	1	07/13/2024 16:14	WG2320434
2-Methylphenol	U		0.000238	0.00200	1	07/13/2024 16:14	WG2320434
2-Nitrophenol	U		0.000247	0.00200	1	07/13/2024 16:14	WG2320434
3&4-Methyl Phenol	U		0.000238	0.00200	1	07/13/2024 16:14	WG2320434
3,3-Dichlorobenzidine	U		0.000788	0.00400	1	07/13/2024 16:14	WG2320434
4,6-Dinitro-2-methylphenol	U		0.00202	0.0100	1	07/13/2024 16:14	WG2320434
4-Chloro-3-methylphenol	U		0.000217	0.00200	1	07/13/2024 16:14	WG2320434
4-Nitrophenol	U		0.00123	0.0100	1	07/13/2024 16:14	WG2320434
Anthracene	U		0.000168	0.00200	1	07/13/2024 16:14	WG2320434
Benzidine	U		0.000350	0.00400	1	07/13/2024 16:14	WG2320434
Benzo(a)anthracene	U		0.000307	0.00200	1	07/13/2024 16:14	WG2320434
Benzo(a)pyrene	U		0.000470	0.00200	1	07/13/2024 16:14	WG2320434
Bis(2-chloroethyl)ether	U		0.000168	0.00200	1	07/13/2024 16:14	WG2320434
Bis(2-Ethylhexyl)phthalate	U		0.00180	0.00200	1	07/13/2024 16:14	WG2320434
Chrysene	U		0.000257	0.00200	1	07/13/2024 16:14	WG2320434
Di-n-butyl phthalate	U		0.00160	0.00200	1	07/13/2024 16:14	WG2320434
Hexachloro-1,3-butadiene	U		0.000217	0.00200	1	07/13/2024 16:14	WG2320434
Hexachlorobenzene	U		0.000307	0.00200	1	07/13/2024 16:14	WG2320434
Hexachlorocyclopentadiene	U		0.000299	0.00200	1	07/13/2024 16:14	WG2320434
Hexachloroethane	U		0.000247	0.00200	1	07/13/2024 16:14	WG2320434
n-Nitrosodi-n-butylamine	U		0.00110	0.00200	1	07/13/2024 16:14	WG2320434
n-Nitrosodiethylamine	U		0.000696	0.00200	1	07/13/2024 16:14	WG2320434
Nitrobenzene	U		0.000314	0.00200	1	07/13/2024 16:14	WG2320434
Nonylphenol	U		0.000168	0.00200	1	07/13/2024 16:14	WG2320434
Pentachlorobenzene	U		0.000247	0.00200	1	07/13/2024 16:14	WG2320434
Pentachlorophenol	U		0.000283	0.00200	1	07/13/2024 16:14	WG2320434
Phenanthrene	U		0.000200	0.00200	1	07/13/2024 16:14	WG2320434
Phenol	U		0.000500	0.00200	1	07/13/2024 16:14	WG2320434
Pyridine	U		0.00174	0.00400	1	07/13/2024 16:14	WG2320434
Total Cresols	U		0.00153	0.00800	1	07/13/2024 16:14	WG2320434
(S) 2,4,6-Tribromophenol	*48.6*			*29.0-132*		*07/13/2024 16:14*	WG2320434
(S) 2-Fluorobiphenyl	*74.5*			*26.0-102*		*07/13/2024 16:14*	WG2320434
(S) 2-Fluorophenol	*63.5*			*10.0-66.0*		*07/13/2024 16:14*	WG2320434
(S) Nitrobenzene-d5	*73.5*			*15.0-106*		*07/13/2024 16:14*	WG2320434
(S) p-Terphenyl-d14	*84.5*			*10.0-120*		*07/13/2024 16:14*	WG2320434
(S) Phenol-D6	*56.5*	J1		*10.0-54.0*		*07/13/2024 16:14*	WG2320434

Method Blank (MB)

(MB) R4093133-1 07/11/24 15:55

Analyte	MB Result mg/l	MB Qualifier	MB MDL mg/l	MB RDL mg/l
Total Dissolved Solids	U		25.0	25.0

L1754251-01 Original Sample (OS) • Duplicate (DUP)

(OS) L1754251-01 07/11/24 15:55 • (DUP) R4093133-3 07/11/24 15:55

Analyte	Original Result mg/l	DUP Result mg/l	Dilution	DUP RPD %	DUP Qualifier	DUP RPD Limits %
Total Dissolved Solids	467	416	1	11.6	J3	10

L1754251-03 Original Sample (OS) • Duplicate (DUP)

(OS) L1754251-03 07/11/24 15:55 • (DUP) R4093133-4 07/11/24 15:55

Analyte	Original Result mg/l	DUP Result mg/l	Dilution	DUP RPD %	DUP Qualifier	DUP RPD Limits %
Total Dissolved Solids	450	475	1	5.41		10

Laboratory Control Sample (LCS)

(LCS) R4093133-2 07/11/24 15:55

Analyte	Spike Amount mg/l	LCS Result mg/l	LCS Rec. %	Rec. Limits %	LCS Qualifier
Total Dissolved Solids	2410	2440	101	85.0-115	

Method Blank (MB)

(MB) R4093943-1 07/12/24 17:30

Analyte	MB Result mg/l	MB Qualifier	MB MDL mg/l	MB RDL mg/l
Suspended Solids	U		2.50	2.50

L1754525-04 Original Sample (OS) • Duplicate (DUP)

(OS) L1754525-04 07/12/24 17:30 • (DUP) R4093943-3 07/12/24 17:30

Analyte	Original Result mg/l	DUP Result mg/l	Dilution	DUP RPD %	DUP Qualifier	DUP RPD Limits %
Suspended Solids	15400	15400	1	0.260		10

L1754525-06 Original Sample (OS) • Duplicate (DUP)

(OS) L1754525-06 07/12/24 17:30 • (DUP) R4093943-4 07/12/24 17:30

Analyte	Original Result mg/l	DUP Result mg/l	Dilution	DUP RPD %	DUP Qualifier	DUP RPD Limits %
Suspended Solids	15700	15700	1	0.000		10

Laboratory Control Sample (LCS)

(LCS) R4093943-2 07/12/24 17:30

Analyte	Spike Amount mg/l	LCS Result mg/l	LCS Rec. %	Rec. Limits %	LCS Qualifier
Suspended Solids	879	844	96.0	85.0-115	

Method Blank (MB)

(MB) R4093066-1 07/12/24 07:26

Analyte	MB Result mg/l	MB Qualifier	MB MDL mg/l	MB RDL mg/l
Oil & Grease (Hexane Extr)	U		0.350	5.00

Laboratory Control Sample (LCS) • Laboratory Control Sample Duplicate (LCSD)

(LCS) R4093066-2 07/12/24 07:26 • (LCSD) R4093066-3 07/12/24 07:26

Analyte	Spike Amount mg/l	LCS Result mg/l	LCSD Result mg/l	LCS Rec. %	LCSD Rec. %	Rec. Limits %	LCS Qualifier	LCSD Qualifier	RPD %	RPD Limits %
Oil & Grease (Hexane Extr)	40.0	39.8	37.9	99.5	94.8	78.0-114			4.89	18

L1753717-02 Original Sample (OS) • Matrix Spike (MS)

(OS) L1753717-02 07/12/24 07:26 • (MS) R4093066-4 07/12/24 07:26

Analyte	Spike Amount mg/l	Original Result mg/l	MS Result mg/l	MS Rec. %	Dilution	Rec. Limits %	MS Qualifier
Oil & Grease (Hexane Extr)	40.0	U	39.6	99.0	1	78.0-114	

Method Blank (MB)

(MB) R4092474-1 07/10/24 10:40

Analyte	MB Result units	MB Qualifier	MB MDL units	MB RDL units
Color	U		5.00	5.00

Sample Narrative:

BLANK: 7

L1754283-01 Original Sample (OS) • Duplicate (DUP)

(OS) L1754283-01 07/10/24 10:40 • (DUP) R4092474-2 07/10/24 10:40

Analyte	Original Result units	DUP Result units	Dilution	DUP RPD %	DUP Qualifier	DUP RPD Limits %
Color	20.0	20.0	1	0.000		20

Sample Narrative:

OS: 7

DUP: 7

Method Blank (MB)

(MB) R4091926-1 07/10/24 09:19

Analyte	MB Result mg/l	MB Qualifier	MB MDL mg/l	MB RDL mg/l
Alkalinity	U		20.0	20.0

L1754283-01 Original Sample (OS) • Duplicate (DUP)

(OS) L1754283-01 07/10/24 09:19 • (DUP) R4091926-3 07/10/24 09:19

Analyte	Original Result mg/l	DUP Result mg/l	Dilution	DUP RPD %	DUP Qualifier	DUP RPD Limits %
Alkalinity	120	118	1	2.11		20

Laboratory Control Sample (LCS)

(LCS) R4091926-2 07/10/24 09:19

Analyte	Spike Amount mg/l	LCS Result mg/l	LCS Rec. %	Rec. Limits %	LCS Qualifier
Alkalinity	250	240	96.0	90.0-110	

Method Blank (MB)

(MB) R4092616-3 07/10/24 19:14

Analyte	MB Result mg/l	MB Qualifier	MB MDL mg/l	MB RDL mg/l
Bromide	U		0.353	1.00
Chloride	U		0.379	1.00
Fluoride	U		0.0640	0.150
Nitrate as (N)	U		0.0480	0.100
Sulfate	U		0.594	5.00

L1754251-01 Original Sample (OS) • Duplicate (DUP)

(OS) L1754251-01 07/10/24 21:50 • (DUP) R4092616-5 07/10/24 22:03

Analyte	Original Result mg/l	DUP Result mg/l	Dilution	DUP RPD %	DUP Qualifier	DUP RPD Limits %
Bromide	U	U	1	0.000		15
Chloride	112	112	1	0.610		15
Fluoride	0.393	0.408	1	3.67		15
Nitrate as (N)	0.155	0.244	1	44.5	P1	15
Sulfate	22.2	22.2	1	0.105		15

L1754732-01 Original Sample (OS) • Duplicate (DUP)

(OS) L1754732-01 07/11/24 01:02 • (DUP) R4092616-8 07/11/24 01:15

Analyte	Original Result mg/l	DUP Result mg/l	Dilution	DUP RPD %	DUP Qualifier	DUP RPD Limits %
Bromide	U	U	1	0.000		15
Chloride	2.86	2.84	1	0.806		15
Fluoride	0.653	0.643	1	1.58		15
Nitrate as (N)	0.0661	0.0653	1	1.22	J	15
Sulfate	1.27	1.32	1	3.37	J	15

Laboratory Control Sample (LCS)

(LCS) R4092616-4 07/10/24 19:26

Analyte	Spike Amount mg/l	LCS Result mg/l	LCS Rec. %	Rec. Limits %	LCS Qualifier
Bromide	40.0	40.0	99.9	90.0-110	
Chloride	40.0	39.3	98.3	90.0-110	
Fluoride	8.00	8.20	102	90.0-110	
Nitrate as (N)	8.00	7.87	98.4	90.0-110	

Laboratory Control Sample (LCS)

(LCS) R4092616-4 07/10/24 19:26

Analyte	Spike Amount mg/l	LCS Result mg/l	LCS Rec. %	Rec. Limits %	LCS Qualifier
Sulfate	40.0	39.3	98.1	90.0-110	

L1754251-01 Original Sample (OS) • Matrix Spike (MS) • Matrix Spike Duplicate (MSD)

(OS) L1754251-01 07/10/24 21:50 • (MS) R4092616-6 07/10/24 22:16 • (MSD) R4092616-7 07/10/24 22:29

Analyte	Spike Amount mg/l	Original Result mg/l	MS Result mg/l	MSD Result mg/l	MS Rec. %	MSD Rec. %	Dilution	Rec. Limits %	MS Qualifier	MSD Qualifier	RPD %	RPD Limits %
Bromide	40.0	U	40.4	40.9	101	102	1	80.0-120			1.03	15
Chloride	40.0	112	130	130	45.8	46.8	1	80.0-120	J6	J6	0.313	15
Fluoride	8.00	0.393	9.14	8.41	109	100	1	80.0-120			8.31	15
Nitrate as (N)	8.00	0.155	8.04	8.09	98.5	99.2	1	80.0-120			0.661	15
Sulfate	40.0	22.2	57.6	58.7	88.4	91.3	1	80.0-120			2.00	15

L1754732-01 Original Sample (OS) • Matrix Spike (MS)

(OS) L1754732-01 07/11/24 01:02 • (MS) R4092616-9 07/11/24 01:28

Analyte	Spike Amount mg/l	Original Result mg/l	MS Result mg/l	MS Rec. %	Dilution	Rec. Limits %	MS Qualifier
Bromide	40.0	U	39.7	99.2	1	80.0-120	
Chloride	40.0	2.86	42.2	98.5	1	80.0-120	
Fluoride	8.00	0.653	8.69	100	1	80.0-120	
Nitrate as (N)	8.00	0.0661	8.00	99.2	1	80.0-120	
Sulfate	40.0	1.27	40.3	97.7	1	80.0-120	

Method Blank (MB)

(MB) R4093286-1 07/12/24 19:03

Analyte	MB Result mg/l	MB Qualifier	MB MDL mg/l	MB RDL mg/l
Chromium,Hexavalent	U		0.00200	0.00300

Laboratory Control Sample (LCS)

(LCS) R4093286-2 07/12/24 19:03

Analyte	Spike Amount mg/l	LCS Result mg/l	LCS Rec. %	Rec. Limits %	LCS Qualifier
Chromium,Hexavalent	0.200	0.195	97.7	85.0-115	

L1756127-01 Original Sample (OS) • Matrix Spike (MS) • Matrix Spike Duplicate (MSD)

(OS) L1756127-01 07/12/24 19:03 • (MS) R4093286-3 07/12/24 19:03 • (MSD) R4093286-4 07/12/24 19:03

Analyte	Spike Amount mg/l	Original Result mg/l	MS Result mg/l	MSD Result mg/l	MS Rec. %	MSD Rec. %	Dilution	Rec. Limits %	MS Qualifier	MSD Qualifier	RPD %	RPD Limits %
Chromium,Hexavalent	0.200	U	0.204	0.202	102	101	1	10.0-120			0.842	20

Method Blank (MB)

(MB) R4094061-1 07/15/24 20:06

Analyte	MB Result	MB Qualifier	MB MDL	MB RDL
	mg/l		mg/l	mg/l
Kjeldahl Nitrogen, TKN	U		0.140	0.250

Laboratory Control Sample (LCS)

(LCS) R4094061-2 07/15/24 20:07

Analyte	Spike Amount	LCS Result	LCS Rec.	Rec. Limits	LCS Qualifier
	mg/l	mg/l	%	%	
Kjeldahl Nitrogen, TKN	4.00	4.27	107	90.0-110	

L1754191-01 Original Sample (OS) • Matrix Spike (MS) • Matrix Spike Duplicate (MSD)

(OS) L1754191-01 07/15/24 20:10 • (MS) R4094061-3 07/15/24 20:44 • (MSD) R4094061-4 07/15/24 20:45

Analyte	Spike Amount	Original Result	MS Result	MSD Result	MS Rec.	MSD Rec.	Dilution	Rec. Limits	MS Qualifier	MSD Qualifier	RPD	RPD Limits
	mg/l	mg/l	mg/l	mg/l	%	%		%			%	%
Kjeldahl Nitrogen, TKN	4.00	1.03	5.64	6.51	115	137	1	90.0-110	J5	J5	14.3	20

L1754283-01 Original Sample (OS) • Matrix Spike (MS) • Matrix Spike Duplicate (MSD)

(OS) L1754283-01 07/15/24 20:11 • (MS) R4094061-5 07/15/24 20:46 • (MSD) R4094061-6 07/15/24 20:48

Analyte	Spike Amount	Original Result	MS Result	MSD Result	MS Rec.	MSD Rec.	Dilution	Rec. Limits	MS Qualifier	MSD Qualifier	RPD	RPD Limits
	mg/l	mg/l	mg/l	mg/l	%	%		%			%	%
Kjeldahl Nitrogen, TKN	4.00	0.343	4.88	4.63	113	107	1	90.0-110	J5		5.26	20

Method Blank (MB)

(MB) R4093045-1 07/12/24 12:50

Analyte	MB Result mg/l	MB Qualifier	MB MDL mg/l	MB RDL mg/l
Nitrate-Nitrite	U		0.0300	0.0500

Laboratory Control Sample (LCS)

(LCS) R4093045-2 07/12/24 12:51

Analyte	Spike Amount mg/l	LCS Result mg/l	LCS Rec. %	Rec. Limits %	LCS Qualifier
Nitrate-Nitrite	2.50	2.40	96.0	90.0-110	

L1754182-01 Original Sample (OS) • Matrix Spike (MS) • Matrix Spike Duplicate (MSD)

(OS) L1754182-01 07/12/24 12:51 • (MS) R4093045-3 07/12/24 12:59 • (MSD) R4093045-4 07/12/24 13:00

Analyte	Spike Amount mg/l	Original Result mg/l	MS Result mg/l	MSD Result mg/l	MS Rec. %	MSD Rec. %	Dilution	Rec. Limits %	MS Qualifier	MSD Qualifier	RPD %	RPD Limits %
Nitrate-Nitrite	2.50	0.794	3.13	3.11	93.4	92.6	1	90.0-110			0.641	20

L1756836-01 Original Sample (OS) • Duplicate (DUP)

(OS) L1756836-01 07/16/24 14:05 • (DUP) R4094367-1 07/16/24 14:05

Analyte	Original Result mg/l	DUP Result mg/l	Dilution	DUP RPD %	DUP Qualifier	DUP RPD Limits %
Dissolved Oxygen	7.77	8.25	1	5.99		10

Method Blank (MB)

(MB) R4093561-1 07/14/24 11:59

Analyte	MB Result mg/l	MB Qualifier	MB MDL mg/l	MB RDL mg/l
Chlorine,residual	U		0.0260	0.100

L1754191-01 Original Sample (OS) • Duplicate (DUP)

(OS) L1754191-01 07/14/24 12:14 • (DUP) R4093561-3 07/14/24 12:15

Analyte	Original Result mg/l	DUP Result mg/l	Dilution	DUP RPD %	DUP Qualifier	DUP RPD Limits %
Chlorine,residual	0.0330	0.0340	1	2.99	J	20

Laboratory Control Sample (LCS)

(LCS) R4093561-2 07/14/24 12:13

Analyte	Spike Amount mg/l	LCS Result mg/l	LCS Rec. %	Rec. Limits %	LCS Qualifier
Chlorine,residual	1.00	0.960	96.0	85.0-115	

Method Blank (MB)

(MB) R4092740-1 07/11/24 16:58

Analyte	MB Result mg/l	MB Qualifier	MB MDL mg/l	MB RDL mg/l
Cyanide	U		0.00430	0.0100

Laboratory Control Sample (LCS)

(LCS) R4092740-2 07/11/24 16:58

Analyte	Spike Amount mg/l	LCS Result mg/l	LCS Rec. %	Rec. Limits %	LCS Qualifier
Cyanide	0.100	0.0908	90.8	85.0-115	

L1754359-01 Original Sample (OS) • Matrix Spike (MS) • Matrix Spike Duplicate (MSD)

(OS) L1754359-01 07/11/24 16:58 • (MS) R4092740-3 07/11/24 16:58 • (MSD) R4092740-4 07/11/24 16:58

Analyte	Spike Amount mg/l	Original Result mg/l	MS Result mg/l	MSD Result mg/l	MS Rec. %	MSD Rec. %	Dilution	Rec. Limits %	MS Qualifier	MSD Qualifier	RPD %	RPD Limits %
Cyanide	0.100	U	0.0928	0.0928	92.8	92.8	1	85.0-115			0.000	20

Method Blank (MB)

(MB) R4092631-1 07/11/24 14:26

Analyte	MB Result mg/l	MB Qualifier	MB MDL mg/l	MB RDL mg/l
Phosphorus,Total	U		0.0152	0.0500

Laboratory Control Sample (LCS)

(LCS) R4092631-2 07/11/24 14:26

Analyte	Spike Amount mg/l	LCS Result mg/l	LCS Rec. %	Rec. Limits %	LCS Qualifier
Phosphorus,Total	0.500	0.526	105	80.0-120	

L1754283-01 Original Sample (OS) • Matrix Spike (MS) • Matrix Spike Duplicate (MSD)

(OS) L1754283-01 07/11/24 14:26 • (MS) R4092631-3 07/11/24 14:27 • (MSD) R4092631-4 07/11/24 14:27

Analyte	Spike Amount mg/l	Original Result mg/l	MS Result mg/l	MSD Result mg/l	MS Rec. %	MSD Rec. %	Dilution	Rec. Limits %	MS Qualifier	MSD Qualifier	RPD %	RPD Limits %
Phosphorus,Total	0.500	0.0443	0.569	0.562	105	104	1	80.0-120			1.20	20

Method Blank (MB)

(MB) R4091612-1 07/09/24 15:00

Analyte	MB Result mg/l	MB Qualifier	MB MDL mg/l	MB RDL mg/l
Sulfide	U		0.0230	0.100

Laboratory Control Sample (LCS)

(LCS) R4091612-2 07/09/24 15:00

Analyte	Spike Amount mg/l	LCS Result mg/l	LCS Rec. %	Rec. Limits %	LCS Qualifier
Sulfide	0.800	0.850	106	80.0-120	

L1753522-01 Original Sample (OS) • Matrix Spike (MS) • Matrix Spike Duplicate (MSD)

(OS) L1753522-01 07/09/24 15:00 • (MS) R4091612-3 07/09/24 15:03 • (MSD) R4091612-4 07/09/24 15:03

Analyte	Spike Amount mg/l	Original Result mg/l	MS Result mg/l	MSD Result mg/l	MS Rec. %	MSD Rec. %	Dilution	Rec. Limits %	MS Qualifier	MSD Qualifier	RPD %	RPD Limits %
Sulfide	0.800	U	0.772	0.769	96.5	96.1	1	80.0-120			0.453	20

Method Blank (MB)

(MB) R4093789-1 07/15/24 11:20

Analyte	MB Result mg/l	MB Qualifier	MB MDL mg/l	MB RDL mg/l
Sulfite	U		1.19	3.00

L1754191-01 Original Sample (OS) • Duplicate (DUP)

(OS) L1754191-01 07/15/24 11:20 • (DUP) R4093789-3 07/15/24 11:20

Analyte	Original Result mg/l	DUP Result mg/l	Dilution	DUP RPD %	DUP Qualifier	DUP RPD Limits %
Sulfite	U	U	1	0.000		20

Laboratory Control Sample (LCS)

(LCS) R4093789-2 07/15/24 11:20

Analyte	Spike Amount mg/l	LCS Result mg/l	LCS Rec. %	Rec. Limits %	LCS Qualifier
Sulfite	20.0	18.0	90.0	85.0-115	

L1754283-01 Original Sample (OS) • Matrix Spike (MS) • Matrix Spike Duplicate (MSD)

(OS) L1754283-01 07/15/24 11:20 • (MS) R4093789-4 07/15/24 11:20 • (MSD) R4093789-5 07/15/24 11:20

Analyte	Spike Amount mg/l	Original Result mg/l	MS Result mg/l	MSD Result mg/l	MS Rec. %	MSD Rec. %	Dilution	Rec. Limits %	MS Qualifier	MSD Qualifier	RPD %	RPD Limits %
Sulfite	20.0	U	19.0	18.5	95.0	92.5	1	85.0-115			2.67	20

Method Blank (MB)

(MB) R4093582-1 07/14/24 12:45

Analyte	MB Result mg/l	MB Qualifier	MB MDL mg/l	MB RDL mg/l
BOD	U		0.200	0.200

L1754172-01 Original Sample (OS) • Duplicate (DUP)

(OS) L1754172-01 07/14/24 12:55 • (DUP) R4093582-3 07/14/24 13:42

Analyte	Original Result mg/l	DUP Result mg/l	Dilution	DUP RPD %	DUP Qualifier	DUP RPD Limits %
BOD	3.30	ND	1	200	P1	20

L1754283-01 Original Sample (OS) • Duplicate (DUP)

(OS) L1754283-01 07/14/24 13:01 • (DUP) R4093582-4 07/14/24 13:44

Analyte	Original Result mg/l	DUP Result mg/l	Dilution	DUP RPD %	DUP Qualifier	DUP RPD Limits %
BOD	1.39	1.45	1	4.23		20

Laboratory Control Sample (LCS)

(LCS) R4093582-2 07/14/24 12:52

Analyte	Spike Amount mg/l	LCS Result mg/l	LCS Rec. %	Rec. Limits %	LCS Qualifier
BOD	198	187	94.6	85-115	

Method Blank (MB)

(MB) R4093709-1 07/14/24 14:20

Analyte	MB Result mg/l	MB Qualifier	MB MDL mg/l	MB RDL mg/l
CBOD	0.220	B1	0.200	0.200

L1754373-01 Original Sample (OS) • Duplicate (DUP)

(OS) L1754373-01 07/14/24 14:46 • (DUP) R4093709-3 07/14/24 14:54

Analyte	Original Result mg/l	DUP Result mg/l	Dilution	DUP RPD %	DUP Qualifier	DUP RPD Limits %
CBOD	1.04	7.58	1	200	J3	20

Laboratory Control Sample (LCS)

(LCS) R4093709-2 07/14/24 14:26

Analyte	Spike Amount mg/l	LCS Result mg/l	LCS Rec. %	Rec. Limits %	LCS Qualifier
CBOD	198	183	92.5	85-115	

Method Blank (MB)

(MB) R4093841-1 07/15/24 13:10

Analyte	MB Result mg/l	MB Qualifier	MB MDL mg/l	MB RDL mg/l
COD	U		16.1	35.0

Laboratory Control Sample (LCS)

(LCS) R4093841-2 07/15/24 13:10

Analyte	Spike Amount mg/l	LCS Result mg/l	LCS Rec. %	Rec. Limits %	LCS Qualifier
COD	500	511	102	80.0-120	

L1754283-01 Original Sample (OS) • Matrix Spike (MS) • Matrix Spike Duplicate (MSD)

(OS) L1754283-01 07/15/24 13:10 • (MS) R4093841-3 07/15/24 13:10 • (MSD) R4093841-4 07/15/24 13:10

Analyte	Spike Amount mg/l	Original Result mg/l	MS Result mg/l	MSD Result mg/l	MS Rec. %	MSD Rec. %	Dilution	Rec. Limits %	MS Qualifier	MSD Qualifier	RPD %	RPD Limits %
COD	500	19.0	517	524	99.7	101	1	80.0-120			1.22	20

L1754768-01 Original Sample (OS) • Matrix Spike (MS) • Matrix Spike Duplicate (MSD)

(OS) L1754768-01 07/15/24 13:10 • (MS) R4093841-5 07/15/24 13:10 • (MSD) R4093841-6 07/15/24 13:10

Analyte	Spike Amount mg/l	Original Result mg/l	MS Result mg/l	MSD Result mg/l	MS Rec. %	MSD Rec. %	Dilution	Rec. Limits %	MS Qualifier	MSD Qualifier	RPD %	RPD Limits %
COD	500	67.6	524	526	91.2	91.7	1	80.0-120			0.402	20

Method Blank (MB)

(MB) R4092962-1 07/11/24 16:22

Analyte	MB Result mg/l	MB Qualifier	MB MDL mg/l	MB RDL mg/l
TOC (Total Organic Carbon)	U		0.270	0.700

Laboratory Control Sample (LCS)

(LCS) R4092962-2 07/11/24 16:42

Analyte	Spike Amount mg/l	LCS Result mg/l	LCS Rec. %	Rec. Limits %	LCS Qualifier
TOC (Total Organic Carbon)	10.0	10.4	104	90.0-110	

L1754776-01 Original Sample (OS) • Matrix Spike (MS) • Matrix Spike Duplicate (MSD)

(OS) L1754776-01 07/11/24 17:08 • (MS) R4092962-3 07/11/24 17:54 • (MSD) R4092962-4 07/11/24 18:14

Analyte	Spike Amount mg/l	Original Result mg/l	MS Result mg/l	MSD Result mg/l	MS Rec. %	MSD Rec. %	Dilution	Rec. Limits %	MS Qualifier	MSD Qualifier	RPD %	RPD Limits %
TOC (Total Organic Carbon)	100	30.8	127	127	96.3	96.3	10	80.0-120			0.000	20

Method Blank (MB)

(MB) R4092475-1 07/09/24 19:02

Analyte	MB Result mg/l	MB Qualifier	MB MDL mg/l	MB RDL mg/l
MBAS	U		0.360	0.500

Laboratory Control Sample (LCS)

(LCS) R4092475-2 07/09/24 19:02

Analyte	Spike Amount mg/l	LCS Result mg/l	LCS Rec. %	Rec. Limits %	LCS Qualifier
MBAS	1.00	1.17	117	80.0-120	

L1754283-01 Original Sample (OS) • Matrix Spike (MS) • Matrix Spike Duplicate (MSD)

(OS) L1754283-01 07/09/24 19:02 • (MS) R4092475-3 07/09/24 19:02 • (MSD) R4092475-4 07/09/24 19:02

Analyte	Spike Amount mg/l	Original Result mg/l	MS Result mg/l	MSD Result mg/l	MS Rec. %	MSD Rec. %	Dilution	Rec. Limits %	MS Qualifier	MSD Qualifier	RPD %	RPD Limits %
MBAS	1.00	U	1.20	1.25	120	125	1	80.0-120		J5	3.87	20

L1754340-01 Original Sample (OS) • Duplicate (DUP)

(OS) L1754340-01 07/11/24 09:01 • (DUP) R4092476-2 07/11/24 09:01

Analyte	Original Result	DUP Result	Dilution	DUP RPD	DUP Qualifier	DUP RPD Limits
	su	su		%		%
pH	7.61	7.62	1	0.131		20

Sample Narrative:
OS: 7.61 at 19.6C
DUP: 7.62 at 19.3C

Laboratory Control Sample (LCS)

(LCS) R4092476-1 07/11/24 09:01

Analyte	Spike Amount	LCS Result	LCS Rec.	Rec. Limits	LCS Qualifier
	su	su	%	%	
pH	6.00	5.99	99.8	99.0-101	

Sample Narrative:
LCS: 5.99 at 22C

Method Blank (MB)

(MB) R4092766-1 07/11/24 16:29

Analyte	MB Result mg/l	MB Qualifier	MB MDL mg/l	MB RDL mg/l
Ammonia Nitrogen	0.0285	J	0.0280	0.100

Laboratory Control Sample (LCS)

(LCS) R4092766-2 07/11/24 16:30

Analyte	Spike Amount mg/l	LCS Result mg/l	LCS Rec. %	Rec. Limits %	LCS Qualifier
Ammonia Nitrogen	5.00	5.28	106	80.0-120	

L1754163-02 Original Sample (OS) • Matrix Spike (MS) • Matrix Spike Duplicate (MSD)

(OS) L1754163-02 07/11/24 16:39 • (MS) R4092766-3 07/11/24 16:32 • (MSD) R4092766-4 07/11/24 16:34

Analyte	Spike Amount mg/l	Original Result mg/l	MS Result mg/l	MSD Result mg/l	MS Rec. %	MSD Rec. %	Dilution	Rec. Limits %	MS Qualifier	MSD Qualifier	RPD %	RPD Limits %
Ammonia Nitrogen	5.00	0.369	5.44	5.43	101	101	1	80.0-120			0.184	20

L1754191-01 Original Sample (OS) • Matrix Spike (MS) • Matrix Spike Duplicate (MSD)

(OS) L1754191-01 07/11/24 16:41 • (MS) R4092766-5 07/11/24 16:36 • (MSD) R4092766-6 07/11/24 16:37

Analyte	Spike Amount mg/l	Original Result mg/l	MS Result mg/l	MSD Result mg/l	MS Rec. %	MSD Rec. %	Dilution	Rec. Limits %	MS Qualifier	MSD Qualifier	RPD %	RPD Limits %
Ammonia Nitrogen	5.00	U	5.12	5.15	102	103	1	80.0-120			0.584	20

Method Blank (MB)

(MB) R4092198-3 07/10/24 16:35

Analyte	MB Result mg/l	MB Qualifier	MB MDL mg/l	MB RDL mg/l
Mercury	0.0000450	J	0.0000450	0.000200

Laboratory Control Sample (LCS)

(LCS) R4092198-4 07/10/24 16:37

Analyte	Spike Amount mg/l	LCS Result mg/l	LCS Rec. %	Rec. Limits %	LCS Qualifier
Mercury	0.00250	0.00227	90.8	85.0-115	

L1753552-01 Original Sample (OS) • Matrix Spike (MS) • Matrix Spike Duplicate (MSD)

(OS) L1753552-01 07/10/24 16:40 • (MS) R4092198-5 07/10/24 16:42 • (MSD) R4092198-6 07/10/24 16:44

Analyte	Spike Amount mg/l	Original Result mg/l	MS Result mg/l	MSD Result mg/l	MS Rec. %	MSD Rec. %	Dilution	Rec. Limits %	MS Qualifier	MSD Qualifier	RPD %	RPD Limits %
Mercury	0.00250	0.0000520	0.00170	0.00171	65.9	66.3	1	70.0-130	J6	J6	0.587	20

Method Blank (MB)

(MB) R4092733-2 07/11/24 13:15

Analyte	MB Result mg/l	MB Qualifier	MB MDL mg/l	MB RDL mg/l
Boron	U		0.0186	0.100
Tin	U		0.00240	0.0250
Titanium	U		0.00835	0.100

Laboratory Control Sample (LCS)

(LCS) R4092733-1 07/11/24 13:12

Analyte	Spike Amount mg/l	LCS Result mg/l	LCS Rec. %	Rec. Limits %	LCS Qualifier
Boron	1.00	0.962	96.2	85.0-115	
Tin	1.00	0.999	99.9	85.0-115	
Titanium	1.00	0.996	99.6	85.0-115	

L1754731-01 Original Sample (OS) • Matrix Spike (MS) • Matrix Spike Duplicate (MSD)

(OS) L1754731-01 07/11/24 13:19 • (MS) R4092733-3 07/11/24 13:23 • (MSD) R4092733-4 07/11/24 13:27

Analyte	Spike Amount mg/l	Original Result mg/l	MS Result mg/l	MSD Result mg/l	MS Rec. %	MSD Rec. %	Dilution	Rec. Limits %	MS Qualifier	MSD Qualifier	RPD %	RPD Limits %
Boron	1.00	0.0190	0.980	0.983	96.1	96.4	1	70.0-130			0.357	20
Tin	1.00	0.00833	1.00	1.01	99.2	99.8	1	70.0-130			0.598	20
Titanium	1.00	0.0438	1.04	1.04	99.3	99.6	1	70.0-130			0.289	20

L1754768-01 Original Sample (OS) • Matrix Spike (MS) • Matrix Spike Duplicate (MSD)

(OS) L1754768-01 07/11/24 14:11 • (MS) R4092733-5 07/11/24 14:15 • (MSD) R4092733-6 07/11/24 14:19

Analyte	Spike Amount mg/l	Original Result mg/l	MS Result mg/l	MSD Result mg/l	MS Rec. %	MSD Rec. %	Dilution	Rec. Limits %	MS Qualifier	MSD Qualifier	RPD %	RPD Limits %
Boron	1.00	1.72	2.62	2.65	89.9	93.5	1	70.0-130			1.37	20
Tin	1.00	U	0.947	0.958	94.7	95.8	1	70.0-130			1.11	20
Titanium	1.00	U	0.977	0.995	97.7	99.5	1	70.0-130			1.73	20

Method Blank (MB)

(MB) R4092690-1 07/11/24 15:02

Analyte	MB Result mg/l	MB Qualifier	MB MDL mg/l	MB RDL mg/l
Aluminum	0.00743		0.00186	0.00250
Antimony	U		0.000580	0.00500
Arsenic	0.000222	J	0.000100	0.000500
Barium	U		0.000440	0.00300
Beryllium	0.000152	J	0.0000600	0.000500
Cadmium	U		0.000120	0.00100
Chromium	U		0.000510	0.00300
Cobalt	0.000117	J	0.0000400	0.000300
Copper	U		0.000900	0.00200
Iron	0.00776		0.00432	0.00700
Lead	U		0.000140	0.000500
Magnesium	U		0.0121	0.0200
Manganese	U		0.000330	0.000500
Molybdenum	U		0.000530	0.00100
Nickel	U		0.000640	0.00200
Selenium	U		0.000740	0.00500
Silver	0.0000896	J	0.0000800	0.000500
Thallium	0.000232	J	0.000190	0.000500
Zinc	U		0.00265	0.00500

Laboratory Control Sample (LCS)

(LCS) R4092690-2 07/11/24 15:08

Analyte	Spike Amount mg/l	LCS Result mg/l	LCS Rec. %	Rec. Limits %	LCS Qualifier
Aluminum	1.00	0.969	96.9	85.0-115	
Antimony	0.100	0.0971	97.1	85.0-115	
Arsenic	0.100	0.0983	98.3	85.0-115	
Barium	0.100	0.0963	96.3	85.0-115	
Beryllium	0.100	0.0990	99.0	85.0-115	
Cadmium	0.100	0.0998	99.8	85.0-115	
Chromium	0.100	0.0995	99.5	85.0-115	
Cobalt	0.100	0.0999	99.9	85.0-115	
Copper	0.100	0.101	101	85.0-115	
Iron	1.00	0.971	97.1	85.0-115	
Lead	0.100	0.0951	95.1	85.0-115	
Magnesium	1.00	1.00	100	85.0-115	
Manganese	0.100	0.0981	98.1	85.0-115	
Molybdenum	0.100	0.100	100	85.0-115	

Laboratory Control Sample (LCS)

(LCS) R4092690-2 07/11/24 15:08

Analyte	Spike Amount mg/l	LCS Result mg/l	LCS Rec. %	Rec. Limits %	LCS Qualifier
Nickel	0.100	0.101	101	85.0-115	
Selenium	0.100	0.101	101	85.0-115	
Silver	0.0500	0.0505	101	85.0-115	
Thallium	0.100	0.0900	90.0	85.0-115	
Zinc	0.100	0.0963	96.3	85.0-115	

L1752148-01 Original Sample (OS) • Matrix Spike (MS) • Matrix Spike Duplicate (MSD)

(OS) L1752148-01 07/11/24 15:15 • (MS) R4092690-3 07/11/24 15:21 • (MSD) R4092690-4 07/11/24 15:27

Analyte	Spike Amount mg/l	Original Result mg/l	MS Result mg/l	MSD Result mg/l	MS Rec. %	MSD Rec. %	Dilution	Rec. Limits %	MS Qualifier	MSD Qualifier	RPD %	RPD Limits %
Aluminum	1.00	0.0185	0.981	0.958	96.3	93.9	1	70.0-130			2.39	20
Antimony	0.100	0.000615	0.0978	0.0991	97.2	98.5	1	70.0-130			1.39	20
Arsenic	0.100	0.0149	0.113	0.113	97.7	97.8	1	70.0-130			0.0911	20
Barium	0.100	0.427	0.523	0.529	96.4	102	1	70.0-130			1.08	20
Beryllium	0.100	0.000212	0.0935	0.0912	93.3	91.0	1	70.0-130			2.44	20
Cadmium	0.100	0.000135	0.0926	0.0923	92.5	92.1	1	70.0-130			0.419	20
Chromium	0.100	0.0179	0.114	0.112	96.4	94.1	1	70.0-130			2.02	20
Cobalt	0.100	0.000261	0.0957	0.0961	95.5	95.8	1	70.0-130			0.341	20
Copper	0.100	0.0163	0.110	0.110	93.7	94.2	1	70.0-130			0.435	20
Iron	1.00	0.149	1.08	1.07	92.9	91.9	1	70.0-130			0.897	20
Lead	0.100	0.000194	0.0913	0.0906	91.1	90.4	1	70.0-130			0.834	20
Magnesium	1.00	33.8	35.1	34.4	125	54.6	1	70.0-130		V	2.02	20
Manganese	0.100	0.00562	0.101	0.0990	95.6	93.4	1	70.0-130			2.17	20
Molybdenum	0.100	0.00292	0.103	0.103	99.8	99.8	1	70.0-130			0.0476	20
Nickel	0.100	0.0466	0.140	0.140	93.1	92.9	1	70.0-130			0.152	20
Selenium	0.100	0.0173	0.117	0.115	99.3	98.1	1	70.0-130			0.986	20
Silver	0.0500	0.000107	0.0474	0.0468	94.5	93.4	1	70.0-130			1.17	20
Thallium	0.100	0.000987	0.0860	0.0863	85.0	85.3	1	70.0-130			0.438	20
Zinc	0.100	0.00409	0.0947	0.0940	90.6	89.9	1	70.0-130			0.793	20

L1754390-06 Original Sample (OS) • Matrix Spike (MS) • Matrix Spike Duplicate (MSD)

(OS) L1754390-06 07/11/24 22:48 • (MS) R4092690-5 07/11/24 22:55 • (MSD) R4092690-6 07/11/24 23:01

Analyte	Spike Amount mg/l	Original Result mg/l	MS Result mg/l	MSD Result mg/l	MS Rec. %	MSD Rec. %	Dilution	Rec. Limits %	MS Qualifier	MSD Qualifier	RPD %	RPD Limits %
Antimony	0.100	U	0.0992	0.0970	99.2	97.0	1	70.0-130			2.24	20
Arsenic	0.100	0.000533	0.0977	0.0956	97.1	95.0	1	70.0-130			2.16	20
Barium	0.100	0.0429	0.145	0.143	102	99.8	1	70.0-130			1.67	20

L1754390-06 Original Sample (OS) • Matrix Spike (MS) • Matrix Spike Duplicate (MSD)

(OS) L1754390-06 07/11/24 22:48 • (MS) R4092690-5 07/11/24 22:55 • (MSD) R4092690-6 07/11/24 23:01

Analyte	Spike Amount mg/l	Original Result mg/l	MS Result mg/l	MSD Result mg/l	MS Rec. %	MSD Rec. %	Dilution	Rec. Limits %	MS Qualifier	MSD Qualifier	RPD %	RPD Limits %
Beryllium	0.100	U	0.0938	0.102	93.8	102	1	70.0-130			8.31	20
Cadmium	0.100	0.000379	0.0952	0.0955	94.8	95.1	1	70.0-130			0.298	20
Chromium	0.100	U	0.0948	0.0957	94.8	95.7	1	70.0-130			0.921	20
Cobalt	0.100	0.00123	0.0992	0.0972	98.0	96.0	1	70.0-130			2.07	20
Copper	0.100	0.290	0.419	0.409	129	119	1	70.0-130			2.41	20
Iron	1.00	0.00434	0.930	0.940	92.6	93.5	1	70.0-130			0.996	20
Lead	0.100	0.00217	0.0951	0.0936	92.9	91.4	1	70.0-130			1.60	20
Magnesium	1.00	3.50	4.78	4.77	128	127	1	70.0-130			0.0436	20
Manganese	0.100	0.256	0.374	0.375	118	119	1	70.0-130			0.191	20
Molybdenum	0.100	0.000975	0.102	0.0997	101	98.8	1	70.0-130			2.54	20
Nickel	0.100	0.304	0.439	0.431	135	127	1	70.0-130	J5		1.79	20
Selenium	0.100	U	0.0991	0.104	99.1	104	1	70.0-130			4.71	20
Silver	0.0500	U	0.0483	0.0485	96.6	97.1	1	70.0-130			0.481	20
Thallium	0.100	U	0.0907	0.0885	90.7	88.5	1	70.0-130			2.46	20
Zinc	0.100	1.14	1.37	1.34	221	199	1	70.0-130	V	V	1.61	20

Method Blank (MB)

(MB) R4091976-2 07/09/24 17:32

Analyte	MB Result mg/l	MB Qualifier	MB MDL mg/l	MB RDL mg/l
1,1,1-Trichloroethane	U		0.00335	0.00500
1,1,2,2-Tetrachloroethane	U		0.000596	0.00500
1,1,2-Trichloroethane	U		0.00145	0.00500
1,1-Dichloroethene	U		0.00367	0.00500
1,1-Dichloroethane	U		0.00292	0.00500
1,2-Dibromoethane	U		0.000549	0.00200
1,2-Dichlorobenzene	U		0.00172	0.00200
1,2-Dichloroethane	U		0.00195	0.00500
1,2-Dichloropropane	U		0.000804	0.00200
1,3-Dichlorobenzene	U		0.00419	0.00500
1,4-Dichlorobenzene	U		0.00173	0.00200
2-Butanone (MEK)	U		0.00822	0.0250
2-Chloroethyl vinyl ether	U		0.00652	0.0100
Acrolein	U		0.00544	0.0100
Acrylonitrile	U		0.00709	0.0100
Benzene	U		0.00207	0.00500
Bromodichloromethane	U		0.00179	0.00200
Bromoform	U		0.000960	0.0100
Bromomethane	U		0.00347	0.00500
Carbon tetrachloride	U		0.00159	0.00200
Chlorobenzene	U		0.00276	0.0100
Chloroethane	U		0.00296	0.00500
Chloroform	U		0.00212	0.00500
Chloromethane	U		0.00361	0.00500
cis-1,3-Dichloropropene	U		0.00492	0.0100
Dibromochloromethane	U		0.00327	0.00500
Ethylbenzene	U		0.000401	0.00200
Methylene Chloride	U		0.0118	0.0200
Tetrachloroethene	U		0.00486	0.0100
Toluene	0.00317	J	0.00219	0.00500
trans-1,2-Dichloroethene	U		0.00501	0.0100
Trichloroethene	U		0.00262	0.00500
Vinyl chloride	U		0.00466	0.00500
(S) 1,2-Dichloroethane-d4	*93.5*			*70.0-130*
(S) 4-Bromofluorobenzene	*99.6*			*70.0-130*
(S) Toluene-d8	*97.4*			*70.0-130*

Laboratory Control Sample (LCS)

(LCS) R4091976-1 07/09/24 16:24

Analyte	Spike Amount mg/l	LCS Result mg/l	LCS Rec. %	Rec. Limits %	LCS Qualifier
1,1,1-Trichloroethane	0.0200	0.0201	101	70.0-130	
1,1,2,2-Tetrachloroethane	0.0200	0.0185	92.5	60.0-140	
1,1,2-Trichloroethane	0.0200	0.0190	95.0	70.0-130	
1,1-Dichloroethene	0.0200	0.0195	97.5	50.0-150	
1,1-Dichloroethane	0.0200	0.0203	102	70.0-130	
1,2-Dibromoethane	0.0200	0.0186	93.0	70.0-130	
1,2-Dichlorobenzene	0.0200	0.0203	102	65.0-135	
1,2-Dichloroethane	0.0200	0.0202	101	70.0-130	
1,2-Dichloropropane	0.0200	0.0181	90.5	35.0-165	
1,3-Dichlorobenzene	0.0200	0.0195	97.5	70.0-130	
1,4-Dichlorobenzene	0.0200	0.0192	96.0	65.0-135	
2-Butanone (MEK)	0.100	0.0829	82.9	70.0-130	
2-Chloroethyl vinyl ether	0.100	0.0529	52.9	1.00-225	
Acrolein	0.100	0.105	105	64.0-139	
Acrylonitrile	0.100	0.104	104	67.0-136	
Benzene	0.0200	0.0197	98.5	65.0-135	
Bromodichloromethane	0.0200	0.0203	102	65.0-135	
Bromoform	0.0200	0.0233	117	70.0-130	
Bromomethane	0.0200	0.0329	165	15.0-185	
Carbon tetrachloride	0.0200	0.0216	108	70.0-130	
Chlorobenzene	0.0200	0.0196	98.0	65.0-135	
Chloroethane	0.0200	0.0214	107	40.0-160	
Chloroform	0.0200	0.0207	104	70.0-135	
Chloromethane	0.0200	0.0159	79.5	1.00-205	
cis-1,3-Dichloropropene	0.0200	0.0177	88.5	25.0-175	
Dibromochloromethane	0.0200	0.0202	101	70.0-135	
Ethylbenzene	0.0200	0.0197	98.5	60.0-140	
Methylene Chloride	0.0200	0.0221	111	60.0-140	
Tetrachloroethene	0.0200	0.0181	90.5	70.0-130	
Toluene	0.0200	0.0196	98.0	70.0-130	
trans-1,2-Dichloroethene	0.0200	0.0206	103	70.0-130	
Trichloroethene	0.0200	0.0201	101	65.0-135	
Vinyl chloride	0.0200	0.0208	104	5.00-195	
(S) 1,2-Dichloroethane-d4			*95.4*	*70.0-130*	
(S) 4-Bromofluorobenzene			*91.3*	*70.0-130*	
(S) Toluene-d8			*99.6*	*70.0-130*	

L1754191-01 Original Sample (OS) • Matrix Spike (MS) • Matrix Spike Duplicate (MSD)

(OS) L1754191-01 07/09/24 18:02 • (MS) R4091976-3 07/09/24 18:26 • (MSD) R4091976-4 07/09/24 18:51

Analyte	Spike Amount mg/l	Original Result mg/l	MS Result mg/l	MSD Result mg/l	MS Rec. %	MSD Rec. %	Dilution	Rec. Limits %	MS Qualifier	MSD Qualifier	RPD %	RPD Limits %
1,1,1-Trichloroethane	0.0199	U	0.0200	0.0203	101	102	1	52.0-162			1.49	36
1,1,2,2-Tetrachloroethane	0.0201	U	0.0183	0.0188	91.0	93.5	1	46.0-157			2.70	61
1,1,2-Trichloroethane	0.0199	U	0.0194	0.0193	97.5	97.0	1	52.0-150			0.517	45
1,1-Dichloroethene	0.0200	U	0.0203	0.0203	102	102	1	1.00-234			0.000	32
1,1-Dichloroethane	0.0200	U	0.0214	0.0211	107	105	1	59.0-155			1.41	40
1,2-Dibromoethane	0.0200	U	0.0184	0.0187	92.0	93.5	1	70.0-130			1.62	20
1,2-Dichlorobenzene	0.0200	U	0.0212	0.0213	106	106	1	18.0-190			0.471	57
1,2-Dichloroethane	0.0200	U	0.0208	0.0209	104	105	1	49.0-155			0.480	49
1,2-Dichloropropane	0.0199	U	0.0185	0.0185	93.0	93.0	1	1.00-210			0.000	55
1,3-Dichlorobenzene	0.0199	U	0.0203	0.0205	102	103	1	59.0-156			0.980	43
1,4-Dichlorobenzene	0.0200	U	0.0201	0.0201	101	101	1	18.0-190			0.000	57
2-Butanone (MEK)	0.100	U	0.0762	0.0774	76.2	77.4	1	70.0-130			1.56	20
2-Chloroethyl vinyl ether	0.100	U	U	U	0.000	0.000	1	1.00-305	J6	J6	0.000	71
Acrolein	0.100	U	0.0936	0.0921	93.6	92.1	1	4.00-172			1.62	20
Acrylonitrile	0.100	U	0.0986	0.104	98.6	104	1	22.0-189			5.33	20
Benzene	0.0200	U	0.0204	0.0202	102	101	1	37.0-151			0.985	61
Bromodichloromethane	0.0199	U	0.0203	0.0199	102	100	1	35.0-155			1.99	56
Bromoform	0.0198	U	0.0225	0.0229	114	116	1	70.0-130			1.76	42
Bromomethane	0.0200	U	0.0261	0.0283	131	142	1	15.0-185			8.09	61
Carbon tetrachloride	0.0200	U	0.0224	0.0225	112	113	1	70.0-140			0.445	41
Chlorobenzene	0.0200	U	0.0203	0.0205	102	103	1	37.0-160			0.980	53
Chloroethane	0.0200	U	0.0203	0.0198	102	99.0	1	14.0-230			2.49	78
Chloroform	0.0200	U	0.0212	0.0215	106	108	1	51.0-138			1.41	54
Chloromethane	0.0200	U	0.0133	0.0137	66.5	68.5	1	1.00-273			2.96	20
cis-1,3-Dichloropropene	0.0200	U	0.0179	0.0181	89.5	90.5	1	1.00-227			1.11	58
Dibromochloromethane	0.0198	U	0.0204	0.0202	103	102	1	53.0-149			0.985	50
Ethylbenzene	0.0200	U	0.0211	0.0209	105	105	1	37.0-162			0.952	63
Methylene Chloride	0.0204	U	0.0193	0.0198	94.6	97.1	1	1.00-221	J	J	2.56	28
Tetrachloroethene	0.0200	U	0.0194	0.0193	97.0	96.5	1	64.0-148			0.517	39
Toluene	0.0200	U	0.0208	0.0206	104	103	1	47.0-150			0.966	41
trans-1,2-Dichloroethene	0.0200	U	0.0213	0.0213	106	106	1	54.0-156			0.000	45
Trichloroethene	0.0200	U	0.0215	0.0213	108	106	1	70.0-157			0.935	48
Vinyl chloride	0.0200	U	0.0189	0.0187	94.5	93.5	1	1.00-251			1.06	66
(S) 1,2-Dichloroethane-d4					*97.2*	*97.9*		*70.0-130*				
(S) 4-Bromofluorobenzene					*90.3*	*91.8*		*70.0-130*				
(S) Toluene-d8					*101*	*100*		*70.0-130*				

Method Blank (MB)

(MB) R4093629-1 07/14/24 04:29

Analyte	MB Result mg/l	MB Qualifier	MB MDL mg/l	MB RDL mg/l
PCB 1016	U		0.000270	0.000500
PCB 1221	U		0.000270	0.000500
PCB 1232	U		0.000270	0.000500
PCB 1242	U		0.000270	0.000500
PCB 1248	U		0.000173	0.000500
PCB 1254	U		0.000173	0.000500
PCB 1260	U		0.000173	0.000500
Total PCBs	U		0.000173	0.000500
(S) Decachlorobiphenyl	*40.9*			*10.0-144*
(S) Tetrachloro-m-xylene	*77.2*			*10.0-135*

Laboratory Control Sample (LCS)

(LCS) R4093629-5 07/14/24 04:50

Analyte	Spike Amount mg/l	LCS Result mg/l	LCS Rec. %	Rec. Limits %	LCS Qualifier
PCB 1016	0.00250	0.00226	90.4	50.0-140	
PCB 1260	0.00250	0.00211	84.4	8.00-140	
(S) Decachlorobiphenyl			*69.4*	*10.0-144*	
(S) Tetrachloro-m-xylene			*79.7*	*10.0-135*	

L1754575-01 Original Sample (OS) • Matrix Spike (MS) • Matrix Spike Duplicate (MSD)

(OS) L1754575-01 07/14/24 06:36 • (MS) R4093629-6 07/14/24 07:08 • (MSD) R4093629-7 07/14/24 07:20

Analyte	Spike Amount mg/l	Original Result mg/l	MS Result mg/l	MSD Result mg/l	MS Rec. %	MSD Rec. %	Dilution	Rec. Limits %	MS Qualifier	MSD Qualifier	RPD %	RPD Limits %
PCB 1016	0.00250	U	0.00210	0.00204	84.0	81.6	1	50.0-140			2.90	36
PCB 1260	0.00250	U	0.00139	0.00146	55.6	58.4	1	8.00-140			4.91	38
(S) Decachlorobiphenyl					*39.5*	*42.5*		*10.0-144*				
(S) Tetrachloro-m-xylene					*69.7*	*70.6*		*10.0-135*				

Method Blank (MB)

(MB) R4093641-1 07/13/24 14:45

Analyte	MB Result mg/l	MB Qualifier	MB MDL mg/l	MB RDL mg/l
1,2,4,5-Tetrachlorobenzene	U		0.000200	0.00200
2,4,6-Trichlorophenol	U		0.000238	0.00200
2,4-Dichlorophenol	U		0.000336	0.00400
2,4-Dimethylphenol	U		0.000613	0.00200
2,4-Dinitrophenol	U		0.00154	0.0100
2-Chlorophenol	U		0.000307	0.00200
2-Methylphenol	U		0.000238	0.00200
2-Nitrophenol	U		0.000247	0.00200
3&4-Methyl Phenol	U		0.000238	0.00200
3,3-Dichlorobenzidine	U		0.000788	0.00400
4,6-Dinitro-2-methylphenol	U		0.00202	0.0100
4-Chloro-3-methylphenol	U		0.000217	0.00200
4-Nitrophenol	U		0.00123	0.0100
Anthracene	U		0.000168	0.00200
Benzidine	U		0.000350	0.00400
Benzo(a)anthracene	U		0.000307	0.00200
Benzo(a)pyrene	U		0.000470	0.00200
Bis(2-chloroethyl)ether	U		0.000168	0.00200
Bis(2-Ethylhexyl)phthalate	U		0.00180	0.00200
Chrysene	U		0.000257	0.00200
Di-n-butyl phthalate	U		0.00160	0.00200
Hexachloro-1,3-butadiene	U		0.000217	0.00200
Hexachlorobenzene	U		0.000307	0.00200
Hexachlorocyclopentadiene	U		0.000299	0.00200
Hexachloroethane	U		0.000247	0.00200
n-Nitrosodi-n-butylamine	U		0.00110	0.00200
n-Nitrosodiethylamine	U		0.000696	0.00200
Nitrobenzene	U		0.000314	0.00200
Nonylphenol	U		0.000168	0.00200
Pentachlorobenzene	U		0.000247	0.00200
Pentachlorophenol	U		0.000283	0.00200
Phenanthrene	U		0.000200	0.00200
Phenol	U		0.000500	0.00200
Pyridine	U		0.00174	0.00400
Total Cresols	U		0.00153	0.00800
(S) 2,4,6-Tribromophenol	*55.0*			*29.0-132*
(S) 2-Fluorobiphenyl	*81.5*			*26.0-102*
(S) 2-Fluorophenol	*72.5*	J1		*10.0-66.0*
(S) Nitrobenzene-d5	*82.5*			*15.0-106*
(S) p-Terphenyl-d14	*95.0*			*10.0-120*

Method Blank (MB)

(MB) R4093641-1 07/13/24 14:45

Analyte	MB Result mg/l	MB Qualifier	MB MDL mg/l	MB RDL mg/l
(S) Phenol-d6	*69.0*	J1		*10.0-54.0*

Laboratory Control Sample (LCS)

(LCS) R4093641-2 07/13/24 15:15

Analyte	Spike Amount mg/l	LCS Result mg/l	LCS Rec. %	Rec. Limits %	LCS Qualifier
1,2,4,5-Tetrachlorobenzene	0.200	0.141	70.5	31.0-120	
2,4,6-Trichlorophenol	0.200	0.175	87.5	37.0-144	
2,4-Dichlorophenol	0.200	0.168	84.0	39.0-135	
2,4-Dimethylphenol	0.200	0.171	85.5	32.0-120	
2,4-Dinitrophenol	0.200	0.123	61.5	1.00-191	
2-Chlorophenol	0.200	0.172	86.0	23.0-134	
2-Methylphenol	0.200	0.179	89.5	26.0-120	
2-Nitrophenol	0.200	0.160	80.0	29.0-182	
3&4-Methyl Phenol	0.200	0.169	84.5	27.0-120	
3,3-Dichlorobenzidine	0.400	0.401	100	1.00-262	
4,6-Dinitro-2-methylphenol	0.200	0.152	76.0	1.00-181	
4-Chloro-3-methylphenol	0.200	0.170	85.0	22.0-147	
4-Nitrophenol	0.200	0.121	60.5	1.00-132	
Anthracene	0.200	0.184	92.0	27.0-133	
Benzidine	0.400	0.125	31.3	1.00-120	
Benzo(a)anthracene	0.200	0.189	94.5	33.0-143	
Benzo(a)pyrene	0.200	0.200	100	17.0-163	
Bis(2-chloroethyl)ether	0.200	0.163	81.5	33.0-185	
Bis(2-Ethylhexyl)phthalate	0.200	0.213	106	8.00-158	
Chrysene	0.200	0.178	89.0	17.0-168	
Di-n-butyl phthalate	0.200	0.196	98.0	1.00-120	
Hexachloro-1,3-butadiene	0.200	0.128	64.0	24.0-120	
Hexachlorobenzene	0.200	0.150	75.0	1.00-152	
Hexachlorocyclopentadiene	0.200	0.120	60.0	10.0-120	
Hexachloroethane	0.200	0.142	71.0	40.0-120	
n-Nitrosodi-n-butylamine	0.200	0.174	87.0	39.0-127	
n-Nitrosodiethylamine	0.200	0.182	91.0	10.0-142	
Nitrobenzene	0.200	0.169	84.5	35.0-180	
Nonylphenol	0.200	0.189	94.5	57.0-136	
Pentachlorobenzene	0.200	0.138	69.0	10.0-151	
Pentachlorophenol	0.200	0.163	81.5	14.0-176	
Phenanthrene	0.200	0.173	86.5	54.0-120	

Laboratory Control Sample (LCS)

(LCS) R4093641-2 07/13/24 15:15

Analyte	Spike Amount mg/l	LCS Result mg/l	LCS Rec. %	Rec. Limits %	LCS Qualifier
Phenol	0.200	0.137	68.5	5.00-120	
Pyridine	0.200	0.0338	16.9	10.0-120	
Total Cresols	0.400	0.348	87.0	36.0-110	
(S) 2,4,6-Tribromophenol			*67.5*	*29.0-132*	
(S) 2-Fluorobiphenyl			*81.5*	*26.0-102*	
(S) 2-Fluorophenol			*75.5*	*10.0-66.0*	J1
(S) Nitrobenzene-d5			*81.5*	*15.0-106*	
(S) p-Terphenyl-d14			*92.0*	*10.0-120*	
(S) Phenol-d6			*73.5*	*10.0-54.0*	J1

GLOSSARY OF TERMS

Guide to Reading and Understanding Your Laboratory Report

The information below is designed to better explain the various terms used in your report of analytical results from the Laboratory. This is not intended as a comprehensive explanation, and if you have additional questions please contact your project representative.

Results Disclaimer - Information that may be provided by the customer, and contained within this report, include Permit Limits, Project Name, Sample ID, Sample Matrix, Sample Preservation, Field Blanks, Field Spikes, Field Duplicates, On-Site Data, Sampling Collection Dates/Times, and Sampling Location. Results relate to the accuracy of this information provided, and as the samples are received.

Abbreviations and Definitions

MDL	Method Detection Limit.
ND	Not detected at the Reporting Limit (or MDL where applicable).
RDL	Reported Detection Limit.
Rec.	Recovery.
RPD	Relative Percent Difference.
SDG	Sample Delivery Group.
(S)	Surrogate (Surrogate Standard) - Analytes added to every blank, sample, Laboratory Control Sample/Duplicate and Matrix Spike/Duplicate; used to evaluate analytical efficiency by measuring recovery. Surrogates are not expected to be detected in all environmental media.
U	Not detected at the Reporting Limit (or MDL where applicable).
Analyte	The name of the particular compound or analysis performed. Some Analyses and Methods will have multiple analytes reported.
Dilution	If the sample matrix contains an interfering material, the sample preparation volume or weight values differ from the standard, or if concentrations of analytes in the sample are higher than the highest limit of concentration that the laboratory can accurately report, the sample may be diluted for analysis. If a value different than 1 is used in this field, the result reported has already been corrected for this factor.
Limits	These are the target % recovery ranges or % difference value that the laboratory has historically determined as normal for the method and analyte being reported. Successful QC Sample analysis will target all analytes recovered or duplicated within these ranges.
Original Sample	The non-spiked sample in the prep batch used to determine the Relative Percent Difference (RPD) from a quality control sample. The Original Sample may not be included within the reported SDG.
Qualifier	This column provides a letter and/or number designation that corresponds to additional information concerning the result reported. If a Qualifier is present, a definition per Qualifier is provided within the Glossary and Definitions page and potentially a discussion of possible implications of the Qualifier in the Case Narrative if applicable.
Result	The actual analytical final result (corrected for any sample specific characteristics) reported for your sample. If there was no measurable result returned for a specific analyte, the result in this column may state "ND" (Not Detected) or "BDL" (Below Detectable Levels). The information in the results column should always be accompanied by either an MDL (Method Detection Limit) or RDL (Reporting Detection Limit) that defines the lowest value that the laboratory could detect or report for this analyte.
Uncertainty (Radiochemistry)	Confidence level of 2 sigma.
Case Narrative (Cn)	A brief discussion about the included sample results, including a discussion of any non-conformances to protocol observed either at sample receipt by the laboratory from the field or during the analytical process. If present, there will be a section in the Case Narrative to discuss the meaning of any data qualifiers used in the report.
Quality Control Summary (Qc)	This section of the report includes the results of the laboratory quality control analyses required by procedure or analytical methods to assist in evaluating the validity of the results reported for your samples. These analyses are not being performed on your samples typically, but on laboratory generated material.
Sample Chain of Custody (Sc)	This is the document created in the field when your samples were initially collected. This is used to verify the time and date of collection, the person collecting the samples, and the analyses that the laboratory is requested to perform. This chain of custody also documents all persons (excluding commercial shippers) that have had control or possession of the samples from the time of collection until delivery to the laboratory for analysis.
Sample Results (Sr)	This section of your report will provide the results of all testing performed on your samples. These results are provided by sample ID and are separated by the analyses performed on each sample. The header line of each analysis section for each sample will provide the name and method number for the analysis reported.
Sample Summary (Ss)	This section of the Analytical Report defines the specific analyses performed for each sample ID, including the dates and times of preparation and/or analysis.

Qualifier	Description
B	The same analyte is found in the associated blank.
B1	The blank depletion was greater than the recommended maximum depletion of 0.2mg/L.
J	The identification of the analyte is acceptable; the reported value is an estimate.
J1	Surrogate recovery limits have been exceeded; values are outside upper control limits.
J3	The associated batch QC was outside the established quality control range for precision.
J5	The sample matrix interfered with the ability to make any accurate determination; spike value is high.
J6	The sample matrix interfered with the ability to make any accurate determination; spike value is low.
P1	RPD value not applicable for sample concentrations less than 5 times the reporting limit.
Q	Sample was prepared and/or analyzed past holding time as defined in the method. Concentrations should be considered minimum values.
T8	Sample(s) received past/too close to holding time expiration.
V	The sample concentration is too high to evaluate accurate spike recoveries.

ACCREDITATIONS & LOCATIONS

Pace Analytical National 12065 Lebanon Rd Mount Juliet, TN 37122

Alabama	40660	Nebraska	NE-OS-15-05
Alaska	17-026	Nevada	TN000032021-1
Arizona	AZ0612	New Hampshire	2975
Arkansas	88-0469	New Jersey–NELAP	TN002
California	2932	New Mexico [1]	TN00003
Colorado	TN00003	New York	11742
Connecticut	PH-0197	North Carolina	Env375
Florida	E87487	North Carolina [1]	DW21704
Georgia	NELAP	North Carolina [3]	41
Georgia [1]	923	North Dakota	R-140
Idaho	TN00003	Ohio–VAP	CL0069
Illinois	200008	Oklahoma	9915
Indiana	C-TN-01	Oregon	TN200002
Iowa	364	Pennsylvania	68-02979
Kansas	E-10277	Rhode Island	LA000356
Kentucky [1 6]	KY90010	South Carolina	84004002
Kentucky [2]	16	South Dakota	n/a
Louisiana	AI30792	Tennessee [1 4]	2006
Louisiana	LA018	Texas	T104704245-20-18
Maine	TN00003	Texas [5]	LAB0152
Maryland	324	Utah	TN000032021-11
Massachusetts	M-TN003	Vermont	VT2006
Michigan	9958	Virginia	110033
Minnesota	047-999-395	Washington	C847
Mississippi	TN00003	West Virginia	233
Missouri	340	Wisconsin	998093910
Montana	CERT0086	Wyoming	A2LA
A2LA – ISO 17025	1461.01	AIHA-LAP,LLC EMLAP	100789
A2LA – ISO 17025 [5]	1461.02	DOD	1461.01
Canada	1461.01	USDA	P330-15-00234
EPA–Crypto	TN00003		

Pace Analytical Services, LLC -Dallas 400 W. Bethany Drive Suite 190 Allen, TX 75013

Arkansas	88-0647	Kansas	E10388
Florida	E871118	Texas	T104704232-23-39
Iowa	408	Oklahoma	8727
Louisiana	30686		

[1] Drinking Water [2] Underground Storage Tanks [3] Aquatic Toxicity [4] Chemical/Microbiological [5] Mold [6] Wastewater n/a Accreditation not applicable

* Not all certifications held by the laboratory are applicable to the results reported in the attached report.

* Accreditation is only applicable to the test methods specified on each scope of accreditation held by Pace Analytical.

CHAIN-OF-CUSTODY Analytical Request Document

Pace Analytical®

Chain-of-Custody is a LEGAL DOCUMENT - Complete all relevent fields

LAB USE ONLY- Affix Workorder/Login Label Here or List Pace Workorder Number or MTJL Log-in Number Here

ALL SHADED AREAS are for LAB USE ONLY

Company: GPL	Billing Information:
Address: 13835 CR 485	
Report To:	Email To:
Copy To:	Site Collection Info/Address:
Customer Project Name/Number:	State: / County/City: Time Zone Collected: [ ] PT [ ] MT [ ] CT [ ] ET
Phone: Email:	Site/Facility ID #: Compliance Monitoring? [ ] Yes [ ] No
Collected By (print):	Purchase Order #: Quote #: DW PWS ID #: DW Location Code:
Collected By (signature):	Turnaround Date Required: Immediately Packed on Ice: [ ] Yes [ ] No
Sample Disposal: [ ] Dispose as appropriate [ ] Return [ ] Archive: _____ [ ] Hold: _____	Rush: [ ] Same Day [ ] Next Day [ ] 2 Day [ ] 3 Day [ ] 4 Day [ ] 5 Day (Expedite Charges Apply) Field Filtered (if applicable): [ ] Yes [ ] No Analysis: _____

Container Preservative Type **

Lab Project Manager:

** Preservative Types: (1) nitric acid, (2) sulfuric acid, (3) hydrochloric acid, (4) sodium hydroxide, (5) zinc acetate, (6) methanol, (7) sodium bisulfate, (8) sodium thiosulfate, (9) hexane, (A) ascorbic acid, (B) ammonium sulfate, (C) ammonium hydroxide, (D) TSP, (U) Unpreserved, (O) Other _____

Analyses

Lab Profile/Line:

* Matrix Codes (Insert in Matrix box below): Drinking Water (DW), Ground Water (GW), Wastewater (WW), Product (P), Soil/Solid (SL), Oil (OL), Wipe (WP), Air (AR), Tissue (TS), Bioassay (B), Vapor (V), Other (OT)

Customer Sample ID	Matrix *	Comp / Grab	Collected (or Composite Start) Date	Collected (or Composite Start) Time	Composite End Date	Composite End Time	Res Cl	# of Ctns	Lab Profile/Line
OUTFALL 001	WW	G			7/8/24	1234		1	L1754283-01

See Attached

Lab Sample Receipt Checklist:

Custody Seals Present/Intact	Y N NA
Custody Signatures Present	Y N NA
Collector Signature Present	Y N NA
Bottles Intact	Y N NA
Correct Bottles	Y N NA
Sufficient Volume	Y N NA
Samples Received on Ice	Y N NA
VOA - Headspace Acceptable	Y N NA
USDA Regulated Soils	Y N NA
Samples in Holding Time	Y N NA
Residual Chlorine Present	Y N NA
Cl Strips: _____	
Sample pH Acceptable	Y N NA
pH Strips: _____	
Sulfide Present	Y N NA
Lead Acetate Strips: _____	

LAB USE ONLY:
Lab Sample # / Comments:

Customer Remarks / Special Conditions / Possible Hazards:

EDA7 1.2+0.3=1.5

Type of Ice Used: Wet Blue Dry None

Packing Material Used:

Radchem sample(s) screened (<500 cpm): Y N NA

SHORT HOLDS PRESENT (<72 hours): Y N N/A

Lab Tracking #: 2893476

Samples received via: FEDEX UPS Client Courier Pace Courier

Lab Sample Temperature Info:
Temp Blank Received: Y N NA
Therm ID#: _____
Cooler 1 Temp Upon Receipt: _____oC
Cooler 1 Therm Corr. Factor: _____oC
Cooler 1 Corrected Temp: _____oC
Comments:

Relinquished by/Company: (Signature)	Date/Time:	Received by/Company: (Signature)	Date/Time:
JM McClain	7/8/24 1430		7/8/24 1430
Relinquished by/Company: (Signature)	Date/Time:	Received by/Company: (Signature)	Date/Time:
Jonathan Ramos/FedEx	7/9/24 1700	FedEx	7/9/24 1700
Relinquished by/Company: (Signature)	Date/Time:	Received by/Company: (Signature)	Date/Time:
FedEx		Jamcorn	7-10-24 0900

MTJL LAB USE ONLY
Table #:
Acctnum:
Template:
Prelogin:
PM:

Trip Blank Received: Y N NA
HCL MeOH TSP Other

Non Conformance(s): Page: _____

Pace ANALYTICAL SERVICES	DC#_Title: ENV-FRM-ALLE-0017 v15_Sample Condition Upon Receipt
	Effective Date: 12/18/2023

Sample Condition Upon Receipt

☐Dallas ☐Ft Worth ☐Corpus Christi ☐Austin

Client Name: GPL Project Work order (place label):

Courier: FedEX ☐ UPS ☐ USPS ☐ Client ☑ LSO ☐ PACE ☐ Other: _____

Tracking #: _____

Custody Seal on Cooler/Box: Yes ☐ No ☑

Received on ice: Wet ☑ Blue ☐ No ice ☐

Receiving Lab 1 Thermometer Used: IR-18 **Cooler Temp °C**: 27.6 (Recorded) +0.3 (Correction Factor) 28.1 (Actual) ~~26.9~~ ~~29.2~~

Receiving Lab 2 Thermometer Used: _____ **Cooler Temp °C**: _____ (Recorded) _____ (Correction Factor) _____ (Actual)

Chain of Custody relinquished	Yes ☑ No ☐
Sampler name & signature on COC	Yes ☐ No ☑
Short HT analyses (<72 hrs)	Yes ☑ No ☐

Temperature should be above freezing to 6°C unless collected same day as receipt in which evidence of cooling is acceptable.

Triage Person: AG Date: 7/9/24

Sufficient Volume received	Yes ☑ No ☐
Correct Container used	Yes ☑ No ☐
Container Intact	Yes ☑ No ☐
Sample pH Acceptable pH Strips: 6402007 Residual Chlorine Present Cl Strips: _____ Sulfide Present Lead Acetate Strips: _____	Yes ☑ No ☐ NA ☐ Yes ☐ No ☐ NA ☑ Yes ☐ No ☐ NA ☑
Are soil samples (volatiles, TPH) received in 5035A Kits (not applicable to TCLP VOA or PST Program TPH)	Yes ☐ No ☐ NA ☑
Unpreserved 5035A soil frozen within 48 hrs	Yes ☐ No ☐ NA ☑
Headspace in VOA (>6mm)	Yes ☐ No ☑ NA ☐
Project sampled in USDA Regulated Area outside of Texas State Sampled: _____	Yes ☐ No ☐ NA ☑
Non-Conformance(s):	Yes ☐ No ☑

Login Person: JW Date: 7/8/24

Labeling Person (if different than log-in): _____ Date: _____

Qualtrax ID: 48806

DAL - L1754283 DSGARLWNTX NCF - JWW 7/8

Shortholds

Time estimate: oh **Time spent:** oh

Members

V Jeremy Watkins (responsible) DPR Dorothy Roberts

- [ ] 1 . If Chain-of-custody (COC) is not received: contact client and if necessary, fill out a COC and indicate that it was filled out by lab personnel. Note issues on this NCF.
- [ ] 2. If COC is incomplete, check applicable issues below and add details where appropiate:
- [ ] *Collection date/time missing or incorrect
- [ ] *Analyses or analytes: missing or Clarification needed
- [ ] *Samples listed on COC do not match samples recieved (missing, additional,etc.)
- [ ] *Sample IDs on COC do not match sample Labels
- [ ] *Required trip blanks were not received
- [ ] *Required signatures are missing
- [x] 3. Sample integrity issues: check applicable issues below and add details where appropriate:
- [ ] *Samples: Past holding time
- [ ] *Samples: Not Field Filtered
- [ ] *samples: Insufficent volume received
- [ ] *Samples: Cooler damaged or compromised
- [ ] *Samples: contain Chlorine or Sulfide
- [ ] *Samples: condition needs to be brought to lab personnel's attention (details below)
- [ ] *Containers: Broken or compromised
- [ ] *Containers: Incorrect
- [ ] *Custody Seals: missing or compromised on samples, trip blanks or coolers
- [ ] *Packing Material: Insufficient/Improper
- [x] *Preservation: improper
- [ ] *Temperature:not witin acceptance criteria (typically 0-6C)
- [ ] *Temperature: Samples arrived frozen
- [ ] *Vials received with improper headspace
- [ ] *Other:
- [ ] 4. If Samples not preserved properly and Sample Receiving adjusts pH, add details below:
- [ ] Sample ID:_____
- [ ] Preserved by:_____
- [ ] Date/Time:_____
- [ ] Initial and Final pH:_____
- [ ] Amount/type pres added:_____
- [ ] Lot # of Pres added:_____
- [ ] 5. Client contact: If Client is Contacted for any issue listed above, fill in details below:
- [x] Client:
- [x] PM Initials: DPR
- [x] Contacted per: JMcClain
- [x] Date/Time: 07/09/24 1050

Comments

Jeremy Watkins *9 July 2024 10:21 AM*

CN and SULFIDE recieved unpreserved.

Dorothy Roberts *10 July 2024 9:35 AM*

Proceed / may not report if replacements can be collected

also sending replacement bottles T256352

ANALYTICAL REPORT

July 26, 2024

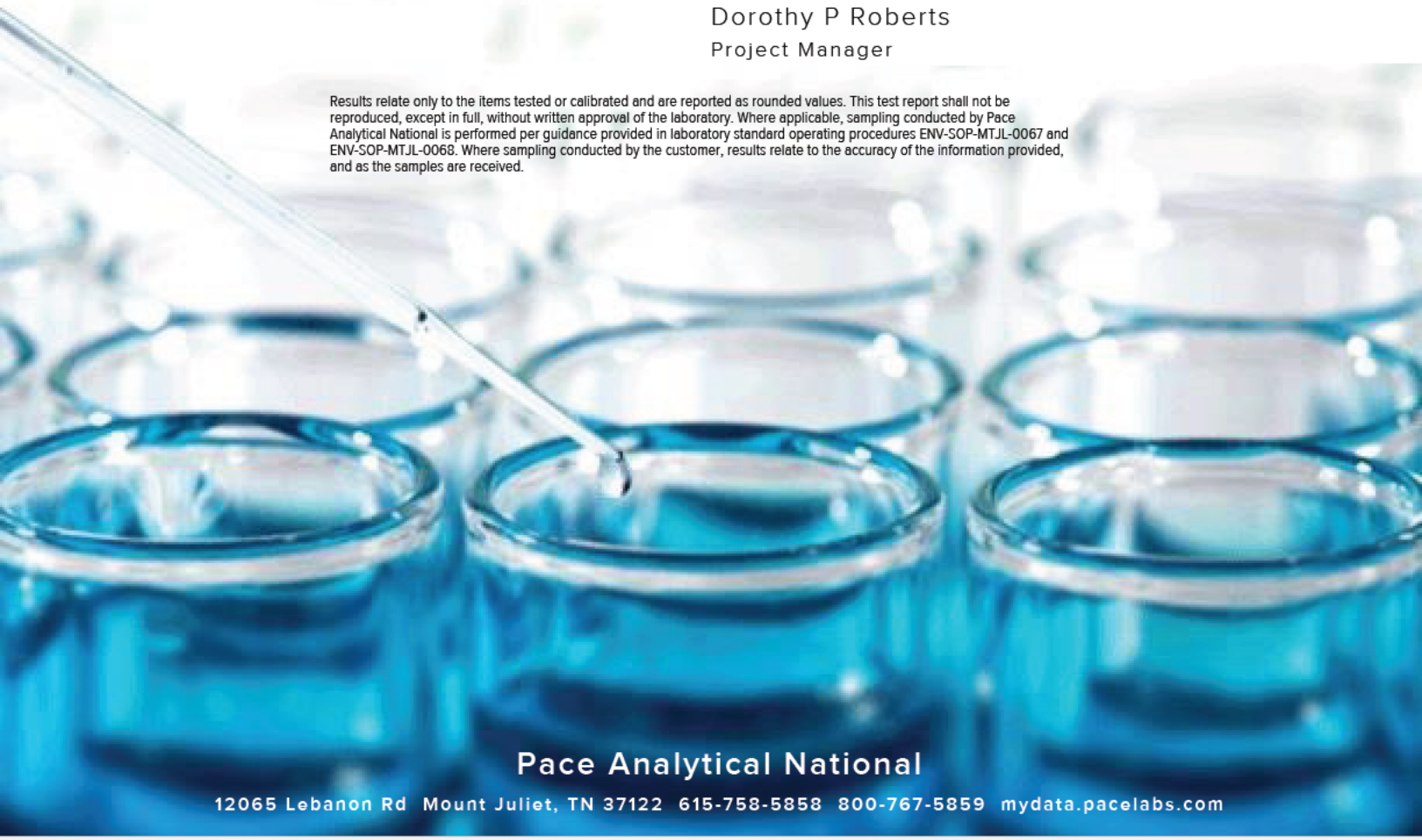
Garland Power & Light

Sample Delivery Group:	L1756836
Samples Received:	07/16/2024
Project Number:	
Description:	TPDES

Report To: Jeff McClain
13835 County Rd 489
Nevada, TX 75173

Entire Report Reviewed By: Dorothy P Roberts

Dorothy P Roberts
Project Manager



Pace Analytical National
12065 Lebanon Rd Mount Juliet, TN 37122 615-758-5858 800-767-5859 mydata.pacelabs.com

TABLE OF CONTENTS

SAMPLE SUMMARY

OUTFALL 001 L1756836-01 WW

	Collected by	Collected date/time	Received date/time
		07/16/24 08:18	07/16/24 09:42

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst	Location
Calculated Results	WG2327774	1	07/22/24 16:22	07/22/24 16:22	EIG	Allen, TX
Calculated Results	WG2329841	1	07/26/24 14:40	07/26/24 14:40	NA	Allen, TX
Gravimetric Analysis by Method 2540C	WG2325834	1	07/18/24 15:18	07/18/24 17:02	QQT	Allen, TX
Gravimetric Analysis by Method 2540D	WG2328064	1	07/23/24 06:21	07/23/24 07:41	QQT	Allen, TX
Wet Chemistry by Method 1664A	WG2324487	1	07/18/24 13:00	07/19/24 09:53	TK	Allen, TX
Wet Chemistry by Method 2120B	WG2324656	1	07/17/24 13:58	07/17/24 13:58	EIG	Allen, TX
Wet Chemistry by Method 2320B	WG2327704	1	07/22/24 12:47	07/22/24 12:47	JBS	Allen, TX
Wet Chemistry by Method 300.0	WG2323759	1	07/16/24 17:30	07/16/24 17:30	SMC	Allen, TX
Wet Chemistry by Method 300.0	WG2323759	5	07/16/24 22:34	07/16/24 22:34	SMC	Allen, TX
Wet Chemistry by Method 3500Cr-B	WG2324738	1	07/17/24 15:16	07/17/24 15:16	KCM	Allen, TX
Wet Chemistry by Method 351.2	WG2326234	1	07/19/24 10:40	07/19/24 20:41	EIG	Allen, TX
Wet Chemistry by Method 353.2	WG2325801	1	07/18/24 15:59	07/18/24 15:59	EIG	Allen, TX
Wet Chemistry by Method 360.1	WG2324067	1	07/16/24 14:05	07/16/24 14:05	JBS	Allen, TX
Wet Chemistry by Method 4500Cl G-2011	WG2325082	1	07/18/24 12:43	07/18/24 12:43	JAR	Mt. Juliet, TN
Wet Chemistry by Method 4500CN-E	WG2325383	1	07/18/24 11:00	07/18/24 18:49	KCM	Allen, TX
Wet Chemistry by Method 4500CN-G	WG2328176	1	07/23/24 15:25	07/23/24 15:25	KCM	Allen, TX
Wet Chemistry by Method 4500P-E	WG2327473	1	07/22/24 16:34	07/22/24 16:34	SMC	Allen, TX
Wet Chemistry by Method 4500-S2 D	WG2324648	1	07/17/24 13:40	07/17/24 13:40	EIG	Allen, TX
Wet Chemistry by Method 4500SO3 B-2011	WG2328484	1	07/23/24 15:00	07/23/24 15:00	CAH	Mt. Juliet, TN
Wet Chemistry by Method 5210 B-2016	WG2323729	1	07/16/24 15:58	07/21/24 11:53	JBS	Allen, TX
Wet Chemistry by Method 5210 B-2016	WG2323730	1	07/16/24 17:37	07/21/24 13:30	JBS	Allen, TX
Wet Chemistry by Method 5220D	WG2324533	1	07/17/24 08:52	07/17/24 11:53	JBS	Allen, TX
Wet Chemistry by Method 5310C	WG2323910	2	07/16/24 20:56	07/16/24 20:56	EIG	Allen, TX
Wet Chemistry by Method 5540C	WG2324658	1	07/17/24 17:24	07/17/24 17:29	EIG	Allen, TX
Wet Chemistry by Method SM 4500-H+B	WG2325390	1	07/18/24 08:46	07/18/24 08:46	SEN	Allen, TX
Wet Chemistry by Method SM4500NH3H	WG2327774	1	07/22/24 16:22	07/22/24 16:22	EIG	Allen, TX
Mercury by Method 245.1	WG2325148	1	07/18/24 12:44	07/18/24 17:47	TDM	Allen, TX
Metals (ICP) by Method 200.7	WG2325465	1	07/18/24 16:25	07/19/24 10:56	SKW	Allen, TX
Metals (ICPMS) by Method 200.8	WG2329841	1	07/25/24 15:11	07/26/24 14:40	NA	Allen, TX
Volatile Organic Compounds (GC/MS) by Method 624.1	WG2324214	1	07/16/24 22:36	07/16/24 22:36	ZST	Allen, TX
Polychlorinated Biphenyls (GC) by Method EPA-608.3	WG2325314	1	07/18/24 20:00	07/19/24 02:59	NWH	Mt. Juliet, TN
Semi Volatile Organic Compounds (GC/MS) by Method 625.1	WG2324634	1	07/17/24 09:31	07/19/24 15:22	XLY	Allen, TX

CASE NARRATIVE

All sample aliquots were received at the correct temperature, in the proper containers, with the appropriate preservatives, and within method specified holding times, unless qualified or notated within the report. Where applicable, all MDL (LOD) and RDL (LOQ) values reported for environmental samples have been corrected for the dilution factor used in the analysis. All Method and Batch Quality Control are within established criteria except where addressed in this case narrative, a non-conformance form or properly qualified within the sample results. By my digital signature below, I affirm to the best of my knowledge, all problems/anomalies observed by the laboratory as having the potential to affect the quality of the data have been identified by the laboratory, and no information or data have been knowingly withheld that would affect the quality of the data.

Dorothy P Roberts
Project Manager

Sample Delivery Group (SDG) Narrative

Analysis was filtered in the laboratory.

Lab Sample ID	Project Sample ID	Method
L1756836-01	OUTFALL 001	3500Cr-B

No extra volume received to perform Matrix Spike samples.

Lab Sample ID	Project Sample ID	Method
L1756836-01	OUTFALL 001	625.1

Calculated Results

Analyte	Result mg/l	Qualifier	MDL mg/l	RDL mg/l	Dilution	Analysis date / time	Batch
Chromium,Trivalent	U		0.000510	0.00300	1	07/26/2024 14:40	WG2329841
Organic Nitrogen	0.478		0.0280	0.100	1	07/22/2024 16:22	WG2327774

Gravimetric Analysis by Method 2540C

Analyte	Result mg/l	Qualifier	RDL mg/l	Dilution	Analysis date / time	Batch
Total Dissolved Solids	219	J3	25.0	1	07/18/2024 17:02	WG2325834

Gravimetric Analysis by Method 2540D

Analyte	Result mg/l	Qualifier	RDL mg/l	Dilution	Analysis date / time	Batch
Suspended Solids	ND		5.00	1	07/23/2024 07:41	WG2328064

Wet Chemistry by Method 1664A

Analyte	Result mg/l	Qualifier	MDL mg/l	RDL mg/l	Dilution	Analysis date / time	Batch
Oil & Grease (Hexane Extr)	U		0.350	5.00	1	07/19/2024 09:53	WG2324487

Wet Chemistry by Method 2120B

Analyte	Result units	Qualifier	RDL units	Dilution	Analysis date / time	Batch
Color	20.0		5.00	1	07/17/2024 13:58	WG2324656

Sample Narrative:

L1756836-01 WG2324656: 7

Wet Chemistry by Method 2320B

Analyte	Result mg/l	Qualifier	MDL mg/l	RDL mg/l	Dilution	Analysis date / time	Batch
Alkalinity	110		20.0	20.0	1	07/22/2024 12:47	WG2327704

Wet Chemistry by Method 300.0

Analyte	Result mg/l	Qualifier	MDL mg/l	RDL mg/l	Dilution	Analysis date / time	Batch
Bromide	0.116	J	0.0668	0.400	1	07/16/2024 17:30	WG2323759
Chloride	16.1	J5	1.62	4.00	5	07/16/2024 22:34	WG2323759
Fluoride	0.243	J	0.0947	0.500	1	07/16/2024 17:30	WG2323759
Nitrate	U		0.379	0.500	1	07/16/2024 17:30	WG2323759
Sulfate	27.3	V	1.06	3.50	5	07/16/2024 22:34	WG2323759

Wet Chemistry by Method 3500Cr-B

Analyte	Result mg/l	Qualifier	MDL mg/l	RDL mg/l	Dilution	Analysis date / time	Batch
Chromium,Hexavalent	U		0.00200	0.00300	1	07/17/2024 15:16	WG2324738

Sample Narrative:

L1756836-01 WG2324738: Sample preserved in lab w/in 24 hrs of collection

Wet Chemistry by Method 351.2

Analyte	Result mg/l	Qualifier	MDL mg/l	RDL mg/l	Dilution	Analysis date / time	Batch
Kjeldahl Nitrogen, TKN	0.478		0.140	0.250	1	07/19/2024 20:41	WG2326234

Wet Chemistry by Method 353.2

Analyte	Result	Qualifier	MDL	RDL	Dilution	Analysis	Batch
	mg/l		mg/l	mg/l		date / time	
Nitrate-Nitrite	U		0.0300	0.0500	1	07/18/2024 15:59	WG2325801

Wet Chemistry by Method 360.1

Analyte	Result	Qualifier	RDL	Dilution	Analysis	Batch
	mg/l		mg/l		date / time	
Dissolved Oxygen	7.77	T8	1	1	07/16/2024 14:05	WG2324067

Wet Chemistry by Method 4500Cl G-2011

Analyte	Result	Qualifier	MDL	RDL	Dilution	Analysis	Batch
	mg/l		mg/l	mg/l		date / time	
Chlorine,residual	0.0420	J T8	0.0260	0.100	1	07/18/2024 12:43	WG2325082

Wet Chemistry by Method 4500CN-E

Analyte	Result	Qualifier	MDL	RDL	Dilution	Analysis	Batch
	mg/l		mg/l	mg/l		date / time	
Cyanide	U		0.00430	0.0100	1	07/18/2024 18:49	WG2325383

Wet Chemistry by Method 4500CN-G

Analyte	Result	Qualifier	MDL	RDL	Dilution	Analysis	Batch
	mg/l		mg/l	mg/l		date / time	
Cyanide,amenable	U		0.00350	0.0100	1	07/23/2024 15:25	WG2328176

Wet Chemistry by Method 4500P-E

Analyte	Result	Qualifier	MDL	RDL	Dilution	Analysis	Batch
	mg/l		mg/l	mg/l		date / time	
Phosphorus,Total	0.0442	J	0.0152	0.0500	1	07/22/2024 16:34	WG2327473

Wet Chemistry by Method 4500-S2 D

Analyte	Result	Qualifier	MDL	RDL	Dilution	Analysis	Batch
	mg/l		mg/l	mg/l		date / time	
Sulfide	U		0.0230	0.100	1	07/17/2024 13:40	WG2324648

Wet Chemistry by Method 4500SO3 B-2011

Analyte	Result	Qualifier	MDL	RDL	Dilution	Analysis	Batch
	mg/l		mg/l	mg/l		date / time	
Sulfite	U	T8	1.19	3.00	1	07/23/2024 15:00	WG2328484

Wet Chemistry by Method 5210 B-2016

Analyte	Result	Qualifier	RDL	Dilution	Analysis	Batch
	mg/l		mg/l		date / time	
BOD	2.53		1.00	1	07/21/2024 11:53	WG2323729
CBOD	2.52		1.00	1	07/21/2024 13:30	WG2323730

Wet Chemistry by Method 5220D

Analyte	Result	Qualifier	MDL	RDL	Dilution	Analysis	Batch
	mg/l		mg/l	mg/l		date / time	
COD	22.2	J	16.1	35.0	1	07/17/2024 11:53	WG2324533

Wet Chemistry by Method 5310C

Analyte	Result	Qualifier	MDL	RDL	Dilution	Analysis	Batch
	mg/l		mg/l	mg/l		date / time	

Wet Chemistry by Method 5310C

Analyte	Result mg/l	Qualifier	MDL mg/l	RDL mg/l	Dilution	Analysis date / time	Batch
TOC (Total Organic Carbon)	5.34		0.540	1.40	2	07/16/2024 20:56	WG2323910

Wet Chemistry by Method 5540C

Analyte	Result mg/l	Qualifier	MDL mg/l	RDL mg/l	Dilution	Analysis date / time	Batch
MBAS	U	J5	0.360	0.500	1	07/17/2024 17:29	WG2324658

Wet Chemistry by Method SM 4500-H+B

Analyte	Result su	Qualifier	Dilution	Analysis date / time	Batch
pH	8.35	T8	1	07/18/2024 08:46	WG2325390

Sample Narrative:

L1756836-01 WG2325390: 8.35 at 23.6C

Wet Chemistry by Method SM4500NH3H

Analyte	Result mg/l	Qualifier	MDL mg/l	RDL mg/l	Dilution	Analysis date / time	Batch
Ammonia Nitrogen	U		0.0280	0.100	1	07/22/2024 16:22	WG2327774

Mercury by Method 245.1

Analyte	Result mg/l	Qualifier	MDL mg/l	RDL mg/l	Dilution	Analysis date / time	Batch
Mercury	0.0000450	J	0.0000450	0.000200	1	07/18/2024 17:47	WG2325148

Metals (ICP) by Method 200.7

Analyte	Result mg/l	Qualifier	MDL mg/l	RDL mg/l	Dilution	Analysis date / time	Batch
Boron	0.0702	J	0.0186	0.100	1	07/19/2024 10:56	WG2325465
Tin	U		0.00240	0.0250	1	07/19/2024 10:56	WG2325465
Titanium	U		0.00835	0.100	1	07/19/2024 10:56	WG2325465

Metals (ICPMS) by Method 200.8

Analyte	Result mg/l	Qualifier	MDL mg/l	RDL mg/l	Dilution	Analysis date / time	Batch
Aluminum	0.167		0.00186	0.00250	1	07/26/2024 14:40	WG2329841
Antimony	U		0.000580	0.00500	1	07/26/2024 14:40	WG2329841
Arsenic	0.00528		0.000100	0.000500	1	07/26/2024 14:40	WG2329841
Barium	0.0341		0.000440	0.00300	1	07/26/2024 14:40	WG2329841
Beryllium	0.0000927	J	0.0000600	0.000500	1	07/26/2024 14:40	WG2329841
Cadmium	U		0.000120	0.00100	1	07/26/2024 14:40	WG2329841
Chromium	U		0.000510	0.00300	1	07/26/2024 14:40	WG2329841
Cobalt	0.00305		0.0000400	0.000300	1	07/26/2024 14:40	WG2329841
Copper	0.00257		0.000900	0.00200	1	07/26/2024 14:40	WG2329841
Iron	0.153		0.00432	0.00700	1	07/26/2024 14:40	WG2329841
Lead	0.000221	J	0.000140	0.000500	1	07/26/2024 14:40	WG2329841
Magnesium	3.92	J6	0.0121	0.0200	1	07/26/2024 14:40	WG2329841
Manganese	0.0439		0.000330	0.000500	1	07/26/2024 14:40	WG2329841
Molybdenum	0.00174		0.000530	0.00100	1	07/26/2024 14:40	WG2329841
Nickel	0.00163	J	0.000640	0.00200	1	07/26/2024 14:40	WG2329841
Selenium	U		0.000740	0.00500	1	07/26/2024 14:40	WG2329841
Silver	U		0.0000800	0.000500	1	07/26/2024 14:40	WG2329841
Thallium	0.000894	B	0.000190	0.000500	1	07/26/2024 14:40	WG2329841

Metals (ICPMS) by Method 200.8

Analyte	Result mg/l	Qualifier	MDL mg/l	RDL mg/l	Dilution	Analysis date / time	Batch
Zinc	U		0.00265	0.00500	1	07/26/2024 14:40	WG2329841

Volatile Organic Compounds (GC/MS) by Method 624.1

Analyte	Result mg/l	Qualifier	MDL mg/l	RDL mg/l	Dilution	Analysis date / time	Batch
1,1,1-Trichloroethane	U		0.00335	0.00500	1	07/16/2024 22:36	WG2324214
1,1,2,2-Tetrachloroethane	U		0.000596	0.00500	1	07/16/2024 22:36	WG2324214
1,1,2-Trichloroethane	U		0.00145	0.00500	1	07/16/2024 22:36	WG2324214
1,1-Dichloroethene	U		0.00367	0.00500	1	07/16/2024 22:36	WG2324214
1,1-Dichloroethane	U		0.00292	0.00500	1	07/16/2024 22:36	WG2324214
1,2-Dibromoethane	U		0.000549	0.00200	1	07/16/2024 22:36	WG2324214
1,2-Dichlorobenzene	U		0.00172	0.00200	1	07/16/2024 22:36	WG2324214
1,2-Dichloroethane	U		0.00195	0.00500	1	07/16/2024 22:36	WG2324214
1,2-Dichloropropane	U		0.000804	0.00200	1	07/16/2024 22:36	WG2324214
1,3-Dichlorobenzene	U		0.00419	0.00500	1	07/16/2024 22:36	WG2324214
1,4-Dichlorobenzene	U		0.00173	0.00200	1	07/16/2024 22:36	WG2324214
2-Butanone (MEK)	U	J6	0.00822	0.0250	1	07/16/2024 22:36	WG2324214
2-Chloroethyl vinyl ether	U		0.00652	0.0100	1	07/16/2024 22:36	WG2324214
Acrolein	U		0.00544	0.0100	1	07/16/2024 22:36	WG2324214
Acrylonitrile	U		0.00709	0.0100	1	07/16/2024 22:36	WG2324214
Benzene	U		0.00207	0.00500	1	07/16/2024 22:36	WG2324214
Bromodichloromethane	U		0.00179	0.00200	1	07/16/2024 22:36	WG2324214
Bromoform	U		0.000960	0.0100	1	07/16/2024 22:36	WG2324214
Bromomethane	U		0.00347	0.00500	1	07/16/2024 22:36	WG2324214
Carbon tetrachloride	U		0.00159	0.00200	1	07/16/2024 22:36	WG2324214
Chlorobenzene	U		0.00276	0.0100	1	07/16/2024 22:36	WG2324214
Chloroethane	U		0.00296	0.00500	1	07/16/2024 22:36	WG2324214
Chloroform	U		0.00212	0.00500	1	07/16/2024 22:36	WG2324214
Chloromethane	U		0.00361	0.00500	1	07/16/2024 22:36	WG2324214
cis-1,3-Dichloropropene	U		0.00492	0.0100	1	07/16/2024 22:36	WG2324214
Dibromochloromethane	U		0.00327	0.00500	1	07/16/2024 22:36	WG2324214
Ethylbenzene	U		0.000401	0.00200	1	07/16/2024 22:36	WG2324214
Methylene Chloride	U		0.0117	0.0200	1	07/16/2024 22:36	WG2324214
Tetrachloroethene	U		0.00486	0.0100	1	07/16/2024 22:36	WG2324214
Toluene	U		0.00219	0.00500	1	07/16/2024 22:36	WG2324214
trans-1,2-Dichloroethene	U		0.00501	0.0100	1	07/16/2024 22:36	WG2324214
Trichloroethene	U		0.00262	0.00500	1	07/16/2024 22:36	WG2324214
Vinyl chloride	U		0.00466	0.00500	1	07/16/2024 22:36	WG2324214
(S) 1,2-Dichloroethane-d4	*101*			*70.0-130*		*07/16/2024 22:36*	WG2324214
(S) 4-Bromofluorobenzene	*101*			*70.0-130*		*07/16/2024 22:36*	WG2324214
(S) Toluene-d8	*100*			*70.0-130*		*07/16/2024 22:36*	WG2324214

Polychlorinated Biphenyls (GC) by Method EPA-608.3

Analyte	Result mg/l	Qualifier	MDL mg/l	RDL mg/l	Dilution	Analysis date / time	Batch
PCB 1016	U		0.000270	0.000500	1	07/19/2024 02:59	WG2325314
PCB 1221	U		0.000270	0.000500	1	07/19/2024 02:59	WG2325314
PCB 1232	U		0.000270	0.000500	1	07/19/2024 02:59	WG2325314
PCB 1242	U		0.000270	0.000500	1	07/19/2024 02:59	WG2325314
PCB 1248	U		0.000173	0.000500	1	07/19/2024 02:59	WG2325314
PCB 1254	U		0.000173	0.000500	1	07/19/2024 02:59	WG2325314
PCB 1260	U		0.000173	0.000500	1	07/19/2024 02:59	WG2325314
Total PCBs	U		0.000173	0.000500	1	07/19/2024 02:59	WG2325314
(S) Decachlorobiphenyl	*15.8*			*10.0-144*		*07/19/2024 02:59*	WG2325314
(S) Tetrachloro-m-xylene	*32.2*			*10.0-135*		*07/19/2024 02:59*	WG2325314

1 Cp
2 Tc
3 Ss
4 Cn
5 Sr
6 Qc
7 Gl
8 Al
9 Sc

Semi Volatile Organic Compounds (GC/MS) by Method 625.1

Analyte	Result	Qualifier	MDL	RDL	Dilution	Analysis	Batch
	mg/l		mg/l	mg/l		date / time	
1,2,4,5-Tetrachlorobenzene	U		0.000200	0.00200	1	07/19/2024 15:22	WG2324634
2,4,6-Trichlorophenol	U		0.000238	0.00200	1	07/19/2024 15:22	WG2324634
2,4-Dichlorophenol	U		0.000336	0.00400	1	07/19/2024 15:22	WG2324634
2,4-Dimethylphenol	U		0.000613	0.00200	1	07/19/2024 15:22	WG2324634
2,4-Dinitrophenol	U		0.00154	0.0100	1	07/19/2024 15:22	WG2324634
2-Chlorophenol	U		0.000307	0.00200	1	07/19/2024 15:22	WG2324634
2-Methylphenol	U		0.000238	0.00200	1	07/19/2024 15:22	WG2324634
2-Nitrophenol	U		0.000247	0.00200	1	07/19/2024 15:22	WG2324634
3&4-Methyl Phenol	U		0.000238	0.00200	1	07/19/2024 15:22	WG2324634
3,3-Dichlorobenzidine	U		0.000788	0.00400	1	07/19/2024 15:22	WG2324634
4,6-Dinitro-2-methylphenol	U		0.00202	0.0100	1	07/19/2024 15:22	WG2324634
4-Chloro-3-methylphenol	U		0.000217	0.00200	1	07/19/2024 15:22	WG2324634
4-Nitrophenol	U		0.00123	0.0100	1	07/19/2024 15:22	WG2324634
Anthracene	U		0.000168	0.00200	1	07/19/2024 15:22	WG2324634
Benzidine	U		0.000350	0.00400	1	07/19/2024 15:22	WG2324634
Benzo(a)anthracene	U		0.000307	0.00200	1	07/19/2024 15:22	WG2324634
Benzo(a)pyrene	U		0.000470	0.00200	1	07/19/2024 15:22	WG2324634
Bis(2-chloroethyl)ether	U		0.000168	0.00200	1	07/19/2024 15:22	WG2324634
Bis(2-Ethylhexyl)phthalate	U		0.00180	0.00200	1	07/19/2024 15:22	WG2324634
Chrysene	U		0.000257	0.00200	1	07/19/2024 15:22	WG2324634
Di-n-butyl phthalate	U		0.00160	0.00200	1	07/19/2024 15:22	WG2324634
Hexachloro-1,3-butadiene	U		0.000217	0.00200	1	07/19/2024 15:22	WG2324634
Hexachlorobenzene	U		0.000307	0.00200	1	07/19/2024 15:22	WG2324634
Hexachlorocyclopentadiene	U		0.000299	0.00200	1	07/19/2024 15:22	WG2324634
Hexachloroethane	U		0.000247	0.00200	1	07/19/2024 15:22	WG2324634
n-Nitrosodi-n-butylamine	U		0.00110	0.00200	1	07/19/2024 15:22	WG2324634
n-Nitrosodiethylamine	U		0.000696	0.00200	1	07/19/2024 15:22	WG2324634
Nitrobenzene	U		0.000314	0.00200	1	07/19/2024 15:22	WG2324634
Nonylphenol	U		0.000168	0.00200	1	07/19/2024 15:22	WG2324634
Pentachlorobenzene	U		0.000247	0.00200	1	07/19/2024 15:22	WG2324634
Pentachlorophenol	U		0.000283	0.00200	1	07/19/2024 15:22	WG2324634
Phenanthrene	U		0.000200	0.00200	1	07/19/2024 15:22	WG2324634
Phenol	U		0.000500	0.00200	1	07/19/2024 15:22	WG2324634
Pyridine	U		0.00174	0.00400	1	07/19/2024 15:22	WG2324634
Total Cresols	U		0.00153	0.00800	1	07/19/2024 15:22	WG2324634
(S) 2,4,6-Tribromophenol	*60.4*			*29.0-132*		*07/19/2024 15:22*	WG2324634
(S) 2-Fluorobiphenyl	*70.3*			*26.0-102*		*07/19/2024 15:22*	WG2324634
(S) 2-Fluorophenol	*64.8*			*10.0-66.0*		*07/19/2024 15:22*	WG2324634
(S) Nitrobenzene-d5	*74.7*			*15.0-106*		*07/19/2024 15:22*	WG2324634
(S) p-Terphenyl-d14	*87.9*			*10.0-120*		*07/19/2024 15:22*	WG2324634
(S) Phenol-D6	*57.1*	J1		*10.0-54.0*		*07/19/2024 15:22*	WG2324634

Method Blank (MB)

(MB) R4096041-1 07/18/24 17:02

Analyte	MB Result mg/l	MB Qualifier	MB MDL mg/l	MB RDL mg/l
Total Dissolved Solids	U		25.0	25.0

L1756796-01 Original Sample (OS) • Duplicate (DUP)

(OS) L1756796-01 07/18/24 17:02 • (DUP) R4096041-3 07/18/24 17:02

Analyte	Original Result mg/l	DUP Result mg/l	Dilution	DUP RPD %	DUP Qualifier	DUP RPD Limits %
Total Dissolved Solids	411	399	1	2.96		10

L1756836-01 Original Sample (OS) • Duplicate (DUP)

(OS) L1756836-01 07/18/24 17:02 • (DUP) R4096041-4 07/18/24 17:02

Analyte	Original Result mg/l	DUP Result mg/l	Dilution	DUP RPD %	DUP Qualifier	DUP RPD Limits %
Total Dissolved Solids	219	178	1	20.7	J3	10

Laboratory Control Sample (LCS)

(LCS) R4096041-2 07/18/24 17:02

Analyte	Spike Amount mg/l	LCS Result mg/l	LCS Rec. %	Rec. Limits %	LCS Qualifier
Total Dissolved Solids	2410	2500	104	85.0-115	

Method Blank (MB)

(MB) R4097307-1 07/23/24 07:41

Analyte	MB Result mg/l	MB Qualifier	MB MDL mg/l	MB RDL mg/l
Suspended Solids	U		2.50	2.50

L1756933-05 Original Sample (OS) • Duplicate (DUP)

(OS) L1756933-05 07/23/24 07:41 • (DUP) R4097307-3 07/23/24 07:41

Analyte	Original Result mg/l	DUP Result mg/l	Dilution	DUP RPD %	DUP Qualifier	DUP RPD Limits %
Suspended Solids	14300	14200	1	0.840		10

L1756933-06 Original Sample (OS) • Duplicate (DUP)

(OS) L1756933-06 07/23/24 07:41 • (DUP) R4097307-4 07/23/24 07:41

Analyte	Original Result mg/l	DUP Result mg/l	Dilution	DUP RPD %	DUP Qualifier	DUP RPD Limits %
Suspended Solids	14300	14100	1	1.83		10

Laboratory Control Sample (LCS)

(LCS) R4097307-2 07/23/24 07:41

Analyte	Spike Amount mg/l	LCS Result mg/l	LCS Rec. %	Rec. Limits %	LCS Qualifier
Suspended Solids	879	820	93.3	85.0-115	

Method Blank (MB)

(MB) R4096035-1 07/19/24 09:53

Analyte	MB Result mg/l	MB Qualifier	MB MDL mg/l	MB RDL mg/l
Oil & Grease (Hexane Extr)	U		0.350	5.00

Laboratory Control Sample (LCS) • Laboratory Control Sample Duplicate (LCSD)

(LCS) R4096035-2 07/19/24 09:53 • (LCSD) R4096035-3 07/19/24 09:53

Analyte	Spike Amount mg/l	LCS Result mg/l	LCSD Result mg/l	LCS Rec. %	LCSD Rec. %	Rec. Limits %	LCS Qualifier	LCSD Qualifier	RPD %	RPD Limits %
Oil & Grease (Hexane Extr)	40.0	35.3	36.2	88.3	90.5	78.0-114			2.52	18

L1756705-02 Original Sample (OS) • Matrix Spike (MS)

(OS) L1756705-02 07/19/24 09:53 • (MS) R4096035-4 07/19/24 09:53

Analyte	Spike Amount mg/l	Original Result mg/l	MS Result mg/l	MS Rec. %	Dilution	Rec. Limits %	MS Qualifier
Oil & Grease (Hexane Extr)	40.0	U	34.0	85.1	1	78.0-114	

Method Blank (MB)

(MB) R4094918-1 07/17/24 13:58

Analyte	MB Result units	MB Qualifier	MB MDL units	MB RDL units
Color	U		5.00	5.00

Sample Narrative:

BLANK: 7

L1756836-01 Original Sample (OS) • Duplicate (DUP)

(OS) L1756836-01 07/17/24 13:58 • (DUP) R4094918-2 07/17/24 13:58

Analyte	Original Result units	DUP Result units	Dilution	DUP RPD %	DUP Qualifier	DUP RPD Limits %
Color	20.0	20.0	1	0.000		20

Sample Narrative:

OS: 7

DUP: 7

Method Blank (MB)

(MB) R4096806-1 07/22/24 12:47

Analyte	MB Result mg/l	MB Qualifier	MB MDL mg/l	MB RDL mg/l
Alkalinity	U		20.0	20.0

L1756836-01 Original Sample (OS) • Duplicate (DUP)

(OS) L1756836-01 07/22/24 12:47 • (DUP) R4096806-3 07/22/24 12:47

Analyte	Original Result mg/l	DUP Result mg/l	Dilution	DUP RPD %	DUP Qualifier	DUP RPD Limits %
Alkalinity	110	112	1	1.80		20

Laboratory Control Sample (LCS)

(LCS) R4096806-2 07/22/24 12:47

Analyte	Spike Amount mg/l	LCS Result mg/l	LCS Rec. %	Rec. Limits %	LCS Qualifier
Alkalinity	250	240	96.0	90.0-110	

Method Blank (MB)

(MB) R4094668-1 07/16/24 16:19

Analyte	MB Result mg/l	MB Qualifier	MB MDL mg/l	MB RDL mg/l
Bromide	U		0.0668	0.400
Chloride	U		0.325	0.800
Fluoride	U		0.0947	0.500
Nitrate	U		0.379	0.500
Sulfate	U		0.211	0.700

Laboratory Control Sample (LCS)

(LCS) R4094668-2 07/16/24 16:37

Analyte	Spike Amount mg/l	LCS Result mg/l	LCS Rec. %	Rec. Limits %	LCS Qualifier
Bromide	5.00	5.38	108	90.0-110	
Chloride	5.00	5.19	104	90.0-110	
Fluoride	5.00	5.33	107	90.0-110	
Nitrate	5.00	5.17	103	90.0-110	
Sulfate	5.00	5.37	107	90.0-110	

L1756836-01 Original Sample (OS) • Matrix Spike (MS) • Matrix Spike Duplicate (MSD)

(OS) L1756836-01 07/16/24 17:30 • (MS) R4094668-3 07/16/24 21:58 • (MSD) R4094668-4 07/16/24 22:16

Analyte	Spike Amount mg/l	Original Result mg/l	MS Result mg/l	MSD Result mg/l	MS Rec. %	MSD Rec. %	Dilution	Rec. Limits %	MS Qualifier	MSD Qualifier	RPD %	RPD Limits %
Bromide	5.00	0.116	5.50	5.53	108	108	1	90.0-110			0.508	20
Fluoride	5.00	0.243	5.66	5.66	108	108	1	90.0-110			0.0689	20
Nitrate	5.00	U	5.24	5.25	105	105	1	90.0-110			0.286	20

L1756836-01 Original Sample (OS) • Matrix Spike (MS) • Matrix Spike Duplicate (MSD)

(OS) L1756836-01 07/16/24 22:34 • (MS) R4094668-5 07/16/24 22:52 • (MSD) R4094668-6 07/16/24 23:09

Analyte	Spike Amount mg/l	Original Result mg/l	MS Result mg/l	MSD Result mg/l	MS Rec. %	MSD Rec. %	Dilution	Rec. Limits %	MS Qualifier	MSD Qualifier	RPD %	RPD Limits %
Chloride	5.00	16.1	43.4	43.6	546	550	5	90.0-110	J5	J5	0.393	20
Sulfate	5.00	27.3	55.1	55.2	556	560	5	90.0-110	V	V	0.333	20

Method Blank (MB)

(MB) R4094993-1 07/17/24 15:16

Analyte	MB Result mg/l	MB Qualifier	MB MDL mg/l	MB RDL mg/l
Chromium,Hexavalent	U		0.00200	0.00300

Laboratory Control Sample (LCS)

(LCS) R4094993-2 07/17/24 15:16

Analyte	Spike Amount mg/l	LCS Result mg/l	LCS Rec. %	Rec. Limits %	LCS Qualifier
Chromium,Hexavalent	0.200	0.200	100	85.0-115	

L1754173-02 Original Sample (OS) • Matrix Spike (MS) • Matrix Spike Duplicate (MSD)

(OS) L1754173-02 07/17/24 15:16 • (MS) R4094993-3 07/17/24 15:16 • (MSD) R4094993-4 07/17/24 15:16

Analyte	Spike Amount mg/l	Original Result mg/l	MS Result mg/l	MSD Result mg/l	MS Rec. %	MSD Rec. %	Dilution	Rec. Limits %	MS Qualifier	MSD Qualifier	RPD %	RPD Limits %
Chromium,Hexavalent	0.200	0.00460	0.208	0.210	102	103	1	10.0-120			0.825	20

Sample Narrative:

OS: Sample preserved in lab w/in 24 hrs of collection

L1754768-01 Original Sample (OS) • Matrix Spike (MS) • Matrix Spike Duplicate (MSD)

(OS) L1754768-01 07/17/24 15:16 • (MS) R4094993-5 07/17/24 15:16 • (MSD) R4094993-6 07/17/24 15:16

Analyte	Spike Amount mg/l	Original Result mg/l	MS Result mg/l	MSD Result mg/l	MS Rec. %	MSD Rec. %	Dilution	Rec. Limits %	MS Qualifier	MSD Qualifier	RPD %	RPD Limits %
Chromium,Hexavalent	0.200	U	0.198	0.197	98.8	98.4	1	10.0-120			0.437	20

Method Blank (MB)

(MB) R4096223-1 07/19/24 20:26

Analyte	MB Result mg/l	MB Qualifier	MB MDL mg/l	MB RDL mg/l
Kjeldahl Nitrogen, TKN	U		0.140	0.250

Laboratory Control Sample (LCS)

(LCS) R4096223-2 07/19/24 20:29

Analyte	Spike Amount mg/l	LCS Result mg/l	LCS Rec. %	Rec. Limits %	LCS Qualifier
Kjeldahl Nitrogen, TKN	4.00	3.78	94.5	90.0-110	

L1754376-02 Original Sample (OS) • Matrix Spike (MS) • Matrix Spike Duplicate (MSD)

(OS) L1754376-02 07/19/24 20:31 • (MS) R4096223-3 07/19/24 20:59 • (MSD) R4096223-4 07/19/24 21:00

Analyte	Spike Amount mg/l	Original Result mg/l	MS Result mg/l	MSD Result mg/l	MS Rec. %	MSD Rec. %	Dilution	Rec. Limits %	MS Qualifier	MSD Qualifier	RPD %	RPD Limits %
Kjeldahl Nitrogen, TKN	20.0	76.7	104	97.3	137	103	10	90.0-110	E J5		6.66	20

L1754397-01 Original Sample (OS) • Matrix Spike (MS) • Matrix Spike Duplicate (MSD)

(OS) L1754397-01 07/19/24 20:33 • (MS) R4096223-5 07/19/24 21:01 • (MSD) R4096223-6 07/19/24 21:03

Analyte	Spike Amount mg/l	Original Result mg/l	MS Result mg/l	MSD Result mg/l	MS Rec. %	MSD Rec. %	Dilution	Rec. Limits %	MS Qualifier	MSD Qualifier	RPD %	RPD Limits %
Kjeldahl Nitrogen, TKN	20.0	27.6	50.1	47.0	113	97.0	10	90.0-110	J5		6.39	20

Method Blank (MB)

(MB) R4095809-1 07/18/24 15:56

Analyte	MB Result mg/l	MB Qualifier	MB MDL mg/l	MB RDL mg/l
Nitrate-Nitrite	U		0.0300	0.0500

Laboratory Control Sample (LCS)

(LCS) R4095809-2 07/18/24 15:57

Analyte	Spike Amount mg/l	LCS Result mg/l	LCS Rec. %	Rec. Limits %	LCS Qualifier
Nitrate-Nitrite	2.50	2.41	96.4	90.0-110	

L1755904-01 Original Sample (OS) • Matrix Spike (MS) • Matrix Spike Duplicate (MSD)

(OS) L1755904-01 07/18/24 15:57 • (MS) R4095809-3 07/18/24 16:05 • (MSD) R4095809-4 07/18/24 16:06

Analyte	Spike Amount mg/l	Original Result mg/l	MS Result mg/l	MSD Result mg/l	MS Rec. %	MSD Rec. %	Dilution	Rec. Limits %	MS Qualifier	MSD Qualifier	RPD %	RPD Limits %
Nitrate-Nitrite	2.50	0.934	3.24	3.23	92.2	91.8	1	90.0-110			0.309	20

L1756836-01 Original Sample (OS) • Duplicate (DUP)

(OS) L1756836-01 07/16/24 14:05 • (DUP) R4094367-1 07/16/24 14:05

Analyte	Original Result mg/l	DUP Result mg/l	Dilution	DUP RPD %	DUP Qualifier	DUP RPD Limits %
Dissolved Oxygen	7.77	8.25	1	5.99		10

Method Blank (MB)

(MB) R4095472-1 07/18/24 12:41

Analyte	MB Result mg/l	MB Qualifier	MB MDL mg/l	MB RDL mg/l
Chlorine,residual	U		0.0260	0.100

L1756487-01 Original Sample (OS) • Duplicate (DUP)

(OS) L1756487-01 07/18/24 12:42 • (DUP) R4095472-4 07/18/24 12:42

Analyte	Original Result mg/l	DUP Result mg/l	Dilution	DUP RPD %	DUP Qualifier	DUP RPD Limits %
Chlorine,residual	0.192	0.191	1	0.522		20

Laboratory Control Sample (LCS) • Laboratory Control Sample Duplicate (LCSD)

(LCS) R4095472-2 07/18/24 12:41 • (LCSD) R4095472-3 07/18/24 12:41

Analyte	Spike Amount mg/l	LCS Result mg/l	LCSD Result mg/l	LCS Rec. %	LCSD Rec. %	Rec. Limits %	LCS Qualifier	LCSD Qualifier	RPD %	RPD Limits %
Chlorine,residual	1.00	0.975	0.978	97.5	97.8	85.0-115			0.307	20

Method Blank (MB)

(MB) R4095810-1 07/18/24 18:49

Analyte	MB Result mg/l	MB Qualifier	MB MDL mg/l	MB RDL mg/l
Cyanide	U		0.00430	0.0100

Laboratory Control Sample (LCS)

(LCS) R4095810-2 07/18/24 18:49

Analyte	Spike Amount mg/l	LCS Result mg/l	LCS Rec. %	Rec. Limits %	LCS Qualifier
Cyanide	0.100	0.103	103	85.0-115	

L1757293-02 Original Sample (OS) • Matrix Spike (MS) • Matrix Spike Duplicate (MSD)

(OS) L1757293-02 07/18/24 18:49 • (MS) R4095810-3 07/18/24 18:49 • (MSD) R4095810-4 07/18/24 18:49

Analyte	Spike Amount mg/l	Original Result mg/l	MS Result mg/l	MSD Result mg/l	MS Rec. %	MSD Rec. %	Dilution	Rec. Limits %	MS Qualifier	MSD Qualifier	RPD %	RPD Limits %
Cyanide	0.100	U	0.0507	0.0507	50.7	50.7	1	85.0-115	J6	J6	0.000	20

L1757408-06 Original Sample (OS) • Matrix Spike (MS) • Matrix Spike Duplicate (MSD)

(OS) L1757408-06 07/18/24 18:49 • (MS) R4095810-5 07/18/24 18:49 • (MSD) R4095810-6 07/18/24 18:49

Analyte	Spike Amount mg/l	Original Result mg/l	MS Result mg/l	MSD Result mg/l	MS Rec. %	MSD Rec. %	Dilution	Rec. Limits %	MS Qualifier	MSD Qualifier	RPD %	RPD Limits %
Cyanide	0.100	0.00474	0.0900	0.0940	90.0	94.0	1	85.0-115			4.34	20

Method Blank (MB)

(MB) R4096931-1 07/22/24 16:34

Analyte	MB Result mg/l	MB Qualifier	MB MDL mg/l	MB RDL mg/l
Phosphorus,Total	U		0.0152	0.0500

Laboratory Control Sample (LCS)

(LCS) R4096931-2 07/22/24 16:34

Analyte	Spike Amount mg/l	LCS Result mg/l	LCS Rec. %	Rec. Limits %	LCS Qualifier
Phosphorus,Total	0.500	0.513	103	80.0-120	

L1757284-02 Original Sample (OS) • Matrix Spike (MS) • Matrix Spike Duplicate (MSD)

(OS) L1757284-02 07/22/24 16:34 • (MS) R4096931-3 07/22/24 16:35 • (MSD) R4096931-4 07/22/24 16:35

Analyte	Spike Amount mg/l	Original Result mg/l	MS Result mg/l	MSD Result mg/l	MS Rec. %	MSD Rec. %	Dilution	Rec. Limits %	MS Qualifier	MSD Qualifier	RPD %	RPD Limits %
Phosphorus,Total	0.500	0.164	0.686	0.666	104	100	1	80.0-120			3.01	20

1 Cp
2 Tc
3 Ss
4 Cn
5 Sr
6 Qc
7 Gl
8 Al
9 Sc

Method Blank (MB)

(MB) R4094911-1 07/17/24 13:38

Analyte	MB Result mg/l	MB Qualifier	MB MDL mg/l	MB RDL mg/l
Sulfide	U		0.0230	0.100

Laboratory Control Sample (LCS)

(LCS) R4094911-2 07/17/24 13:38

Analyte	Spike Amount mg/l	LCS Result mg/l	LCS Rec. %	Rec. Limits %	LCS Qualifier
Sulfide	0.800	0.877	110	80.0-120	

L1756950-02 Original Sample (OS) • Matrix Spike (MS) • Matrix Spike Duplicate (MSD)

(OS) L1756950-02 07/17/24 13:40 • (MS) R4094911-3 07/17/24 13:40 • (MSD) R4094911-4 07/17/24 13:40

Analyte	Spike Amount mg/l	Original Result mg/l	MS Result mg/l	MSD Result mg/l	MS Rec. %	MSD Rec. %	Dilution	Rec. Limits %	MS Qualifier	MSD Qualifier	RPD %	RPD Limits %
Sulfide	0.800	0.0269	0.591	0.567	70.5	67.5	1	80.0-120	J6	J6	4.07	20

Method Blank (MB)

(MB) R4097393-1 07/23/24 15:00

Analyte	MB Result mg/l	MB Qualifier	MB MDL mg/l	MB RDL mg/l
Sulfite	U		1.19	3.00

L1757021-02 Original Sample (OS) • Duplicate (DUP)

(OS) L1757021-02 07/23/24 15:00 • (DUP) R4097393-3 07/23/24 15:00

Analyte	Original Result mg/l	DUP Result mg/l	Dilution	DUP RPD %	DUP Qualifier	DUP RPD Limits %
Sulfite	6.50	6.50	1	0.000		20

Laboratory Control Sample (LCS)

(LCS) R4097393-2 07/23/24 15:00

Analyte	Spike Amount mg/l	LCS Result mg/l	LCS Rec. %	Rec. Limits %	LCS Qualifier
Sulfite	20.0	18.0	90.0	85.0-115	

L1757021-03 Original Sample (OS) • Matrix Spike (MS) • Matrix Spike Duplicate (MSD)

(OS) L1757021-03 07/23/24 15:00 • (MS) R4097393-4 07/23/24 15:00 • (MSD) R4097393-5 07/23/24 15:00

Analyte	Spike Amount mg/l	Original Result mg/l	MS Result mg/l	MSD Result mg/l	MS Rec. %	MSD Rec. %	Dilution	Rec. Limits %	MS Qualifier	MSD Qualifier	RPD %	RPD Limits %
Sulfite	20.0	U	17.5	18.0	87.5	90.0	1	85.0-115			2.82	20

Method Blank (MB)

(MB) R4096615-1 07/21/24 11:11

Analyte	MB Result mg/l	MB Qualifier	MB MDL mg/l	MB RDL mg/l
BOD	U		0.200	0.200

L1756776-01 Original Sample (OS) • Duplicate (DUP)

(OS) L1756776-01 07/21/24 11:42 • (DUP) R4096615-3 07/21/24 11:54

Analyte	Original Result mg/l	DUP Result mg/l	Dilution	DUP RPD %	DUP Qualifier	DUP RPD Limits %
BOD	7.12	7.08	1	0.563		20

L1756822-01 Original Sample (OS) • Duplicate (DUP)

(OS) L1756822-01 07/21/24 11:48 • (DUP) R4096615-4 07/21/24 11:59

Analyte	Original Result mg/l	DUP Result mg/l	Dilution	DUP RPD %	DUP Qualifier	DUP RPD Limits %
BOD	ND	ND	1	0		20

Laboratory Control Sample (LCS)

(LCS) R4096615-2 07/21/24 11:17

Analyte	Spike Amount mg/l	LCS Result mg/l	LCS Rec. %	Rec. Limits %	LCS Qualifier
BOD	198	194	98.1	85-115	

Method Blank (MB)

(MB) R4096616-1 07/21/24 12:45

Analyte	MB Result mg/l	MB Qualifier	MB MDL mg/l	MB RDL mg/l
CBOD	U		0.200	0.200

L1756689-01 Original Sample (OS) • Duplicate (DUP)

(OS) L1756689-01 07/21/24 12:55 • (DUP) R4096616-3 07/21/24 13:45

Analyte	Original Result mg/l	DUP Result mg/l	Dilution	DUP RPD %	DUP Qualifier	DUP RPD Limits %
CBOD	3.79	3.71	1	2.13		20

L1756933-01 Original Sample (OS) • Duplicate (DUP)

(OS) L1756933-01 07/21/24 13:39 • (DUP) R4096616-4 07/21/24 13:49

Analyte	Original Result mg/l	DUP Result mg/l	Dilution	DUP RPD %	DUP Qualifier	DUP RPD Limits %
CBOD	ND	ND	1	0		20

Laboratory Control Sample (LCS)

(LCS) R4096616-2 07/21/24 12:51

Analyte	Spike Amount mg/l	LCS Result mg/l	LCS Rec. %	Rec. Limits %	LCS Qualifier
CBOD	198	198	100	85-115	

Method Blank (MB)

(MB) R4094848-1 07/17/24 11:53

Analyte	MB Result mg/l	MB Qualifier	MB MDL mg/l	MB RDL mg/l
COD	U		16.1	35.0

Laboratory Control Sample (LCS)

(LCS) R4094848-2 07/17/24 11:53

Analyte	Spike Amount mg/l	LCS Result mg/l	LCS Rec. %	Rec. Limits %	LCS Qualifier
COD	500	516	103	80.0-120	

L1756038-04 Original Sample (OS) • Matrix Spike (MS) • Matrix Spike Duplicate (MSD)

(OS) L1756038-04 07/17/24 11:53 • (MS) R4094848-3 07/17/24 11:53 • (MSD) R4094848-4 07/17/24 11:53

Analyte	Spike Amount mg/l	Original Result mg/l	MS Result mg/l	MSD Result mg/l	MS Rec. %	MSD Rec. %	Dilution	Rec. Limits %	MS Qualifier	MSD Qualifier	RPD %	RPD Limits %
COD	500	28.5	518	531	98.0	100	1	80.0-120			2.39	20

L1756465-01 Original Sample (OS) • Matrix Spike (MS) • Matrix Spike Duplicate (MSD)

(OS) L1756465-01 07/17/24 11:53 • (MS) R4094848-5 07/17/24 11:53 • (MSD) R4094848-6 07/17/24 11:53

Analyte	Spike Amount mg/l	Original Result mg/l	MS Result mg/l	MSD Result mg/l	MS Rec. %	MSD Rec. %	Dilution	Rec. Limits %	MS Qualifier	MSD Qualifier	RPD %	RPD Limits %
COD	500	51.5	531	543	95.9	98.4	1	80.0-120			2.34	20

Method Blank (MB)

(MB) R4094841-1 07/16/24 15:35

Analyte	MB Result mg/l	MB Qualifier	MB MDL mg/l	MB RDL mg/l
TOC (Total Organic Carbon)	U		0.270	0.700

Laboratory Control Sample (LCS)

(LCS) R4094841-2 07/16/24 15:54

Analyte	Spike Amount mg/l	LCS Result mg/l	LCS Rec. %	Rec. Limits %	LCS Qualifier
TOC (Total Organic Carbon)	10.0	10.2	102	90.0-110	

L1756680-01 Original Sample (OS) • Matrix Spike (MS) • Matrix Spike Duplicate (MSD)

(OS) L1756680-01 07/16/24 17:14 • (MS) R4094841-3 07/16/24 18:08 • (MSD) R4094841-4 07/16/24 18:36

Analyte	Spike Amount mg/l	Original Result mg/l	MS Result mg/l	MSD Result mg/l	MS Rec. %	MSD Rec. %	Dilution	Rec. Limits %	MS Qualifier	MSD Qualifier	RPD %	RPD Limits %
TOC (Total Organic Carbon)	50.0	28.5	79.8	84.1	103	111	5	80.0-120			5.19	20

Method Blank (MB)

(MB) R4095086-1 07/17/24 17:29

Analyte	MB Result mg/l	MB Qualifier	MB MDL mg/l	MB RDL mg/l
MBAS	U		0.360	0.500

Laboratory Control Sample (LCS)

(LCS) R4095086-2 07/17/24 17:29

Analyte	Spike Amount mg/l	LCS Result mg/l	LCS Rec. %	Rec. Limits %	LCS Qualifier
MBAS	1.00	1.12	112	80.0-120	

L1756836-01 Original Sample (OS) • Matrix Spike (MS) • Matrix Spike Duplicate (MSD)

(OS) L1756836-01 07/17/24 17:29 • (MS) R4095086-3 07/17/24 17:29 • (MSD) R4095086-4 07/17/24 17:29

Analyte	Spike Amount mg/l	Original Result mg/l	MS Result mg/l	MSD Result mg/l	MS Rec. %	MSD Rec. %	Dilution	Rec. Limits %	MS Qualifier	MSD Qualifier	RPD %	RPD Limits %
MBAS	1.00	U	1.25	1.13	125	113	1	80.0-120	J5		10.4	20

L1756869-01 Original Sample (OS) • Duplicate (DUP)

(OS) L1756869-01 07/18/24 08:46 • (DUP) R4095234-2 07/18/24 08:46

Analyte	Original Result	DUP Result	Dilution	DUP RPD	DUP Qualifier	DUP RPD Limits
	su	su		%		%
pH	8.99	8.99	1	0.000		20

Sample Narrative:

OS: 8.99 at 21.7C

DUP: 8.99 at 21.6C

Laboratory Control Sample (LCS)

(LCS) R4095234-1 07/18/24 08:46

Analyte	Spike Amount	LCS Result	LCS Rec.	Rec. Limits	LCS Qualifier
	su	su	%	%	
pH	6.00	5.97	99.5	99.0-101	

Sample Narrative:

LCS: 5.97 at 21.2C

Method Blank (MB)

(MB) R4096965-1 07/22/24 15:38

Analyte	MB Result mg/l	MB Qualifier	MB MDL mg/l	MB RDL mg/l
Ammonia Nitrogen	U		0.0280	0.100

Laboratory Control Sample (LCS)

(LCS) R4096965-2 07/22/24 15:39

Analyte	Spike Amount mg/l	LCS Result mg/l	LCS Rec. %	Rec. Limits %	LCS Qualifier
Ammonia Nitrogen	5.00	5.04	101	80.0-120	

L1755609-01 Original Sample (OS) • Matrix Spike (MS) • Matrix Spike Duplicate (MSD)

(OS) L1755609-01 07/22/24 15:57 • (MS) R4096965-3 07/22/24 15:50 • (MSD) R4096965-4 07/22/24 15:52

Analyte	Spike Amount mg/l	Original Result mg/l	MS Result mg/l	MSD Result mg/l	MS Rec. %	MSD Rec. %	Dilution	Rec. Limits %	MS Qualifier	MSD Qualifier	RPD %	RPD Limits %
Ammonia Nitrogen	5.00	0.0469	4.91	4.90	97.3	97.1	1	80.0-120			0.204	20

L1756014-01 Original Sample (OS) • Matrix Spike (MS) • Matrix Spike Duplicate (MSD)

(OS) L1756014-01 07/22/24 15:59 • (MS) R4096965-5 07/22/24 15:53 • (MSD) R4096965-6 07/22/24 15:55

Analyte	Spike Amount mg/l	Original Result mg/l	MS Result mg/l	MSD Result mg/l	MS Rec. %	MSD Rec. %	Dilution	Rec. Limits %	MS Qualifier	MSD Qualifier	RPD %	RPD Limits %
Ammonia Nitrogen	5.00	0.120	4.96	4.98	96.8	97.2	1	80.0-120			0.402	20

QUALITY CONTROL SUMMARY

L1756836-01

Method Blank (MB)

(MB) R4095624-5 07/18/24 17:12

Analyte	MB Result mg/l	MB Qualifier	MB MDL mg/l	MB RDL mg/l
Mercury	U		0.0000450	0.000200

Laboratory Control Sample (LCS)

(LCS) R4095624-2 07/18/24 16:54

Analyte	Spike Amount mg/l	LCS Result mg/l	LCS Rec. %	Rec. Limits %	LCS Qualifier
Mercury	0.00250	0.00255	102	85.0-115	

L1756002-06 Original Sample (OS) • Matrix Spike (MS) • Matrix Spike Duplicate (MSD)

(OS) L1756002-06 07/18/24 16:56 • (MS) R4095624-3 07/18/24 16:58 • (MSD) R4095624-4 07/18/24 17:00

Analyte	Spike Amount mg/l	Original Result mg/l	MS Result mg/l	MSD Result mg/l	MS Rec. %	MSD Rec. %	Dilution	Rec. Limits %	MS Qualifier	MSD Qualifier	RPD %	RPD Limits %
Mercury	0.00250	0.000119	0.00246	0.00243	93.6	92.4	1	70.0-130			1.23	20

L1756002-04 Original Sample (OS) • Matrix Spike (MS) • Matrix Spike Duplicate (MSD)

(OS) L1756002-04 07/18/24 17:56 • (MS) R4095624-6 07/18/24 17:58 • (MSD) R4095624-7 07/18/24 18:00

Analyte	Spike Amount mg/l	Original Result mg/l	MS Result mg/l	MSD Result mg/l	MS Rec. %	MSD Rec. %	Dilution	Rec. Limits %	MS Qualifier	MSD Qualifier	RPD %	RPD Limits %
Mercury	0.00250	0.000237	0.00273	0.00270	99.7	98.5	1	70.0-130			1.10	20

Method Blank (MB)

(MB) R4095885-1 07/19/24 10:24

Analyte	MB Result mg/l	MB Qualifier	MB MDL mg/l	MB RDL mg/l
Boron	U		0.0186	0.100
Tin	U		0.00240	0.0250
Titanium	U		0.00835	0.100

Laboratory Control Sample (LCS)

(LCS) R4095885-2 07/19/24 10:28

Analyte	Spike Amount mg/l	LCS Result mg/l	LCS Rec. %	Rec. Limits %	LCS Qualifier
Boron	1.00	0.936	93.6	85.0-115	
Tin	1.00	0.994	99.4	85.0-115	
Titanium	1.00	0.979	97.9	85.0-115	

L1756433-03 Original Sample (OS) • Matrix Spike (MS) • Matrix Spike Duplicate (MSD)

(OS) L1756433-03 07/19/24 10:32 • (MS) R4095885-3 07/19/24 10:36 • (MSD) R4095885-4 07/19/24 10:40

Analyte	Spike Amount mg/l	Original Result mg/l	MS Result mg/l	MSD Result mg/l	MS Rec. %	MSD Rec. %	Dilution	Rec. Limits %	MS Qualifier	MSD Qualifier	RPD %	RPD Limits %
Boron	1.00	0.283	1.22	1.19	93.6	91.2	1	70.0-130			1.99	20
Tin	1.00	0.00980	0.974	0.964	96.4	95.4	1	70.0-130			1.10	20
Titanium	1.00	U	0.982	0.954	98.2	95.4	1	70.0-130			2.87	20

Method Blank (MB)

(MB) R4098986-1 07/26/24 14:22

Analyte	MB Result mg/l	MB Qualifier	MB MDL mg/l	MB RDL mg/l
Aluminum	0.00428		0.00186	0.00250
Antimony	U		0.000580	0.00500
Arsenic	0.000112	J	0.000100	0.000500
Barium	U		0.000440	0.00300
Beryllium	U		0.0000600	0.000500
Cadmium	U		0.000120	0.00100
Chromium	U		0.000510	0.00300
Cobalt	U		0.0000400	0.000300
Copper	U		0.000900	0.00200
Iron	0.00462	J	0.00432	0.00700
Lead	U		0.000140	0.000500
Magnesium	U		0.0121	0.0200
Manganese	U		0.000330	0.000500
Molybdenum	U		0.000530	0.00100
Nickel	U		0.000640	0.00200
Selenium	U		0.000740	0.00500
Silver	U		0.0000800	0.000500
Thallium	0.000202	J	0.000190	0.000500
Zinc	U		0.00265	0.00500

Laboratory Control Sample (LCS)

(LCS) R4098986-2 07/26/24 14:34

Analyte	Spike Amount mg/l	LCS Result mg/l	LCS Rec. %	Rec. Limits %	LCS Qualifier
Aluminum	1.00	1.03	103	85.0-115	
Antimony	0.100	0.0972	97.2	85.0-115	
Arsenic	0.100	0.103	103	85.0-115	
Barium	0.100	0.0943	94.3	85.0-115	
Beryllium	0.100	0.103	103	85.0-115	
Cadmium	0.100	0.106	106	85.0-115	
Chromium	0.100	0.105	105	85.0-115	
Cobalt	0.100	0.104	104	85.0-115	
Copper	0.100	0.105	105	85.0-115	
Iron	1.00	1.07	107	85.0-115	
Lead	0.100	0.104	104	85.0-115	
Magnesium	1.00	1.08	108	85.0-115	
Manganese	0.100	0.104	104	85.0-115	
Molybdenum	0.100	0.109	109	85.0-115	

Laboratory Control Sample (LCS)

(LCS) R4098986-2 07/26/24 14:34

Analyte	Spike Amount mg/l	LCS Result mg/l	LCS Rec. %	Rec. Limits %	LCS Qualifier
Nickel	0.100	0.103	103	85.0-115	
Selenium	0.100	0.105	105	85.0-115	
Silver	0.0500	0.0530	106	85.0-115	
Thallium	0.100	0.0980	98.0	85.0-115	
Zinc	0.100	0.103	103	85.0-115	

L1756836-01 Original Sample (OS) • Matrix Spike (MS) • Matrix Spike Duplicate (MSD)

(OS) L1756836-01 07/26/24 14:40 • (MS) R4098986-3 07/26/24 14:59 • (MSD) R4098986-4 07/26/24 15:05

Analyte	Spike Amount mg/l	Original Result mg/l	MS Result mg/l	MSD Result mg/l	MS Rec. %	MSD Rec. %	Dilution	Rec. Limits %	MS Qualifier	MSD Qualifier	RPD %	RPD Limits %
Aluminum	1.00	0.167	1.06	1.03	89.2	86.1	1	70.0-130			2.97	20
Antimony	0.100	U	0.0847	0.0830	84.7	83.0	1	70.0-130			2.08	20
Arsenic	0.100	0.00528	0.0963	0.0954	91.1	90.1	1	70.0-130			1.02	20
Barium	0.100	0.0341	0.112	0.111	78.2	76.5	1	70.0-130			1.50	20
Beryllium	0.100	0.0000927	0.0964	0.0966	96.3	96.5	1	70.0-130			0.186	20
Cadmium	0.100	U	0.0908	0.0898	90.8	89.8	1	70.0-130			1.12	20
Chromium	0.100	U	0.0915	0.0880	91.5	88.0	1	70.0-130			3.91	20
Cobalt	0.100	0.00305	0.0895	0.0877	86.5	84.6	1	70.0-130			2.06	20
Copper	0.100	0.00257	0.0935	0.0913	91.0	88.7	1	70.0-130			2.40	20
Iron	1.00	0.153	1.18	1.06	103	90.8	1	70.0-130			11.0	20
Lead	0.100	0.000221	0.0913	0.0896	91.1	89.4	1	70.0-130			1.90	20
Magnesium	1.00	3.92	4.50	4.29	58.9	37.8	1	70.0-130	J6	J6	4.79	20
Manganese	0.100	0.0439	0.129	0.124	85.0	79.8	1	70.0-130			4.12	20
Molybdenum	0.100	0.00174	0.0961	0.0951	94.4	93.4	1	70.0-130			1.04	20
Nickel	0.100	0.00163	0.0913	0.0889	89.7	87.3	1	70.0-130			2.60	20
Selenium	0.100	U	0.0974	0.0996	97.4	99.6	1	70.0-130			2.26	20
Silver	0.0500	U	0.0465	0.0465	93.0	93.0	1	70.0-130			0.0109	20
Thallium	0.100	0.000894	0.0919	0.0893	91.0	88.4	1	70.0-130			2.83	20
Zinc	0.100	U	0.0937	0.0896	93.7	89.6	1	70.0-130			4.46	20

Method Blank (MB)

(MB) R4095202-2 07/16/24 20:34

Analyte	MB Result mg/l	MB Qualifier	MB MDL mg/l	MB RDL mg/l
1,1,1-Trichloroethane	U		0.00335	0.00500
1,1,2,2-Tetrachloroethane	U		0.000596	0.00500
1,1,2-Trichloroethane	U		0.00145	0.00500
1,1-Dichloroethene	U		0.00367	0.00500
1,1-Dichloroethane	U		0.00292	0.00500
1,2-Dibromoethane	U		0.000549	0.00200
1,2-Dichlorobenzene	U		0.00172	0.00200
1,2-Dichloroethane	U		0.00195	0.00500
1,2-Dichloropropane	U		0.000804	0.00200
1,3-Dichlorobenzene	U		0.00419	0.00500
1,4-Dichlorobenzene	U		0.00173	0.00200
2-Butanone (MEK)	U		0.00822	0.0250
2-Chloroethyl vinyl ether	U		0.00652	0.0100
Acrolein	U		0.00544	0.0100
Acrylonitrile	U		0.00709	0.0100
Benzene	U		0.00207	0.00500
Bromodichloromethane	U		0.00179	0.00200
Bromoform	U		0.000960	0.0100
Bromomethane	U		0.00347	0.00500
Carbon tetrachloride	U		0.00159	0.00200
Chlorobenzene	U		0.00276	0.0100
Chloroethane	U		0.00296	0.00500
Chloroform	U		0.00212	0.00500
Chloromethane	U		0.00361	0.00500
cis-1,3-Dichloropropene	U		0.00492	0.0100
Dibromochloromethane	U		0.00327	0.00500
Ethylbenzene	U		0.000401	0.00200
Methylene Chloride	U		0.0118	0.0200
Tetrachloroethene	U		0.00486	0.0100
Toluene	U		0.00219	0.00500
trans-1,2-Dichloroethene	U		0.00501	0.0100
Trichloroethene	U		0.00262	0.00500
Vinyl chloride	U		0.00466	0.00500
(S) 1,2-Dichloroethane-d4	*101*			*70.0-130*
(S) 4-Bromofluorobenzene	*100*			*70.0-130*
(S) Toluene-d8	*100*			*70.0-130*

Laboratory Control Sample (LCS)

(LCS) R4095202-1 07/16/24 18:55

Analyte	Spike Amount mg/l	LCS Result mg/l	LCS Rec. %	Rec. Limits %	LCS Qualifier
1,1,1-Trichloroethane	0.0200	0.0208	104	70.0-130	
1,1,2,2-Tetrachloroethane	0.0200	0.0185	92.5	60.0-140	
1,1,2-Trichloroethane	0.0200	0.0203	102	70.0-130	
1,1-Dichloroethene	0.0200	0.0202	101	50.0-150	
1,1-Dichloroethane	0.0200	0.0195	97.5	70.0-130	
1,2-Dibromoethane	0.0200	0.0200	100	70.0-130	
1,2-Dichlorobenzene	0.0200	0.0204	102	65.0-135	
1,2-Dichloroethane	0.0200	0.0193	96.5	70.0-130	
1,2-Dichloropropane	0.0200	0.0194	97.0	35.0-165	
1,3-Dichlorobenzene	0.0200	0.0201	101	70.0-130	
1,4-Dichlorobenzene	0.0200	0.0197	98.5	65.0-135	
2-Butanone (MEK)	0.100	0.0999	99.9	70.0-130	
2-Chloroethyl vinyl ether	0.100	0.0974	97.4	1.00-225	
Acrolein	0.100	0.103	103	64.0-139	
Acrylonitrile	0.100	0.0991	99.1	67.0-136	
Benzene	0.0200	0.0199	99.5	65.0-135	
Bromodichloromethane	0.0200	0.0202	101	65.0-135	
Bromoform	0.0200	0.0189	94.5	70.0-130	
Bromomethane	0.0200	0.0235	117	15.0-185	
Carbon tetrachloride	0.0200	0.0197	98.5	70.0-130	
Chlorobenzene	0.0200	0.0199	99.5	65.0-135	
Chloroethane	0.0200	0.0195	97.5	40.0-160	
Chloroform	0.0200	0.0199	99.5	70.0-135	
Chloromethane	0.0200	0.0173	86.5	1.00-205	
cis-1,3-Dichloropropene	0.0200	0.0192	96.0	25.0-175	
Dibromochloromethane	0.0200	0.0196	98.0	70.0-135	
Ethylbenzene	0.0200	0.0200	100	60.0-140	
Methylene Chloride	0.0200	0.0197	98.5	60.0-140	J
Tetrachloroethene	0.0200	0.0197	98.5	70.0-130	
Toluene	0.0200	0.0196	98.0	70.0-130	
trans-1,2-Dichloroethene	0.0200	0.0202	101	70.0-130	
Trichloroethene	0.0200	0.0215	108	65.0-135	
Vinyl chloride	0.0200	0.0197	98.5	5.00-195	
(S) 1,2-Dichloroethane-d4			*107*	*70.0-130*	
(S) 4-Bromofluorobenzene			*100*	*70.0-130*	
(S) Toluene-d8			*101*	*70.0-130*	

L1756836-01 Original Sample (OS) • Matrix Spike (MS) • Matrix Spike Duplicate (MSD)

(OS) L1756836-01 07/16/24 22:36 • (MS) R4095202-3 07/16/24 23:00 • (MSD) R4095202-4 07/16/24 23:25

Analyte	Spike Amount mg/l	Original Result mg/l	MS Result mg/l	MSD Result mg/l	MS Rec. %	MSD Rec. %	Dilution	Rec. Limits %	MS Qualifier	MSD Qualifier	RPD %	RPD Limits %
1,1,1-Trichloroethane	0.0200	U	0.0217	0.0194	109	97.0	1	52.0-162			11.2	36
1,1,2,2-Tetrachloroethane	0.0200	U	0.0178	0.0174	89.0	87.0	1	46.0-157			2.27	61
1,1,2-Trichloroethane	0.0200	U	0.0198	0.0189	99.0	94.5	1	52.0-150			4.65	45
1,1-Dichloroethene	0.0200	U	0.0225	0.0206	113	103	1	1.00-234			8.82	32
1,2-Dibromoethane	0.0200	U	0.0187	0.0186	93.5	93.0	1	70.0-130			0.536	20
1,2-Dichlorobenzene	0.0200	U	0.0215	0.0199	108	99.5	1	18.0-190			7.73	57
1,2-Dichloroethane	0.0200	U	0.0200	0.0192	100	96.0	1	49.0-155			4.08	49
1,2-Dichloropropane	0.0200	U	0.0201	0.0183	101	91.5	1	1.00-210			9.37	55
1,3-Dichlorobenzene	0.0200	U	0.0208	0.0192	104	96.0	1	59.0-156			8.00	43
1,4-Dichlorobenzene	0.0200	U	0.0202	0.0198	101	99.0	1	18.0-190			2.00	57
2-Butanone (MEK)	0.100	U	0.0618	0.0625	61.8	62.5	1	70.0-130	J6	J6	1.13	20
2-Chloroethyl vinyl ether	0.100	U	0.0768	0.0713	76.8	71.3	1	1.00-305			7.43	71
Acrolein	0.100	U	0.0515	0.0489	51.5	48.9	1	4.00-172			5.18	20
Acrylonitrile	0.100	U	0.0908	0.0796	90.8	79.6	1	22.0-189			13.1	20
Benzene	0.0200	U	0.0215	0.0196	108	98.0	1	37.0-151			9.25	61
Bromodichloromethane	0.0200	U	0.0203	0.0184	102	92.0	1	35.0-155			9.82	56
Bromoform	0.0200	U	0.0171	0.0169	85.5	84.5	1	70.0-130			1.18	42
Bromomethane	0.0200	U	0.0199	0.0178	99.5	89.0	1	15.0-185			11.1	61
Carbon tetrachloride	0.0200	U	0.0212	0.0188	106	94.0	1	70.0-140			12.0	41
Chlorobenzene	0.0200	U	0.0201	0.0193	101	96.5	1	37.0-160			4.06	53
Chloroethane	0.0200	U	0.0169	0.0159	84.5	79.5	1	14.0-230			6.10	78
Chloroform	0.0200	U	0.0218	0.0199	109	99.5	1	51.0-138			9.11	54
Chloromethane	0.0200	U	0.0144	0.0140	72.0	70.0	1	1.00-273			2.82	20
cis-1,3-Dichloropropene	0.0200	U	0.0180	0.0174	90.0	87.0	1	1.00-227			3.39	58
Dibromochloromethane	0.0200	U	0.0190	0.0176	95.0	88.0	1	53.0-149			7.65	50
Ethylbenzene	0.0200	U	0.0210	0.0198	105	99.0	1	37.0-162			5.88	63
Methylene Chloride	0.0200	U	0.0185	0.0171	92.5	85.5	1	1.00-221	J	J	7.87	28
Tetrachloroethene	0.0200	U	0.0215	0.0201	108	101	1	64.0-148			6.73	39
Toluene	0.0200	U	0.0199	0.0193	99.5	96.5	1	47.0-150			3.06	41
trans-1,2-Dichloroethene	0.0200	U	0.0226	0.0204	113	102	1	54.0-156			10.2	45
Trichloroethene	0.0200	U	0.0229	0.0213	115	106	1	70.0-157			7.24	48
Vinyl chloride	0.0200	U	0.0177	0.0165	88.5	82.5	1	1.00-251			7.02	66
(S) 1,2-Dichloroethane-d4					*104*	*100*		*70.0-130*				
(S) 4-Bromofluorobenzene					*100*	*99.0*		*70.0-130*				
(S) Toluene-d8					*100*	*101*		*70.0-130*				

Method Blank (MB)

(MB) R4096010-1 07/19/24 02:11

Analyte	MB Result mg/l	MB Qualifier	MB MDL mg/l	MB RDL mg/l
PCB 1016	U		0.000270	0.000500
PCB 1221	U		0.000270	0.000500
PCB 1232	U		0.000270	0.000500
PCB 1242	U		0.000270	0.000500
PCB 1248	U		0.000173	0.000500
PCB 1254	U		0.000173	0.000500
PCB 1260	U		0.000173	0.000500
Total PCBs	U		0.000173	0.000500
(S) Decachlorobiphenyl	*22.5*			*10.0-144*
(S) Tetrachloro-m-xylene	*70.6*			*10.0-135*

Laboratory Control Sample (LCS)

(LCS) R4096010-5 07/19/24 02:30

Analyte	Spike Amount mg/l	LCS Result mg/l	LCS Rec. %	Rec. Limits %	LCS Qualifier
PCB 1016	0.00250	0.00282	113	50.0-140	
PCB 1260	0.00250	0.00247	98.8	8.00-140	
(S) Decachlorobiphenyl			*63.5*	*10.0-144*	
(S) Tetrachloro-m-xylene			*79.2*	*10.0-135*	

L1756962-01 Original Sample (OS) • Matrix Spike (MS) • Matrix Spike Duplicate (MSD)

(OS) L1756962-01 07/19/24 03:09 • (MS) R4096010-6 07/19/24 03:39 • (MSD) R4096010-7 07/19/24 03:48

Analyte	Spike Amount mg/l	Original Result mg/l	MS Result mg/l	MSD Result mg/l	MS Rec. %	MSD Rec. %	Dilution	Rec. Limits %	MS Qualifier	MSD Qualifier	RPD %	RPD Limits %
PCB 1016	0.00250	U	0.0152	0.0214	608	856	1	50.0-140	J5 P	J5	33.9	36
PCB 1260	0.00250	U	0.0165	0.0238	660	952	1	8.00-140	J5 P	J5	36.2	38
(S) Decachlorobiphenyl					*23.0*	*28.6*		*10.0-144*				
(S) Tetrachloro-m-xylene					*49.2*	*57.9*		*10.0-135*				

Method Blank (MB)

(MB) R4096164-1 07/19/24 12:54

Analyte	MB Result mg/l	MB Qualifier	MB MDL mg/l	MB RDL mg/l
1,2,4,5-Tetrachlorobenzene	U		0.000200	0.00200
2,4,6-Trichlorophenol	U		0.000238	0.00200
2,4-Dichlorophenol	U		0.000336	0.00400
2,4-Dimethylphenol	U		0.000613	0.00200
2,4-Dinitrophenol	U		0.00154	0.0100
2-Chlorophenol	U		0.000307	0.00200
2-Methylphenol	U		0.000238	0.00200
2-Nitrophenol	U		0.000247	0.00200
3&4-Methyl Phenol	U		0.000238	0.00200
3,3-Dichlorobenzidine	U		0.000788	0.00400
4,6-Dinitro-2-methylphenol	U		0.00202	0.0100
4-Chloro-3-methylphenol	U		0.000217	0.00200
4-Nitrophenol	U		0.00123	0.0100
Anthracene	U		0.000168	0.00200
Benzidine	U		0.000350	0.00400
Benzo(a)anthracene	U		0.000307	0.00200
Benzo(a)pyrene	U		0.000470	0.00200
Bis(2-chloroethyl)ether	U		0.000168	0.00200
Bis(2-Ethylhexyl)phthalate	U		0.00180	0.00200
Chrysene	U		0.000257	0.00200
Di-n-butyl phthalate	U		0.00160	0.00200
Hexachloro-1,3-butadiene	U		0.000217	0.00200
Hexachlorobenzene	U		0.000307	0.00200
Hexachlorocyclopentadiene	U		0.000299	0.00200
Hexachloroethane	U		0.000247	0.00200
n-Nitrosodi-n-butylamine	U		0.00110	0.00200
n-Nitrosodiethylamine	U		0.000696	0.00200
Nitrobenzene	U		0.000314	0.00200
Nonylphenol	U		0.000168	0.00200
Pentachlorobenzene	U		0.000247	0.00200
Pentachlorophenol	U		0.000283	0.00200
Phenanthrene	U		0.000200	0.00200
Phenol	U		0.000500	0.00200
Pyridine	U		0.00174	0.00400
Total Cresols	U		0.00153	0.00800
(S) 2,4,6-Tribromophenol	*54.0*			*29.0-132*
(S) 2-Fluorobiphenyl	*68.0*			*26.0-102*
(S) 2-Fluorophenol	*59.0*			*10.0-66.0*
(S) Nitrobenzene-d5	*70.0*			*15.0-106*
(S) p-Terphenyl-d14	*80.0*			*10.0-120*

QUALITY CONTROL SUMMARY

L1756836-01

Method Blank (MB)

(MB) R4096164-1 07/19/24 12:54

Analyte	MB Result mg/l	MB Qualifier	MB MDL mg/l	MB RDL mg/l
(S) Phenol-d6	*50.5*			*10.0-54.0*

Laboratory Control Sample (LCS)

(LCS) R4096164-2 07/19/24 13:23

Analyte	Spike Amount mg/l	LCS Result mg/l	LCS Rec. %	Rec. Limits %	LCS Qualifier
1,2,4,5-Tetrachlorobenzene	0.200	0.137	68.5	31.0-120	
2,4,6-Trichlorophenol	0.200	0.173	86.5	37.0-144	
2,4-Dichlorophenol	0.200	0.166	83.0	39.0-135	
2,4-Dimethylphenol	0.200	0.169	84.5	32.0-120	
2,4-Dinitrophenol	0.200	0.121	60.5	1.00-191	
2-Chlorophenol	0.200	0.168	84.0	23.0-134	
2-Methylphenol	0.200	0.174	87.0	26.0-120	
2-Nitrophenol	0.200	0.158	79.0	29.0-182	
3&4-Methyl Phenol	0.200	0.164	82.0	27.0-120	
3,3-Dichlorobenzidine	0.400	0.397	99.3	1.00-262	
4,6-Dinitro-2-methylphenol	0.200	0.159	79.5	1.00-181	
4-Chloro-3-methylphenol	0.200	0.174	87.0	22.0-147	
4-Nitrophenol	0.200	0.121	60.5	1.00-132	
Anthracene	0.200	0.179	89.5	27.0-133	
Benzidine	0.400	0.175	43.8	1.00-120	
Benzo(a)anthracene	0.200	0.184	92.0	33.0-143	
Benzo(a)pyrene	0.200	0.198	99.0	17.0-163	
Bis(2-chloroethyl)ether	0.200	0.162	81.0	33.0-185	
Bis(2-Ethylhexyl)phthalate	0.200	0.207	104	8.00-158	
Chrysene	0.200	0.173	86.5	17.0-168	
Di-n-butyl phthalate	0.200	0.196	98.0	1.00-120	
Hexachloro-1,3-butadiene	0.200	0.130	65.0	24.0-120	
Hexachlorobenzene	0.200	0.145	72.5	1.00-152	
Hexachlorocyclopentadiene	0.200	0.106	53.0	10.0-120	
Hexachloroethane	0.200	0.138	69.0	40.0-120	
n-Nitrosodi-n-butylamine	0.200	0.172	86.0	39.0-127	
n-Nitrosodiethylamine	0.200	0.167	83.5	10.0-142	
Nitrobenzene	0.200	0.166	83.0	35.0-180	
Nonylphenol	0.200	0.184	92.0	57.0-136	
Pentachlorobenzene	0.200	0.144	72.0	10.0-151	
Pentachlorophenol	0.200	0.158	79.0	14.0-176	
Phenanthrene	0.200	0.166	83.0	54.0-120	

Laboratory Control Sample (LCS)

(LCS) R4096164-2 07/19/24 13:23

Analyte	Spike Amount mg/l	LCS Result mg/l	LCS Rec. %	Rec. Limits %	LCS Qualifier
Phenol	0.200	0.125	62.5	5.00-120	
Pyridine	0.200	0.0435	21.7	10.0-120	
Total Cresols	0.400	0.338	84.5	36.0-110	
(S) 2,4,6-Tribromophenol			*71.0*	*29.0-132*	
(S) 2-Fluorobiphenyl			*80.5*	*26.0-102*	
(S) 2-Fluorophenol			*70.5*	*10.0-66.0*	J1
(S) Nitrobenzene-d5			*79.5*	*15.0-106*	
(S) p-Terphenyl-d14			*88.5*	*10.0-120*	
(S) Phenol-d6			*68.0*	*10.0-54.0*	J1

GLOSSARY OF TERMS

Guide to Reading and Understanding Your Laboratory Report

The information below is designed to better explain the various terms used in your report of analytical results from the Laboratory. This is not intended as a comprehensive explanation, and if you have additional questions please contact your project representative.

Results Disclaimer - Information that may be provided by the customer, and contained within this report, include Permit Limits, Project Name, Sample ID, Sample Matrix, Sample Preservation, Field Blanks, Field Spikes, Field Duplicates, On-Site Data, Sampling Collection Dates/Times, and Sampling Location. Results relate to the accuracy of this information provided, and as the samples are received.

Abbreviations and Definitions

MDL	Method Detection Limit.
ND	Not detected at the Reporting Limit (or MDL where applicable).
RDL	Reported Detection Limit.
Rec.	Recovery.
RPD	Relative Percent Difference.
SDG	Sample Delivery Group.
(S)	Surrogate (Surrogate Standard) - Analytes added to every blank, sample, Laboratory Control Sample/Duplicate and Matrix Spike/Duplicate; used to evaluate analytical efficiency by measuring recovery. Surrogates are not expected to be detected in all environmental media.
U	Not detected at the Reporting Limit (or MDL where applicable).
Analyte	The name of the particular compound or analysis performed. Some Analyses and Methods will have multiple analytes reported.
Dilution	If the sample matrix contains an interfering material, the sample preparation volume or weight values differ from the standard, or if concentrations of analytes in the sample are higher than the highest limit of concentration that the laboratory can accurately report, the sample may be diluted for analysis. If a value different than 1 is used in this field, the result reported has already been corrected for this factor.
Limits	These are the target % recovery ranges or % difference value that the laboratory has historically determined as normal for the method and analyte being reported. Successful QC Sample analysis will target all analytes recovered or duplicated within these ranges.
Original Sample	The non-spiked sample in the prep batch used to determine the Relative Percent Difference (RPD) from a quality control sample. The Original Sample may not be included within the reported SDG.
Qualifier	This column provides a letter and/or number designation that corresponds to additional information concerning the result reported. If a Qualifier is present, a definition per Qualifier is provided within the Glossary and Definitions page and potentially a discussion of possible implications of the Qualifier in the Case Narrative if applicable.
Result	The actual analytical final result (corrected for any sample specific characteristics) reported for your sample. If there was no measurable result returned for a specific analyte, the result in this column may state "ND" (Not Detected) or "BDL" (Below Detectable Levels). The information in the results column should always be accompanied by either an MDL (Method Detection Limit) or RDL (Reporting Detection Limit) that defines the lowest value that the laboratory could detect or report for this analyte.
Uncertainty (Radiochemistry)	Confidence level of 2 sigma.
Case Narrative (Cn)	A brief discussion about the included sample results, including a discussion of any non-conformances to protocol observed either at sample receipt by the laboratory from the field or during the analytical process. If present, there will be a section in the Case Narrative to discuss the meaning of any data qualifiers used in the report.
Quality Control Summary (Qc)	This section of the report includes the results of the laboratory quality control analyses required by procedure or analytical methods to assist in evaluating the validity of the results reported for your samples. These analyses are not being performed on your samples typically, but on laboratory generated material.
Sample Chain of Custody (Sc)	This is the document created in the field when your samples were initially collected. This is used to verify the time and date of collection, the person collecting the samples, and the analyses that the laboratory is requested to perform. This chain of custody also documents all persons (excluding commercial shippers) that have had control or possession of the samples from the time of collection until delivery to the laboratory for analysis.
Sample Results (Sr)	This section of your report will provide the results of all testing performed on your samples. These results are provided by sample ID and are separated by the analyses performed on each sample. The header line of each analysis section for each sample will provide the name and method number for the analysis reported.
Sample Summary (Ss)	This section of the Analytical Report defines the specific analyses performed for each sample ID, including the dates and times of preparation and/or analysis.

Qualifier	Description
B	The same analyte is found in the associated blank.
E	The analyte concentration exceeds the upper limit of the calibration range of the instrument established by the initial calibration (ICAL).
J	The identification of the analyte is acceptable; the reported value is an estimate.
J1	Surrogate recovery limits have been exceeded; values are outside upper control limits.
J3	The associated batch QC was outside the established quality control range for precision.
J5	The sample matrix interfered with the ability to make any accurate determination; spike value is high.
J6	The sample matrix interfered with the ability to make any accurate determination; spike value is low.
P	RPD between the primary and confirmatory analysis exceeded 40%.
T8	Sample(s) received past/too close to holding time expiration.
V	The sample concentration is too high to evaluate accurate spike recoveries.

ACCREDITATIONS & LOCATIONS

Pace Analytical National 12065 Lebanon Rd Mount Juliet, TN 37122

Alabama	40660	Nebraska	NE-OS-15-05
Alaska	17-026	Nevada	TN000032021-1
Arizona	AZ0612	New Hampshire	2975
Arkansas	88-0469	New Jersey–NELAP	TN002
California	2932	New Mexico [1]	TN00003
Colorado	TN00003	New York	11742
Connecticut	PH-0197	North Carolina	Env375
Florida	E87487	North Carolina [1]	DW21704
Georgia	NELAP	North Carolina [3]	41
Georgia [1]	923	North Dakota	R-140
Idaho	TN00003	Ohio–VAP	CL0069
Illinois	200008	Oklahoma	9915
Indiana	C-TN-01	Oregon	TN200002
Iowa	364	Pennsylvania	68-02979
Kansas	E-10277	Rhode Island	LA000356
Kentucky [1 6]	KY90010	South Carolina	84004002
Kentucky [2]	16	South Dakota	n/a
Louisiana	AI30792	Tennessee [1 4]	2006
Louisiana	LA018	Texas	T104704245-20-18
Maine	TN00003	Texas [5]	LAB0152
Maryland	324	Utah	TN000032021-11
Massachusetts	M-TN003	Vermont	VT2006
Michigan	9958	Virginia	110033
Minnesota	047-999-395	Washington	C847
Mississippi	TN00003	West Virginia	233
Missouri	340	Wisconsin	998093910
Montana	CERT0086	Wyoming	A2LA
A2LA – ISO 17025	1461.01	AIHA-LAP,LLC EMLAP	100789
A2LA – ISO 17025 [5]	1461.02	DOD	1461.01
Canada	1461.01	USDA	P330-15-00234
EPA–Crypto	TN00003		

Pace Analytical Services, LLC -Dallas 400 W. Bethany Drive Suite 190 Allen, TX 75013

Arkansas	88-0647	Kansas	E10388
Florida	E871118	Texas	T104704232-23-39
Iowa	408	Oklahoma	8727
Louisiana	30686		

[1] Drinking Water [2] Underground Storage Tanks [3] Aquatic Toxicity [4] Chemical/Microbiological [5] Mold [6] Wastewater n/a Accreditation not applicable

* Not all certifications held by the laboratory are applicable to the results reported in the attached report.

* Accreditation is only applicable to the test methods specified on each scope of accreditation held by Pace Analytical.

Company Name/Address:
Garland Power & Light

13835 County Rd 489
Nevada, TX 75173

Billing Information:
Michael Burr
13835 County Rd 489
Nevada, TX 75173

Pres Chk

Report to:
Jeff McClain

Email To: **mburr@gpltexas.org;jmcclain@gpltexas.org;gplenviron@gpltexas.org**

Project Description:
TPDES

City/State Collected:

Please Circle: PT MT CT ET

Phone: **972-485-6458**

Client Project #

Lab Project #
DSGARLWNTX-RENEWAL

Collected by (print):

Site/Facility ID #

P.O. #

Collected by (signature):

Immediately Packed on Ice N ____ Y ____

Rush? (Lab MUST Be Notified)
____ Same Day ____ Five Day
____ Next Day ____ 5 Day (Rad Only)
____ Two Day ____ 10 Day (Rad Only)
____ Three Day

Quote #

Date Results Needed

No. of Cntrs

Analysis / Container / Preservative

Sample ID	Comp/Grab	Matrix *	Depth	Date	Time	No. of Cntrs	608.3PCBONLY 100ml Amb NoPres	ALL625.1RV 100ml Amb NoPres	ALLCN 250mlHDPE-NaOH	ALLOGHEX 1L-Amb-Add HCl	ALLPHOS 500mlHDPE-Add H2SO4	ALLSULFIDE 500mlHDPE-NaOH+ZnAc	ALLTIICP 250mlHDPE HNO3	ALLTOC 250mlAmb-H2SO4	ALLTSS 1L-HDPE-NoPres	ALLV624.1NP 40mlClr-NoPres	Remarks	Sample # (lab only)
OUTFALL 001	G	WW		7/16/24	0518	24	X	X	X	X	X	X	X	X	X	X		01

Chain of Custody Page 6 of 8

Pace Analytical®
190 Allen, TX 75013

Submitting a sample via this chain of custody constitutes acknowledgment and acceptance of the Pace Terms and Conditions found at: https://info.pacelabs.com/hubfs/pas-standard-terms.pdf

SDG # L1756836

Table #

Acctnum: **DSGARLWNTX**

Template: **T256244**

Prelogin: **P1088417**

PM: **3565 - Dorothy P Roberts**

PB:

Shipped Via: **FedEx Priority**

* Matrix:
SS - Soil **AIR** - Air **F** - Filter
GW - Groundwater **B** - Bioassay
WW - WasteWater
DW - Drinking Water
OT - Other_____

Remarks: TABLES 1,2,3,6,8,9

pH _____ Temp _____

Flow _____ Other _____

Samples returned via:
__ UPS __ FedEx __ Courier _____

Tracking #

Sample Receipt Checklist

COC Seal Present/Intact:	__NP __Y __N
COC Signed/Accurate:	__Y __N
Bottles arrive intact:	__Y __N
Correct bottles used:	__Y __N
Sufficient volume sent:	__Y __N
If Applicable	
VOA Zero Headspace:	__Y __N
Preservation Correct/Checked:	__Y __N
RAD Screen <0.5 mR/hr:	__Y __N

Relinquished by : (Signature)	Date:	Time:	Received by: (Signature)	Trip Blank Received: Yes / No HCL / MeoH TBR
[signature]	7/16/24	0942	[signature] PACE	
Relinquished by : (Signature)	Date:	Time:	Received by: (Signature)	Temp: °C Bottles Received:
[signature] Alyssen Ramos	PACE 7/16/24	1700	FedEx	7/16/24 1700
Relinquished by : (Signature)	Date:	Time:	Received for lab by: (Signature)	Date: Time:
FedEx			[signature]	07-17-24 0900

If preservation required by Login: Date/Time

Hold: 5.5+0.3=5.8

Condition: NCF / OK

Company Name/Address:
Garland Power & Light

13835 County Rd 489
Nevada, TX 75173

Billing Information:
Michael Burr
13835 County Rd 489
Nevada, TX 75173

Pres Chk

Report to: **Jeff McClain**

Email To: mburr@gpltexas.org;jmcclain@gpltexas.org;gplenviron@gpltexas.org

Project Description: **TPDES**

City/State Collected:

Please Circle: PT MT CT ET

Phone: **972-485-6458**

Client Project #

Lab Project #: **DSGARLWNTX-RENEWAL**

Collected by (print):

Site/Facility ID #

P.O. #

Collected by (signature):

Immediately Packed on Ice N ____ Y ____

Rush? (Lab MUST Be Notified)
___ Same Day ___ Five Day
___ Next Day ___ 5 Day (Rad Only)
___ Two Day ___ 10 Day (Rad Only)
___ Three Day

Quote #

Date Results Needed

No. of Cntrs

Analysis / Container / Preservative

Sample ID	Comp/Grab	Matrix *	Depth	Date	Time	No. of Cntrs	BOD CBOD MBAS TDS 1L-HDPE NoPres	BOD CBOD MBAS TDS 1L-HDPE-NoPres	Metals site spec 250mlHDPE HNO3	PAN CHLORR 250mlHDPE-NoPres	PAN SULFITE 250mlHDPE-NoPres	PAN-SULFITE,CHLORR 250mlHDPE NoPres	WetChem COD NH3 N/N 250mlHDPE-H2SO4	WetChem anions, ALK 125mlHDPE-NoPres	WetChem,color CR6,DO 500mlHDPE-NoPres		Remarks	Sample # (lab only)
OUTFALL 001	G	WW		7/16/24	0818	24	X	X	X	X	X	X	X	X	X			01

Chain of Custody Page 1 of 1

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[redacted]
190 Allen, TX 75013

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SDG # L1756836

Table #

Acctnum: **DSGARLWNTX**

Template: **T256244**

Prelogin: **P1088417**

PM: **3565 - Dorothy P Roberts**

PB:

Shipped Via: **FedEx Priority**

* Matrix:
SS - Soil **AIR** - Air **F** - Filter
GW - Groundwater **B** - Bioassay
WW - WasteWater
DW - Drinking Water
OT - Other_____

Remarks:

pH _____ Temp _____

Flow _____ Other _____

Samples returned via:
__ UPS __ FedEx __ Courier _____

Tracking #

Sample Receipt Checklist

COC Seal Present/Intact:	__NP	__Y __N
COC Signed/Accurate:		__Y __N
Bottles arrive intact:		__Y __N
Correct bottles used:		__Y __N
Sufficient volume sent:		__Y __N
If Applicable		
VOA Zero Headspace:		__Y __N
Preservation Correct/Checked:		__Y __N
RAD Screen <0.5 mR/hr:		__Y __N

Relinquished by : (Signature)	Date: 7/16/24	Time: 0942	Received by: (Signature) PACE	Trip Blank Received: Yes / No HCL / MeoH TBR	
Relinquished by : (Signature) Aysen Ramos	Date: 7/16/24	Time: 1700	Received by: (Signature) FedEx	Temp: °C Bottles Received: 7/16/24 1700	If preservation required by Login: Date/Time
Relinquished by : (Signature) FedEx	Date:	Time:	Received for lab by: (Signature)	Date: 07-17-24 Time: 0900 5.5-0.5=5.0	Condition: NCF / OK

175e834

Pace ANALYTICAL SERVICES	DC#_Title: ENV-FRM-ALLE-0017 v15_Sample Condition Upon Receipt
	Effective Date: 12/18/2023

Sample Condition Upon Receipt

☐Dallas ☐Ft Worth ☐Corpus Christi ☐Austin

Client Name: Garland Power & Light Project Work order (place label):

Courier: FedEX ☐ UPS ☐ USPS ☐ Client ☑ LSO ☐ PACE ☐ Other: _____

Tracking #: _____

Custody Seal on Cooler/Box: Yes ☐ No ☑

Received on ice: Wet ☑ Blue ☐ No ice ☐

Receiving Lab 1 Thermometer Used: IR19 **Cooler Temp °C**: 3.3 (Recorded) +0.1 (Correction Factor) 3.4 (Actual)

Receiving Lab 2 Thermometer Used: _____ **Cooler Temp °C**: _____ (Recorded) _____ (Correction Factor) _____ (Actual)

Chain of Custody relinquished	Yes ☑ No ☐
Sampler name & signature on COC	Yes ☐ No ☑
Short HT analyses (<72 hrs)	Yes ☑ No ☐

Temperature should be above freezing to 6°C unless collected same day as receipt in which evidence of cooling is acceptable.

Triage Person: AG Date: 7/16/24

Sufficient Volume received	Yes ☑ No ☐
Correct Container used	Yes ☑ No ☐
Container Intact	Yes ☑ No ☐
Sample pH Acceptable pH Strips: 64022007	Yes ☑ No ☐ NA ☐
Residual Chlorine Present Cl Strips: 148210	Yes ☐ No ☑ NA ☐
Sulfide Present Lead Acetate Strips: 14842	Yes ☐ No ☑ NA ☐
Are soil samples (volatiles, TPH) received in 5035A Kits (not applicable to TCLP VOA or PST Program TPH)	Yes ☐ No ☐ NA ☑
Unpreserved 5035A soil frozen within 48 hrs	Yes ☐ No ☐ NA ☑
Headspace in VOA (>6mm)	Yes ☐ No ☑ NA ☐
Project sampled in USDA Regulated Area outside of Texas State Sampled: _____	Yes ☐ No ☐ NA ☑
Non-Conformance(s):	Yes ☐ No ☑

Login Person: JC Date: 7/16

Labeling Person (if different than log-in): _____ Date: _____

Company Name/Address:
Garland Power & Light

13835 County Rd 489
Nevada, TX 75173

Billing Information:
Michael Burr
13835 County Rd 489
Nevada, TX 75173

Pres Chk

Report to:
Jeff McClain

Email To: **mburr@gpltexas.org;jmcclain@gpltexas.org ;gplenviron@gpltexas.org**

Project Description:
TPDES

City/State Collected:

Please Circle: PT MT CT ET

Phone: **972-485-6458**

Client Project #

Lab Project #
DSGARLWNTX-RENEWAL

Collected by (print):
JEFFREY McCLAIN

Site/Facility ID #

P.O. #

Collected by (signature):

Immediately Packed on Ice N ____ Y ____

Rush? (Lab MUST Be Notified)
____ Same Day ____ Five Day
____ Next Day ____ 5 Day (Rad Only)
____ Two Day ____ 10 Day (Rad Only)
____ Three Day

Quote #

Date Results Needed

No. of Cntrs

Analysis / Container / Preservative

Sample ID	Comp/Grab	Matrix *	Depth	Date	Time	No. of Cntrs	608.3PCBONLY 100ml Amb NoPres	ALL625.1RV 100ml Amb NoPres	ALLCN 250mlHDPE-NaOH	ALLCNAM 250mlHDPE-NaOH	ALLOGHEX 1L-Amb-Add HCl	ALLPH 125mlHDPE-NoPres	ALLPHOS 500mlHDPE-Add H2SO4	ALLSULFIDE 500mlHDPE-NaOH+ZnAc	ALLTIICP 250mlHDPE HNO3	ALLTKN 250mlHDPE-H2SO4	Remarks	Sample # (lab only)
OUTFALL 001	G	WW		7/24/24	1358	27	X	X	X	X	X	X	X	X	X	X		01

Chain of Custody Page 1 of 3

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190 Allen, TX 75013

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SDG # L1726920

Table #

Acctnum: **DSGARLWNTX**

Template: **T256244**

Prelogin: **P1090746**

PM: **3565 - Dorothy P Roberts**

PB:

Shipped Via: **FedEX Priority**

* Matrix:
SS - Soil **AIR** - Air **F** - Filter
GW - Groundwater **B** - Bioassay
WW - WasteWater
DW - Drinking Water
OT - Other_____

Remarks:

pH _____ Temp _____

Flow _____ Other _____

Samples returned via:
__ UPS __ FedEx __ Courier _____

Tracking #

Sample Receipt Checklist

COC Seal Present/Intact:	__NP	__Y __N
COC Signed/Accurate:		__Y __N
Bottles arrive intact:		__Y __N
Correct bottles used:		__Y __N
Sufficient volume sent:		__Y __N
If Applicable		
VOA Zero Headspace:		__Y __N
Preservation Correct/Checked:		__Y __N
RAD Screen <0.5 mR/hr:		__Y __N

Relinquished by : (Signature)	Date:	Time:	Received by: (Signature)	Trip Blank Received: Yes / No HCL / MeoH TBR
	7/26/24	1540	PACE ATX	
Relinquished by : (Signature)	Date:	Time:	Received by: (Signature)	Temp: °C Bottles Received:
				If preservation required by Login: Date/Time
Relinquished by : (Signature)	Date:	Time:	Received for lab by: (Signature)	Date: Time:
				Hold: Condition: NCF / OK

Company Name/Address:
Garland Power & Light

13835 County Rd 489
Nevada, TX 75173

Billing Information:
Michael Burr
13835 County Rd 489
Nevada, TX 75173

Pres Chk

Report to:
Jeff McClain

Email To: **mburr@gpltexas.org;jmcclain@gpltexas.org ;gplenviron@gpltexas.org**

Project Description:
TPDES

City/State Collected:

Please Circle: PT MT CT ET

Phone: **972-485-6458**

Client Project #

Lab Project #
DSGARLWNTX-RENEWAL

Collected by (print):

Site/Facility ID #

P.O. #

Collected by (signature):

Immediately Packed on Ice N____ Y____

Rush? (Lab MUST Be Notified)
____ Same Day ____ Five Day
____ Next Day ____ 5 Day (Rad Only)
____ Two Day ____ 10 Day (Rad Only)
____ Three Day

Quote #

Date Results Needed

Sample ID	Comp/Grab	Matrix *	Depth	Date	Time	No. of Cntrs	Analysis / Container / Preservative											
							ALLTOC 250mlAmb-H2SO4	ALLTSS 1L-HDPE-NoPres	ALLV624.1NP 40mlClr-NoPres	BOD CBOD MBAS TDS 1L-HDPE NoPres	BOD CBOD MBAS TDS 1L-HDPE-NoPres	Metals site spec 250mlHDPE HNO3	PAN CHLORR 250mlHDPE-NoPres	PAN SULFITE 250mlHDPE-NoPres	PAN-SULFITE,CHLORR 250mlHDPE NoPres	WetChem COD NH3 N/N 250mlHDPE-H2SO4	Remarks	Sample # (lab only)
OUTFALL 001		**WW**				**27**	X	X	X	X	X	X	X	X	X	X		01

Chain of Custody Page 2 of 3

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SDG # L1760920

Table #

Acctnum: **DSGARLWNTX**

Template: **T256244**

Prelogin: **P1090746**

PM: **3565 - Dorothy P Roberts**

PB:

Shipped Via: **FedEX Priority**

* Matrix:
SS - Soil **AIR** - Air **F** - Filter
GW - Groundwater **B** - Bioassay
WW - WasteWater
DW - Drinking Water
OT - Other_____

Remarks:

pH _____ Temp _____

Flow _____ Other _____

Samples returned via:
__ UPS __ FedEx __ Courier _____

Tracking #

Sample Receipt Checklist

COC Seal Present/Intact:	__NP __Y __N
COC Signed/Accurate:	__Y __N
Bottles arrive intact:	__Y __N
Correct bottles used:	__Y __N
Sufficient volume sent:	__Y __N
If Applicable	
VOA Zero Headspace:	__Y __N
Preservation Correct/Checked:	__Y __N
RAD Screen <0.5 mR/hr:	__Y __N

Relinquished by : (Signature)	Date:	Time:	Received by: (Signature)	Trip Blank Received: Yes / No HCL / MeoH TBR	
	7/22/21	1540	PACEATX		
Relinquished by : (Signature)	Date:	Time:	Received by: (Signature)	Temp: °C Bottles Received:	If preservation required by Login: Date/Time
Relinquished by : (Signature)	Date:	Time:	Received for lab by: (Signature)	Date: Time:	Hold: Condition: NCF / OK

Company Name/Address:
Garland Power & Light

13835 County Rd 489
Nevada, TX 75173

Billing Information:
Michael Burr
13835 County Rd 489
Nevada, TX 75173

Pres Chk

Report to:
Jeff McClain

Email To: **mburr@gpltexas.org;jmcclain@gpltexas.org ;gplenviron@gpltexas.org**

Project Description:
TPDES

City/State Collected:

Please Circle: PT MT CT ET

Phone: **972-485-6458**

Client Project #

Lab Project #
DSGARLWNTX-RENEWAL

Collected by (print):

Site/Facility ID #

P.O. #

Collected by (signature):

Immediately
Packed on Ice N____ Y____

Rush? (Lab MUST Be Notified)
____ Same Day ____ Five Day
____ Next Day ____ 5 Day (Rad Only)
____ Two Day ____ 10 Day (Rad Only)
____ Three Day

Quote #

Date Results Needed

Sample ID	Comp/Grab	Matrix *	Depth	Date	Time	No. of Cntrs	WetChem anions, ALK 125mlHDPE-NoPres	WetChem,color CR6,DO 500mlHDPE-NoPres	Remarks	Sample # (lab only)
OUTFALL 001		WW				27	X	X		01

Analysis / Container / Preservative

Chain of Custody Page 3 of 3

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SDG # L1760920

Table #

Acctnum: **DSGARLWNTX**
Template: **T256244**
Prelogin: **P1090746**
PM: **3565 - Dorothy P Roberts**
PB:

Shipped Via: **FedEX Priority**

* Matrix:
SS - Soil **AIR** - Air **F** - Filter
GW - Groundwater **B** - Bioassay
WW - WasteWater
DW - Drinking Water
OT - Other_____

Remarks:

pH _____ Temp _____
Flow _____ Other _____

Samples returned via:
__ UPS __ FedEx __ Courier _____

Tracking #

Sample Receipt Checklist
COC Seal Present/Intact: __NP __Y __N
COC Signed/Accurate: __Y __N
Bottles arrive intact: __Y __N
Correct bottles used: __Y __N
Sufficient volume sent: __Y __N
If Applicable
VOA Zero Headspace: __Y __N
Preservation Correct/Checked: __Y __N
RAD Screen <0.5 mR/hr: __Y __N

Relinquished by : (Signature)	Date:	Time:	Received by: (Signature)	Trip Blank Received: Yes / No HCL / MeoH TBR	
	7/20/21	1540	PACEATX		
Relinquished by : (Signature)	Date:	Time:	Received by: (Signature)	Temp: °C Bottles Received:	If preservation required by Login: Date/Time
Relinquished by : (Signature)	Date:	Time:	Received for lab by: (Signature)	Date: Time:	Hold: / Condition: NCF / OK

Pace ANALYTICAL SERVICES	DC#_Title: ENV-FRM-ALLE-0017 v15_Sample Condition Upon Receipt
	Effective Date: 12/18/2023

Sample Condition Upon Receipt

☐Dallas ☐Ft Worth ☐Corpus Christi ☐Austin

Client Name: Garland Power & Light Project Work order (place label):

Courier: FedEX ☐ UPS ☐ USPS ☐ Client ☑ LSO ☐ PACE ☐ Other: _____

Tracking #: _____

Custody Seal on Cooler/Box: Yes ☐ No ☑

Received on ice: Wet ☑ Blue ☐ No ice ☐

Receiving Lab 1 Thermometer Used: IR19 **Cooler Temp °C:** 4.4 (Recorded) +0.1 (Correction Factor) 4.5 (Actual)

Receiving Lab 2 Thermometer Used: _____ **Cooler Temp °C:** _____(Recorded) _____(Correction Factor) _____(Actual)

Chain of Custody relinquished	Yes ☑ No ☐
Sampler name & signature on COC	Yes ☑ No ☐
Short HT analyses (<72 hrs)	Yes ☑ No ☐

Temperature should be above freezing to 6°C unless collected same day as receipt in which evidence of cooling is acceptable.

Triage Person: AG Date: 7/26/24

Sufficient Volume received	Yes ☑ No ☐
Correct Container used	Yes ☑ No ☐
Container Intact	Yes ☑ No ☐
Sample pH Acceptable pH Strips: 6402007	Yes ☑ No ☐ NA ☐
Residual Chlorine Present Cl Strips: 148860	Yes ☐ No ☑ NA ☐
Sulfide Present Lead Acetate Strips: 14862	Yes ☐ No ☑ NA ☐
Are soil samples (volatiles, TPH) received in 5035A Kits (not applicable to TCLP VOA or PST Program TPH)	Yes ☐ No ☐ NA ☑
Unpreserved 5035A soil frozen within 48 hrs	Yes ☐ No ☐ NA ☑
Headspace in VOA (>6mm)	Yes ☐ No ☑ NA ☐
Project sampled in USDA Regulated Area outside of Texas State Sampled: _____	Yes ☐ No ☐ NA ☑
Non-Conformance(s):	Yes ☐ No ☑

Login Person: JC Date: 7/26

Labeling Person (if different than log-in): _____ Date: _____

ATTACHMENT TR-5

Cooling Water System Data

Worksheet 11.0
Cooling Water Intake Information
Section 1.b. Cooling Water System Data

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

A description of ROPP and the cooling-water system of the facility is provided in the facility PIC (GP&L, 2006). ROPP is a 420-megawatt peaking, gas-fired facility consisting of four generating units. The power plant is located on the southeast shore of Lake Lavon in Collin County (Figures 1 and 2). Units 1, 2, and 3 use Lake Lavon water for once-through condenser cooling. Unit 4 is a gas turbine that uses an average of 0.0006 mgd of reservoir water for contact cooling; then it is discharged to evaporation ponds. Units 1, 2, and 3 each have two circulating-water (CW) pumps. The CW pumps for Unit 1 are each rated at 30,000 gallons per minute (gpm). The CW pumps for Unit 2 are each rated at 35,000 gpm. The CW pumps for Unit 3 are each rated at 54,000 gpm. Each CW pump is served by a single traveling-water screen (screen) with ⅜- inch square steel mesh. The facility's maximum design cooling-water withdrawal volume (flow) is 248,000 gpm (357 mgd). One screen wash pump per unit also withdraws small volumes of water from Lake Lavon.

Figure 3 shows the 5-year flow history for ROPP. In general, the facility withdraws more cooling water during summer, followed by winter and less water during fall and spring. In the 5-year flow history, the facility has not operated at design capacity. As shown in Figure 3, the facility withdraws less than the design capacity most of the time. The annual cooling water utilization capacity over the past 5 years was about 43% of the design capacity.

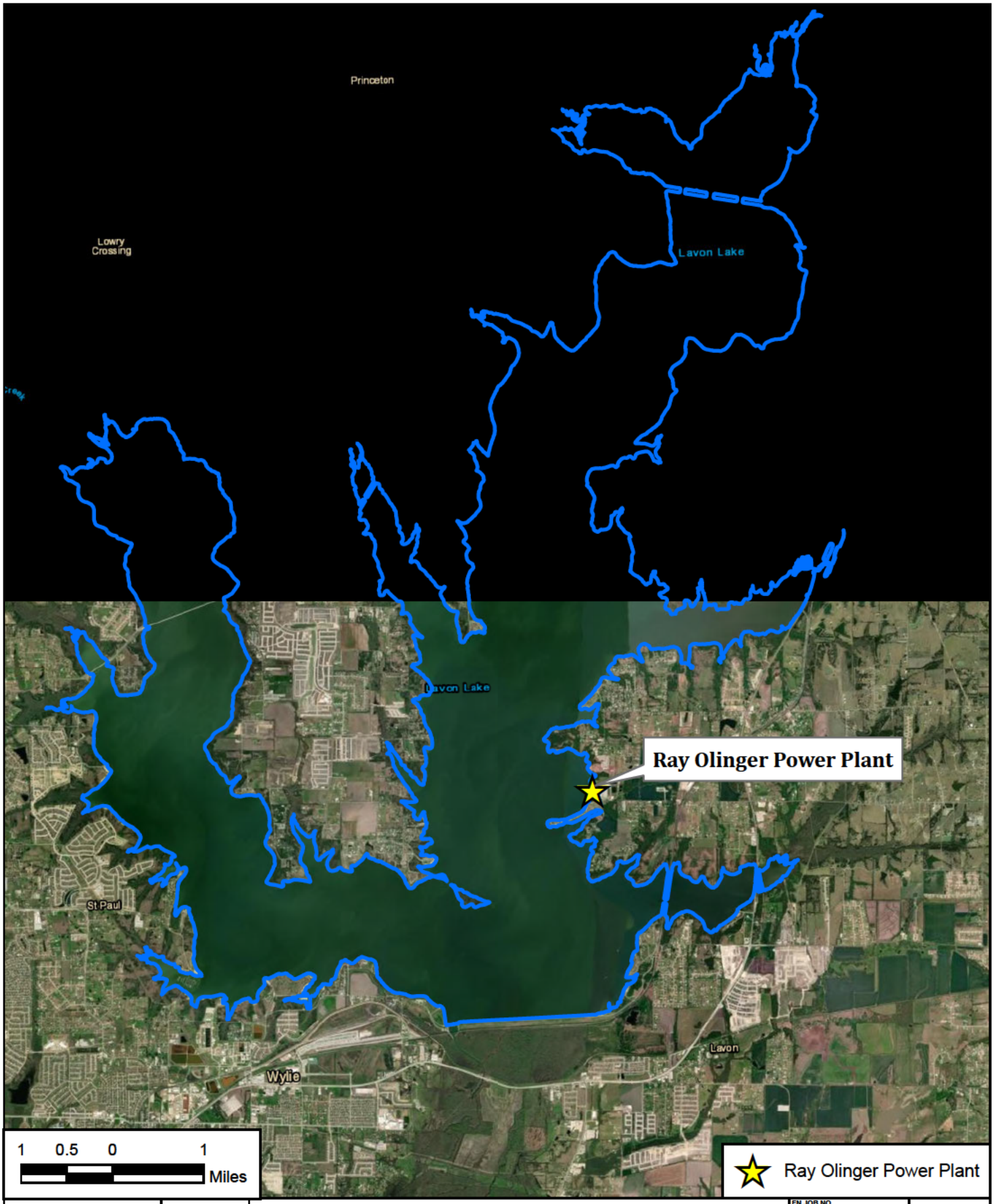
Normal operating reservoir pool elevation (reservoir elevation) is 492.0 feet (ft) mean sea level [msl]). The minimum operating reservoir elevation is 483.3 ft msl. The wetted screen depth at normal reservoir elevation is 32 ft. The CW pumps are either off, with zero flow, or operating at design flow. Screen velocities (velocity) vary among units due to the different CW pump capacities. In addition, velocity varies with varying wetted screen area, resulting in changes in reservoir elevation.

Cooling water is withdrawn from the rear of a 700-foot-long excavated intake canal. However, the distance to the main body of the reservoir is approximately 2,500 ft. The shallowest depth of the canal is approximately 25 ft.

Screens are usually washed once per 8-hour shift when the units are in operation. The length of time the screen wash operates varies depending on the differential pressure loss. On occasion, the screens may be washed several times during a single day. Screen-wash water from each unit is transported through a sluice, then to a debris sump and basket, and then returned to the reservoir near the CWIS. The cooling water system is described below in Table 1.

Table 1. ROPP CWIS Configuration.

	Unit 1	Unit 2	Unit 3	Facility
Number of circulating water pumps	2	2	2	
Circulating water pump capacity (mgd) per pump	43.2	50.4	77.8	
Number of service water pumps	1	1	1	
Service water pump capacity (mgd)	4.32	4.32	5.76	
Number of screens	2	2	2	
Screen type	Traveling	Traveling	Traveling	
Screen mesh size (inch)	0.38	0.38	0.38	
Through-screen velocity (fps)	0.84	0.98	1.51	
Design flow (mgd)				357
Percent reservoir volume pumped/day at design				0.2
Megawatt rating (Units 1-3)				420
24-month capacity utilization (June 2022 – June 2024)	0.0%	3.4%	3.9%	3.6%



FREESE AND NICHOLS
FREESE AND NICHOLS, INC
801 Cherry Street, Suite 2800
Fort Worth, TX 76102
Phone - (817) 735 - 7300

N W E S

City of Garland

Ray Olinger Power Plant

Lake Lavon

FN JOB NO	GPL24350
FILE NAME	GP&L TPDES Renewal.mxd
DATE	7/16/2024
SCALE	1:90,000
DESIGNED	CLV
DRAFTED	08245

5

FIGURE

Path: H:\ENVIRONMENTAL\Working\GP&L TPDES Renewal\GP&L TPDES Renewal.aprx

NAD 1983 StatePlane Texas South Central FIPS 4204 Feet

FREESE AND NICHOLS
FREESE AND NICHOLS, INC
801 Cherry Street, Suite 2800
Fort Worth, TX 76102
Phone - (817) 735 - 7300

N W E S

City of Garland

Ray Olinger Power Plant

Power Plant Facilities

FN JOB NO	GPL24350
FILE NAME	GP&L TPDES Renewal.mxd
DATE	7/16/2024
SCALE	1:7,372
DESIGNED	CLV
DRAFTED	08245

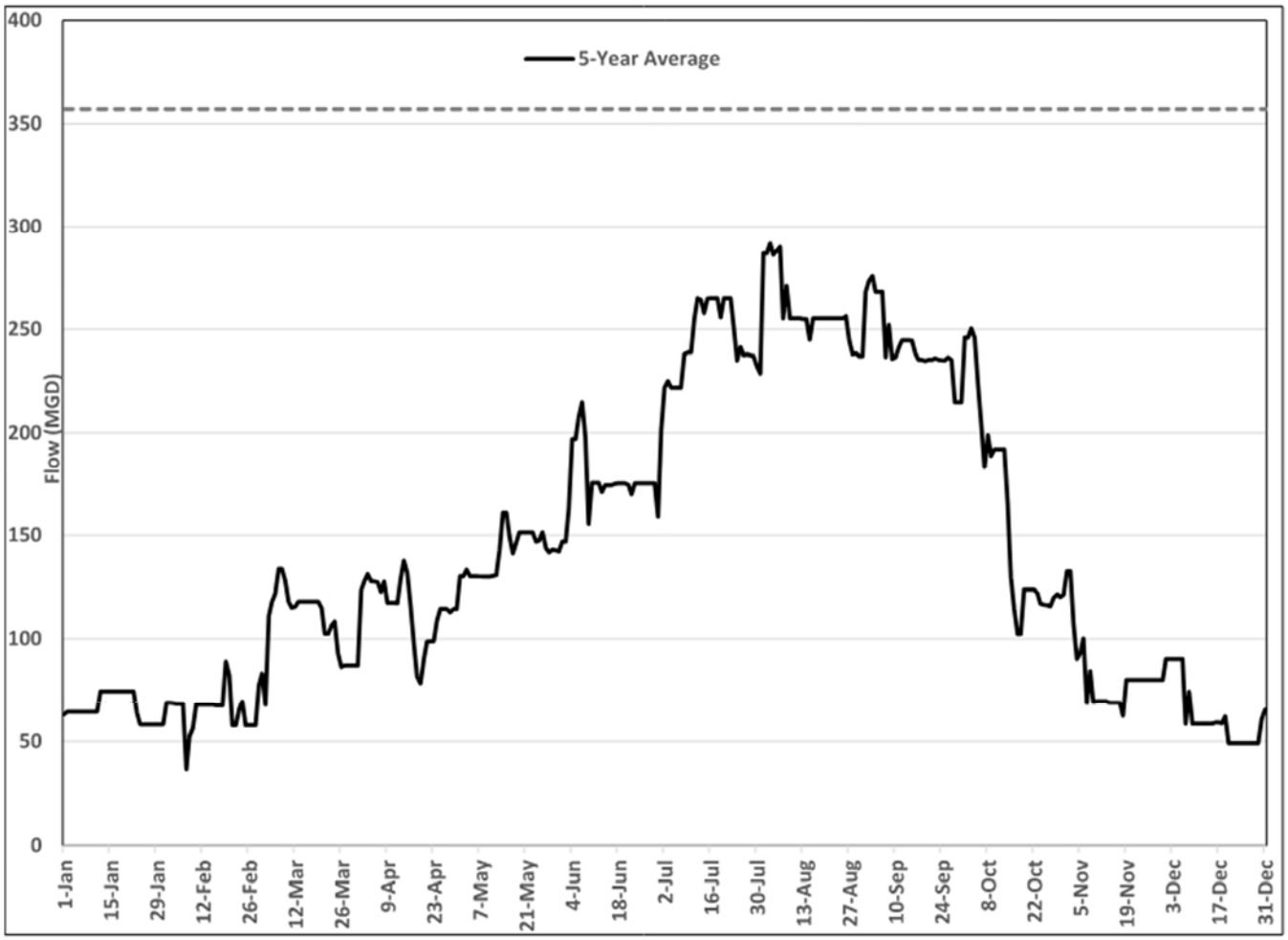
5

FIGURE

Path: H:\ENVIRONMENTAL\Working\GP&L TPDES Renewal\GP&L TPDES Renewal.aprx

NAD 1983 StatePlane Texas South Central FIPS 4204 Feet

Figure 3. 5-year Flow History for ROPP



Section 1.b. Cooling Water System Data

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.

Figures 1 and 2 provide aerial views of the CWIS and associated power plant facilities. The CWIS geographic location is at: 33° 03' 55.37" N, 96° 27' 11.30" W. The CWIS withdraws from the rear of an excavated channel that is approximately 34-feet deep at the CWIS. The floor of the CWIS is at 458.0 ft- msl. Normal pool elevation of Lake Lavon is 492.0 ft-msl. The traveling screens span from the floor of the CWIS to the top deck, allowing vertical integration of the water column. However, the CW pumps are vertical-shaft turbines with the impellers near the floor of the CWIS, and, therefore, a higher proportion of flow is generally from near the bottom.

3. A description of water reuse activities, if applicable.

ROPP utilizes once-through cooling water from Lake Lavon. While cooling water is circulated within the reservoir, there is no reuse, such as reclaimed effluent to offset the use of surface water.

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

DIF is the compilation of all circulating and service water pump capacities (assumed zero head differential). AIF is the average discharge monitoring reported flows for the past 3 years (June 2021 – June 2024). Intake flow use percentage is the proportion of the reported flow for each use to the AIF. The proportion of contact cooling was derived from a 3-year average that is presented in the water balance. There is no process use of water at ROPP.

Section 1.b. Cooling Water System Data

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

Table 4. Ray Olinger Power Plant actual intake flow, January 2023 – December 2023.

Day	January	February	March	April	May	June	July	August	September	October	November	December
1	6.48	57.6	54.721	213.12	213.12	216	268.56	268.56	268.56	268.56	113.04	7.2
2	7.2	57.6	56.041	213.12	213.12	216	268.56	268.56	268.56	268.56	113.04	7.2
3	7.2	57.6	57.6	222	222	188.64	279.75	279.75	279.75	279.75	49.98	7.5
4	7.2	57.6	137.52	213.12	213.12	213.12	268.56	268.56	268.56	268.56	7.2	7.2
5	7.2	57.6	134.64	213.12	213.12	213.12	268.56	268.56	268.56	264.27	7.2	7.2
6	7.2	57.6	154.8	213.12	213.12	213.12	268.56	268.56	268.56	242.82	7.2	7.2
7	7.2	57.6	213.12	213.12	213.12	213.12	268.56	268.56	268.56	268.56	7.2	7.2
8	7.2	57.6	213.12	213.12	213.12	167.76	268.56	268.56	268.44	268.56	7.29	7.2
9	7.2	57.6	135.36	213.12	213.12	61.14	268.56	268.56	266.52	268.56	8.28	7.2
10	7.2	57.6	57.6	213.48	213.12	110.88	268.56	268.56	268.56	268.56	9.36	7.2
11	7.2	57.6	42.9	213.12	214.32	110.88	268.56	268.56	268.56	268.56	9.36	7.2
12	57.6	57.6	45	213.12	216	110.88	268.56	268.56	268.56	268.56	9.36	7.2
13	57.6	57.6	57.6	213.12	216	110.88	264.24	268.56	268.56	268.56	9.27	7.2
14	57.6	57.6	57.6	213.12	216	110.88	232.92	268.56	268.56	190.8	7.2	7.2
15	57.6	57.6	57.6	213.12	216	110.88	268.56	268.56	268.56	113.04	7.2	7.2
16	57.6	54.721	57.6	213.12	216	110.88	268.56	268.56	268.56	113.04	7.2	7.2
17	57.6	54.721	57.6	213.12	216	110.88	268.56	268.56	268.56	113.04	7.2	7.2
18	57.6	54.721	57.6	213.12	243.3	110.88	268.56	268.56	268.56	113.04	7.2	7.2
19	57.6	54.721	57.6	213.12	266.4	110.88	268.56	268.56	267.48	113.04	7.2	7.2
20	57.6	54.721	57.6	213.12	266.4	110.88	268.56	268.56	268.56	113.04	7.2	7.2
21	57.6	54.721	57.6	213.12	266.4	108.96	268.56	268.56	268.56	113.04	7.2	7.2
22	57.6	54.721	57.6	213.12	266.4	97.44	268.56	268.56	268.56	113.04	7.2	7.2
23	57.6	54.721	57.6	213.12	266.4	110.88	268.56	268.56	268.56	113.04	7.2	7.2
24	57.6	54.721	57.6	213.12	266.4	110.88	268.56	268.56	268.56	113.04	7.2	7.2
25	57.6	54.721	57.6	213.12	266.4	110.88	268.56	268.56	268.56	113.04	7.2	7.2
26	57.6	54.721	55.98	213.12	266.4	110.88	268.56	268.56	268.56	113.04	7.2	7.2
27	57.6	54.721	57.6	213.12	266.4	110.88	268.56	268.56	268.56	111.6	7.2	7.2
28	57.6	54.721	57.6	213.12	266.4	110.88	268.56	268.56	268.56	107.521	7.2	7.2
29	57.6		57.6	213.12	266.4	110.88	268.56	268.56	268.56	111.12	7.2	7.2
30	57.6		57.6	213.12	266.4	110.88	268.56	268.56	268.56	108.001	7.2	7.2
31	57.6		57.6		266.4		268.56	268.56		110.641		7.2
AVG	**39.6929**	**56.26332**	**77.26458**	**213.428**	**237.3194**	**133.838**	**267.6319**	**268.921**	**268.825**	**179.6324**	**16.006**	**7.209677**

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.

There have been no technologies or operational measures recently employed to specifically reduce impingement mortality or entrainment at ROPP. From November 2006 through November 2007, biweekly impingement sampling was conducted at ROPP (Impingement Mortality Characterization Study, Ray Olinger Power Plant conducted by PBS&J, 2007). Over the course of that study, a total of 387 fish impinged, of which 88% were Threadfin (*Dorosoma petenense*) and Gizzard (*D. cepedianum*) shad, followed by Largemouth Bass (*Micropterus salmoides*) [5%], and Golden Shiner (*Notemigonus crysoleucas*) [3%]. The cooling water capacity factor (AIF/DIF x 100) was 43% during the study. Total impingement for the entire year was estimated at approximately 4,800, with the overwhelming majority of fish consisting of fragile (shad) [40 FCR 125.92(m)] or exotic (Golden Shiner) species.

The number of fish not considered fragile or exotic expected to be impinged at ROPP is exceptionally low (up to a few hundred annually) and the facility might qualify for the de minimis alternative (40 CFR 125.94[11]) to meet impingement mortality compliance standard. The low impingent rate results from the CWIS location and design. The U.S. Environmental Protection Agency's 2004 Final Regulations to Establish Requirements for Cooling Water Intake Structures at Phase II Existing Facilities Rule defines a "baseline" CWIS configuration as one that is oriented parallel to the shore and is absent impingement or entrainment control measures (otherwise, worst-case scenario). The CWIS at ROPP is located at the rear of a man-made, excavated canal that is 32-feet deep at normal reservoir pool elevation. The CWIS employs vertical-shaft turbine pumps that withdraw from near the floor of the CWIS (deep water), which is not the most biologically productive zone. In addition, screen velocities are relatively low, ranging from 0.8 (Unit 1) to 1.5 (Unit 3) fps at normal reservoir pool elevation. Therefore, the location and operation of the CWIS aids in reducing impingement mortality. It is also important to note that cooling water capacity is generally low, with a recent 3-year (2016-2018) average of 41%, indicating that current and likely future CWIS operations for ROPP would likely result in low impingement.

Entrainment has not been monitored at ROPP. Peak spawning (and juvenile life stage abundance) in Lake Lavon occurs in the spring and early summer. As indicated in Figure 3, power plant operations are greatly reduced in the spring, during spawning season. In addition, the CWIS is located at the rear of a deep, excavated channel which presumably has little, if any littoral habitat for spawning. As a result of this operational pattern and the location of the CWIS, entrainment at ROPP is expected to be low.

ATTACHMENT TR-6

Cooling Water Intake Structure(s) Data

Worksheet 11.0
Cooling Water Intake Information

Section 2.b. Cooling Water Intake Structure Data

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.**

   ROPP has a single CWIS which is divided into bays which serve each of the units' CW pumps. Each unit has two circulating-water (CW) pumps. The Cooling Water Intake Structure(s) Data Table describes the components of the CWIS. Each CW pump is served by a single traveling-water screen (screen) with ⅜-inch square steel mesh. Screens are usually washed once per 8-hour shift when the units are in operation. The length of time the screen wash operates varies depending on the differential pressure loss. On occasion the screens may be washed several times during a single day. Screen-wash water from each unit is transported through a sluice, then to a debris sump and basket, and then returned to the reservoir near the CWIS.

   Figure 3 shows the 5-year flow history for ROPP. In general, the facility withdraws more cooling water during summer followed by winter and less water during fall and spring. In the 5-year flow history, the facility had not operated at design capacity. As shown on Figure 3, the facility withdraws less than design capacity during most of the time. The annual cooling water utilization capacity over the past 5 years was about 43% of design capacity

   Cooling water is withdrawn from the rear of a 700-foot-long excavated intake canal. However, the distance to the main body of the reservoir is approximately 2,500 ft. The shallowest depth of the canal is approximately 25 ft; however, the depth in the vicinity of the CWIS is approximately 32 feet under normal reservoir pool elevation. The CW pumps are vertical-shaft turbines with the impellers near the floor of the CWIS. Therefore, a higher proportion of flow is generally from near the bottom (deeper water).

2. **Engineering calculations for each CWIS.**

   There is only one CWIS at ROPP. CWIS information is listed in the ROPP CWIS Configuration Table in Attachment TR-5 and The Cooling Water Intake Structure(s) Data Table (Worksheet 11.0 2.a). DIF is 357 mgd and is the compilation of all circulating and service water pump capacities (assumed zero head differential). AIF is the average reported flows for the past 3 years (June 2021 – June 2024). Intake flow uses percentage is the proportion of the reported flow for each use to the AIF.

ATTACHMENT TR-7

Source Water Physical Data

Worksheet 11.0
Cooling Water Intake Information

Section 3.b. Source Water Physical Data

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

   ROPP uses cooling water from Lake Lavon. The facility utilizes a single CWIS located at the rear of a 700-foot-long excavated intake canal (see Figure 4). The distance to the main body of the reservoir is approximately 2,500 ft. The depth at the CWIS is approximately 32 ft under conservation pool elevation. Lake Lavon is a man-made impoundment constructed on the East Fork Trinity River, Texas Commission on Environmental Quality Segment No. 0821. At normal operating reservoir pool elevation of 492.0 ft msl, total surface area of Lake Lavon is 20,559 acres with a storage capacity of approximately 409,360 acre-feet. The reservoir and power plant are located in the Navarro and Taylor geologic groups (Bureau of Economic Geology http://www.jsg.utexas.edu/news/files/Geologic-map-of-Texas.jpg).

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

   Lake Lavon is a fresh water impoundment used for flood control, water supply, and recreation. The reservoir fishery is stocked and managed by the Texas Parks and Wildlife Department. Water quality was monitored for 1 year during the ROPP impingement study (Ray Olinger Impingement Mortality Study, PBS&J,2007). Temperature ranged from 7°C in February to 31°C in September 2007. Salinity remained below 0.5 parts per thousand during the study.

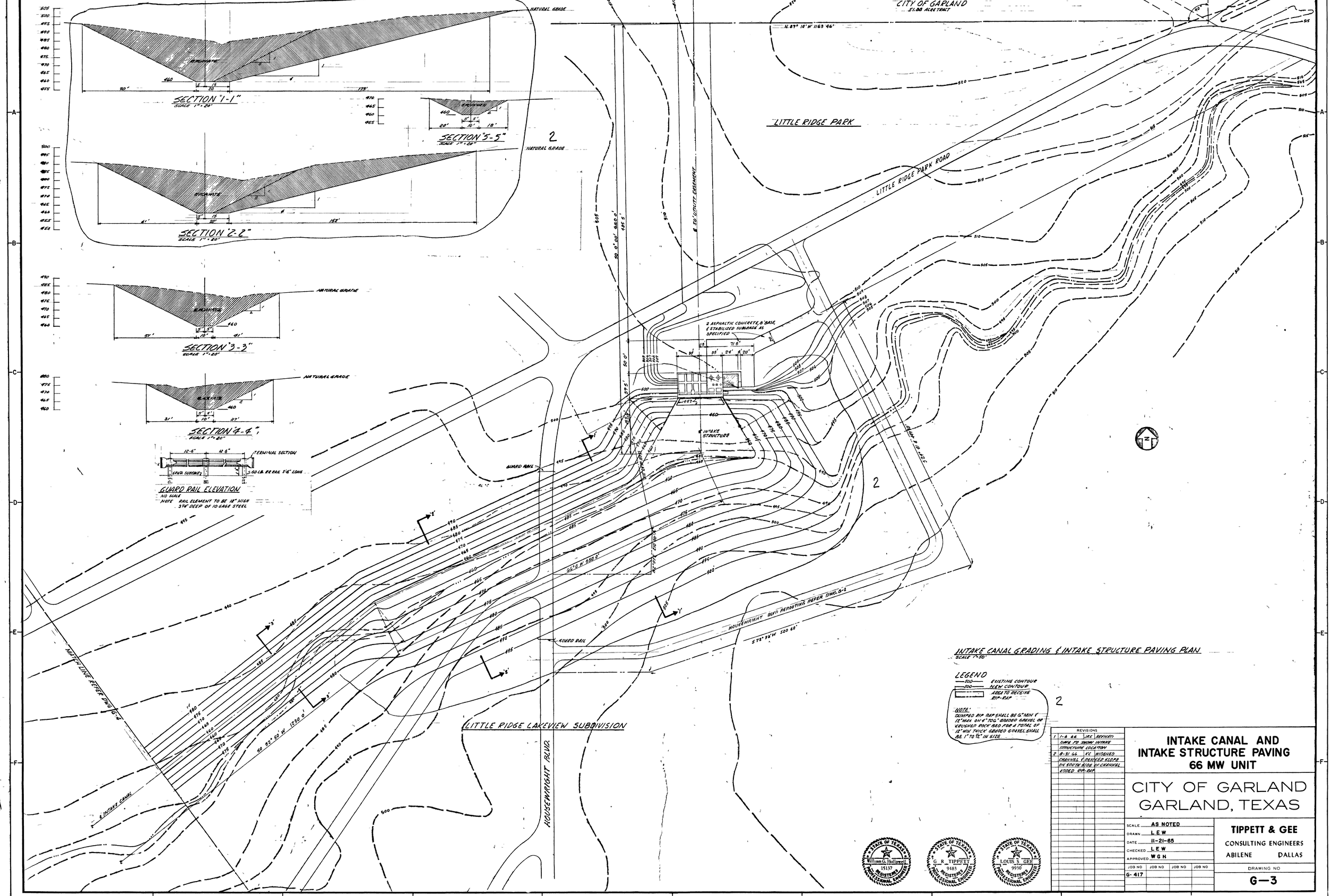
3. **Scaled drawings showing the physical configuration of all source water bodies used by the facility, including the source waterbody's hydrological and geomorphological features. Note: The source waterbody's hydrological and geomorphological features may be included on the map submitted for item 1.b.ii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

   See Figure 4.

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.**

   There have been no studies that describe the zone of influence associated with cooling water withdrawal by the facility.

GUARD RAIL ELEVATION
NO SCALE
NOTE RAIL ELEMENT TO BE 18" HIGH
3/16" DEEP OF 10 GAGE STEEL



INTAKE CANAL GRADING & INTAKE STRUCTURE PAVING PLAN
SCALE 1"=50'

LEGEND
500 EXISTING CONTOUR
500 NEW CONTOUR
AREA TO RECEIVE RIP-RAP

NOTE:
DUMPED RIP RAP SHALL BE 6" MIN. & 12" MAX. ON 4" TOG. GRADED GRAVEL OR CRUSHED ROCK BED FOR A TOTAL OF 18" MIN. THICK. GRADED GRAVEL SHALL BE 1" TO 12" IN SIZE

REVISIONS		
1	1-6-66	JRS REVISED DWG TO SHOW INTAKE STRUCTURE LOCATION
2	9-21-66	VC WIDENED CHANNEL & REVISED SLOPE ON SOUTH SIDE W/ CHANNEL & ADDED RIP-RAP

INTAKE CANAL AND INTAKE STRUCTURE PAVING 66 MW UNIT

CITY OF GARLAND
GARLAND, TEXAS

SCALE	AS NOTED
DRAWN	L E W
DATE	11-21-65
CHECKED	L E W
APPROVED	W G H

JOB NO.	JOB NO.	JOB NO.	JOB NO.
G-417			

TIPPETT & GEE
CONSULTING ENGINEERS
ABILENE DALLAS

DRAWING NO.
G—3

William G. Hollowell 15137 REGISTERED PROFESSIONAL ENGINEER
G. R. TIPPETT 9483 REGISTERED PROFESSIONAL ENGINEER
LOUIS S. GEE 9930 REGISTERED PROFESSIONAL ENGINEER

ATTACHMENT TR-8

Operational Status

Worksheet 11.0
Cooling Water Intake Information
Section 4.a. Operational Status

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.**

   ROPP Unit 1 was constructed in 1967, Unit 2 in 1971, and Unit 3 in 1975. Each unit remains in service, although operating intermittently and at a very low utilization capacity. Over the past 5 years (October 2018 – June 2024), the capacity utilization rate for the power plant was 2.3% (Table 5).

Table 5. Ray Olinger Power Plant 5-Year Monthly Capacity Utilization Rate by Unit.

DATE	UNIT 1	UNIT 2	UNIT 3	DATE	UNIT 1	UNIT 2	UNIT 3
Oct-18	0.0%	0.0%	0.0%	Jan-22	0.0%	1.4%	0.0%
Nov-18	0.0%	0.0%	2.1%	Feb-22	0.0%	3.7%	2.8%
Dec-18	0.0%	0.0%	0.0%	Mar-22	0.0%	2.2%	1.9%
Jan-19	0.0%	0.0%	0.0%	Apr-22	0.0%	0.3%	0.0%
Feb-19	0.0%	0.0%	0.0%	May-22	0.0%	1.7%	9.3%
Mar-19	0.2%	1.5%	0.0%	Jun-22	0.0%	7.6%	0.4%
Apr-19	0.0%	0.0%	0.0%	Jul-22	0.0%	10.9%	8.6%
May-19	0.0%	0.0%	0.0%	Aug-22	0.0%	6.3%	8.7%
Jun-19	0.5%	2.4%	5.3%	Sep-22	0.0%	3.0%	3.9%
Jul-19	1.4%	7.5%	12.2%	Oct-22	0.0%	1.4%	0.0%
Aug-19	7.7%	28.2%	36.9%	Nov-22	0.0%	0.0%	0.0%
Sep-19	2.9%	10.0%	28.4%	Dec-22	0.0%	0.0%	0.0%
Oct-19	0.7%	3.0%	5.9%	Jan-23	0.0%	0.2%	0.0%
Nov-19	0.0%	0.0%	0.7%	Feb-23	0.0%	0.3%	0.0%
Dec-19	0.0%	0.0%	1.8%	Mar-23	0.0%	3.0%	0.2%
Jan-20	0.0%	0.0%	0.0%	Apr-23	0.0%	2.6%	2.7%
Feb-20	0.0%	0.0%	0.0%	May-23	0.0%	3.8%	3.3%
Mar-20	0.0%	0.0%	0.0%	Jun-23	0.0%	7.9%	7.0%
Apr-20	0.0%	1.0%	0.7%	Jul-23	0.0%	6.5%	4.8%
May-20	0.0%	0.2%	0.7%	Aug-23	0.0%	15.3%	29.3%
Jun-20	0.0%	1.0%	0.4%	Sep-23	0.0%	5.2%	12.1%
Jul-20	0.2%	0.6%	2.1%	Oct-23	0.0%	0.0%	6.6%
Aug-20	0.9%	6.1%	7.9%	Nov-23	0.0%	0.0%	5.6%
Sep-20	0.0%	0.3%	0.3%	Dec-23	0.0%	0.4%	0.0%
Oct-20	0.0%	0.0%	0.0%	Jan-24	0.0%	2.1%	3.0%
Nov-20	0.0%	0.0%	0.0%	Feb-24	0.0%	0.0%	0.0%
Dec-20	0.0%	0.0%	0.0%	Mar-24	0.0%	0.5%	0.0%
Jan-21	0.0%	0.0%	0.0%	Apr-24	0.0%	2.4%	0.0%
Feb-21	0.0%	0.0%	22.4%	May-24	0.0%	2.3%	0.0%
Mar-21	0.0%	0.0%	0.0%	Jun-24	0.0%	2.4%	1.4%

Apr-21	0.0%	0.4%	0.0%	
May-21	0.0%	0.0%	0.0%	
Jun-21	0.0%	2.3%	4.1%	
Jul-21	0.0%	6.4%	6.9%	
Aug-21	0.0%	6.4%	7.7%	
Sep-21	0.0%	1.1%	3.1%	
Oct-21	0.0%	0.0%	15.5%	
Nov-21	0.0%	0.3%	3.1%	
Dec-21	0.0%	1.5%	0.0%	

In the most recent 24-month contiguous block (June 2022 – June 2024), none of the units operated in February 2024. The highest periods of utilization capacity were July 2022 and August 2023, at 10.9% and 15.3%, respectively. Over this period, Unit 1 ran the least at 0.0%, and Unit 2 ran the most at 3.4% average utilization capacity. In general, the units rarely operate in the spring and fall.

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

There have been no significant facility modifications or extended outages in the past 15 years nor are there any major outages planned in the near future. However, the facility operates at a very low electric utilization capacity; therefore, impingement and entrainment impacts are minimized due to normal plant operations.

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).

Units 1, 2, and 3 each have capacity utilization rates of less than 8% over a recent, contiguous 24-month period, June 2022 – June 2024 (see Table 6). The average capacity utilization rate for Unit 1 was 0.8%, Unit 2 was 1.9%, and Unit 3 was 1.4%. The total facility average capacity utilization rate during this period was 1.4%.

Table 6. Ray Olinger Power Plant Electric Capacity Utilization Rate from June 2022 – June 2024.

Electric Capacity Utilization by Month			
Date	**ROP 1 MW**	**ROP 2 MW**	**ROP3 MW**
Jun-22	0.0%	7.6%	0.4%
Jul-22	0.0%	10.9%	8.6%
Aug-22	0.0%	6.3%	8.7%
Sep-22	0.0%	3.0%	3.9%
Oct-22	0.0%	1.4%	0.0%
Nov-22	0.0%	0.0%	0.0%
Dec-22	0.0%	0.0%	0.0%
Jan-23	0.0%	0.2%	0.0%
Feb-23	0.0%	0.3%	0.0%
Mar-23	0.0%	3.0%	0.2%
Apr-23	0.0%	2.6%	2.7%
May-23	0.0%	3.8%	3.3%

Jun-23	0.0%	7.9%	7.0%
Jul-23	0.0%	6.5%	4.8%
Aug-23	0.0%	15.3%	29.3%
Sep-23	0.0%	5.2%	12.1%
Oct-23	0.0%	0.0%	6.6%
Nov-23	0.0%	0.0%	5.6%
Dec-23	0.0%	0.4%	0.0%
Jan-24	0.0%	2.1%	3.0%
Feb-24	0.0%	0.0%	0.0%
Mar-24	0.0%	0.5%	0.0%
Apr-24	0.0%	2.4%	0.0%
May-24	0.0%	2.3%	0.0%
Jun-24	0.0%	2.4%	1.4%
24-Month Average	**0.0%**	**3.4%**	**3.9%**

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.

There have been no significant facility modifications the past 15 years nor are there any major modifications planned in the near future.

ATTACHMENT TR-9

TPWD Fisheries Management Report

PERFORMANCE REPORT

As Required by

FEDERAL AID IN SPORT FISH RESTORATION ACT

TEXAS

FEDERAL AID PROJECT F-221-M-5

INLAND FISHERIES DIVISION MONITORING AND MANAGEMENT PROGRAM

2014 Fisheries Management Survey Report

Lavon Reservoir

Prepared by:

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and
John H. Moczygemba, Assistant District Management Supervisor

Inland Fisheries Division
Denison District
Pottsboro, Texas

Carter Smith
Executive Director

Craig Bonds
Director, Inland Fisheries

July 31, 2015

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SURVEY AND MANAGEMENT SUMMARY

Fish populations in Lavon Reservoir were surveyed in 2014 using electrofishing and trap netting and in 2015 using gill netting. Historical data are presented with the 2014-2015 data for comparison. This report summarizes the results of the surveys and contains a management plan for the reservoir based on those findings.

- **Reservoir description:** Lavon Reservoir is a 21,400-acre impoundment located on the East Fork Trinity River approximately 8 miles east of McKinney. Since July 2011 water level has fluctuated 13 feet above and below conservation elevation (492 feet above mean sea level). However, water level began dropping July 2012 and continued dropping until January 2015. Lavon Reservoir has moderate productivity. Habitat features consisted mainly of riprap along the dam and railroad bridges, dead trees and stumps, and rocky shoreline. Standing dead timber was an important habitat feature.

- **Management history:** Important sport fishes include White Bass, Largemouth Bass, White and Black Crappie, and Blue and Channel Catfish. The management plan from the 2011 survey report included requesting the TPWD Webmaster include a statement about the improving sport fishery, especially Blue and Channel Catfish, and Largemouth Bass. We cooperated with USACOE in posting signage warning lake visitors of the potential of zebra mussel infestation. Advised, educated, and provided signage and invasive species literature to marina owners. Utilizing media outlets and speaking engagements, we provided our constituents and user groups this same information. Monitored existing inter-basin water transfers. Monitored Portland samplers deployed in the reservoir for zebra mussel colonization.

- **Fish community**

  - **Prey species:** Threadfin Shad continued to be present, but showed a decline in abundance. While showing a large decline in numbers, the electrofishing catch of Gizzard Shad was still high and most (95%) were available as prey to most sportfishes. The electrofishing catch of prey-size Bluegill declined in numbers, but was still above the district average.

  - **Catfishes:** Gill net catch of Blue Catfish declined, but 100% of the population was legal size and in good condition. Recruitment was low, but they continue to out-number Channel Catfish in abundance. Gill net catch of Channel Catfish declined. No Flathead Catfish were collected.

  - **White Bass:** Gill net catch of White Bass increased and no Striped Bass were collected.

  - **Largemouth Bass:** The electrofishing catch of Largemouth Bass declined, but recruitment was good and relative weights were fair for legal-size fish. Over one-half of the Largemouth Bass sample population was legally harvestable.

  - **Crappies:** The trap netting catch of White Crappie increased, body condition and recruitment was good, and over one-half of the sample population was legal size and larger. The trap netting catch of Black Crappie was at an all-time high and the fish were in good condition. We predict a bright future for Black Crappie.

- **Management strategies:** Conduct general monitoring with electrofisher, trap nets, and gill nets in 2018-2019. Publicize improvements to sport fishes in the reservoir to anglers. Inform the Lavon Reservoir U.S. Army Corps of Engineers personnel about new exotic species threats to Texas waters, and work with them to display appropriate signage, educate constituents, and understand appropriate enforcement actions. Continue to monitor immigration of invasive species into Lavon Reservoir.

INTRODUCTION

This document is a summary of fisheries data collected from Lavon Reservoir in 2014-2015. Sampling of fishes was done by electrofishing and trap netting in 2014 and in 2015 by gill netting. The purpose of the document is to provide fisheries information and make management recommendations to protect and improve the sport fishery. While information on other species of fishes was collected, this report deals primarily with major sport fishes and important prey species. Historical data are presented with the 2014-2015 data for comparison.

Reservoir Description

Lavon Reservoir is a 21,400-acre impoundment constructed in 1953 on the East Fork Trinity River. It is located in Collin County approximately 8 miles east of McKinney and is operated and controlled by the U.S. Army Corps of Engineers (USACOE). The original dam impounded 11,080 acres of water. In 1974 the dam was raised 12 feet and increased the surface area of the reservoir to 21,400 acres. Primary project purposes are municipal and industrial water supply, flood control, and recreation. To augment municipal and industrial water, Lavon Reservoir receives inter-basin transfers from Cooper and Tawakoni Reservoirs and the East Fork Raw Water Supply Project near Seagoville, TX. The inter-basin transfer of Texoma Reservoir water via Sister Grove Creek has been converted to a direct pipeline transfer from Texoma Reservoir to the North Texas Municipal Water District water treatment facility at Wylie, TX. Lavon Reservoir also receives outfall from a regional sewage treatment facility. Lavon Reservoir was mesotrophic with a mean TSI chl-*a* of 39.30 (Texas Commission on Environmental Quality 2011). Habitat at time of sampling consisted of dead trees, rocks and boulders, riprap, but mostly rocky interspersed with bare soil shoreline. There were isolated patches of native submerged and emergent vegetation. Native aquatic plants present were pondweed, water willow, and buttonbush. Water level has been low and unstable since July 2011 (Figure 1). With the exception of July 2011, most of the reservoir was 8 to 12 feet below conservation throughout this study period Other descriptive characteristics for Lavon Reservoir are in Table 1.

Angler Access

Lavon Reservoir has 16 public boat ramps (Table 2). During the period July 2011 through spring 2015 access via these boat ramps was limited to the period January 2012 to July 2013. Early in this period access was denied because of low water and late in this period access was denied because of high water. Boat ramp characteristics appear in detail in Table 2. Bank fishing access has been compromised due to large expanses of exposed flats and shallow inshore water. Despite this there are still potential sites available at USACOE recreation areas and to a lesser extent from public roads. Shoreline access to Lavon Reservoir is unlimited unless posted because it is U.S. Army Corps of Engineers property; hence, public.

Management History

Previous management strategies and actions: Management strategies and actions from the previous survey report (Hysmith and Moczygemba 2011) included:

1. Recommended incorporating improvements in the sport fishery on the TPWD web site.
   Action: Sport fish survey data were forwarded to the TPWD webmaster in Austin.
2. Recommended cooperating with reservoir controlling authority and marinas to inform and educate the public about invasive species.
   Action: Posted appropriate signage at reservoir access points, informed marina owners regarding invasive species, provided printed material, used media and internet, tracked any and all inter basin transfers, and monitored Portland samplers in the reservoir.

Harvest regulation history: Sportfishes in Lavon Reservoir are currently managed with statewide regulations (Table 3).

Stocking history: Lavon Reservoir was last stocked in 2007 and 2008 with Striped Bass at 13/acre. The complete stocking history is in Table 4.

Vegetation/habitat history: Historically, Lavon Reservoir (Hysmith and Moczygemba 1980) supported diverse aquatic vegetation, and consisted of narrow leaved cattail, black willow, smartweed, water willow, knotgrass, duckweed, and water primrose native pondweed, buttonbush, and water willow. There was no aquatic vegetation to sample in 2014, however, in 2010 aquatic vegetation consisted of pondweed, buttonbush, and water willow (Hysmith and Moczygemba 2011).

Water Transfer: Lavon Reservoir is primarily used for municipal water supply, recreation, and to a lesser extent, flood control. Water is pumped into Lavon Reservoir from Cooper Reservoir, Tawakoni Reservoir, and the East Fork Raw Water Supply Project Seagoville, TX. Until 2009, water was pumped from Texoma Reservoir to Sister Grove Creek, a tributary of Lavon Reservoir. Water is pumped out of Lavon Reservoir by North Texas Municipal Water District.

METHODS

Fishes were collected by electrofishing (2 hours at 24 5-min stations), gill netting (15 net nights at 15 stations), and trap netting (15 net nights at 15 stations). Catch per unit effort (CPUE) for electrofishing was recorded as the number of fish caught per hour (fish/h) of actual electrofishing and, for gill and trap nets, as the number of fish caught per net night (fish/nn). Survey sites were randomly selected and all surveys were conducted according to the Fishery Assessment Procedures (TPWD, Inland Fisheries Division, unpublished manual revised 2014).

A structural habitat survey was conducted in 2014. Vegetation surveys were conducted in 2002, 2006, 2010, and 2014. Aquatic vegetation was not present in 2006 and 2014. Habitat was assessed using a modified digital shapefile method (TPWD, Inland Fisheries Division, unpublished manual revised 2014).

Sampling statistics (CPUE for various length categories) and structural indices [Proportional Size Distribution (PSD)] as defined by Guy et al. (2007) and condition indices [relative weight (Wr)] were calculated for target fishes according to Anderson and Neumann (1996). Index of vulnerability (IOV) was calculated for Gizzard Shad (DiCenzo et al. 1996). Relative standard error (RSE = 100 X SE of the estimate/estimate) was calculated for all CPUE statistics and SE was calculated for structural indices and IOV. Ages for Channel Catfish, Largemouth Bass, and White and Black Crappie were determined using Category 2 protocol according to the Fishery Assessment Procedures (TPWD, Inland Fisheries Division, unpublished manual revised 2014). The manual specifies Largemouth Bass, but we adapted the protocol to include Channel Catfish and White and Black Crappie. Source for water level data was the United States Geological Survey (USGS 2015).

Genetic analysis of Largemouth Bass was conducted according to the Fishery Assessment Procedures (TPWD, Inland Fisheries Division, unpublished manual revised 2014). Micro-satellite DNA analysis was used to determine genetic composition of individual fish from 2005 through 2012 and by electrophoresis for previous years.

RESULTS AND DISCUSSION

Habitat: Littoral zone habitat consisted primarily of rocky shoreline and dead timber with some native aquatic vegetation (Tables 5 and 6).

Prey species: Electrofishing CPUE of Gizzard Shad and Bluegill were 405.5/h and 88.5/h, respectively (Figures 2 and 3). Catches of both species were lower than for 2010. While not as good as 2011, the current IOV of 95 indicated an abundance of prey-size Gizzard Shad. Over half the sample population of Bluegill was $\leq$ 4 inches, ideal prey-size. Longear Sunfish were almost as abundant as Bluegill (Appendix A) and because of their small average size, provided excellent prey. The electrofishing CPUE for Threadfin Shad (14.0/h) was a record low (Appendix A).

Catfishes: The gill net CPUE of Blue Catfish was 2.5/nn in 2015, well below estimates of relative abundance in 2007 (Figure 4). The multiyear relative abundance has averaged 10.7/nn since 1996 (Appendix C). Relative weight ranged from 80 to 115, increasing with size; a trend repeated from 2011 (Figure 4). The trophy component (≥ 30 inches) of the population remained strong, repeating results of 2011 (Figure 4). All of the Blue Catfish sample population was ≥12 inches.

The gill net CPUE of Channel Catfish was 3.5/nn in 2015, second highest on record (Figure 5 and Appendix C). Recruitment of sub-stock fish was good and body condition was fair with relative weights ranging from 80 to almost 90. Channel Catfish grew to 12 inches in 5 years (N = 11; range = 5 to 6 years). Sixty-three percent of the sample population was ≥ 12 inches.

White Bass: The gill net CPUE of White Bass was 6.0/nn in 2015 (Figure 6), second highest CPUE for this reservoir (Appendix C). Relative weight of White Bass ranged from 95 to 105. Eighty-eight percent of the sample population was ≥ 10 inches.

Largemouth Bass: The electrofishing CPUE of Largemouth Bass was 35.0/h in 2015 (Figure 7), well below the all-time high CPUE in 2010 (Figure 7, Appendix C). There was excellent recruitment of sub-stock fish. A high average relative weight of 90 indicated a majority of the Largemouth Bass were in good condition, especially sub-stock fish which showed average relative weight ranging between 100 and 120 (Figure 7). Growth was excellent with fish reaching legal size in 2 years (N = 13; range 2 to 3 years). Fifty-four percent of the sample population was ≥ 14 inches. Genetic analysis of Largemouth Bass collected by electrofishing indicated Florida Largemouth Bass allele's at 39.0% which is a decrease from 42.0% in 2006 (Table 7).

Crappies: The trap net CPUE of White Crappie was 34.8/nn in 2015 (Figure 8), more than double the reservoir average (Appendix C). There was excellent recruitment of sub-stock fish. A high average relative weight of 100 % indicated a majority of the White Crappie were in good condition. Twenty-eight percent of the sample population was ≥ 10 inches and they reached legal size in 1 year (N = 13; range = 1 to 2 years).

Trap netting CPUE of Black Crappie was 3.4/nn (Figure 9). They were first collected in 2006 when one specimen was caught in a trap net during standard sampling (Hysmith and Moczygemba 2007). Thirteen individuals were collected during routine trap net sampling in 2010. There was excellent recruitment of sub-stock fish. High relative weight (>90) indicated a majority of the Black Crappie were in good condition. Thirty-seven percent of the sample population was ≥ 10 inches and they reached legal size in 2 years (N=13; range = 2 to 3 years).

Fisheries management plan for Lavon Reservoir, Texas

Prepared – July 2015.

ISSUE 1: The sport fishery in Lavon Reservoir, especially blue and Channel Catfish, and Largemouth Bass has continued to improve.

MANAGEMENT STRATEGY

1. Incorporate these improvements on the TPWD web site.

ISSUE 2: Many invasive species threaten aquatic habitats and organisms in Texas and can adversely affect the state ecologically, environmentally, and economically. For example, zebra mussels (*Dreissena polymorpha*) can multiply rapidly and attach themselves to any available hard structure, restricting water flow in pipes, fouling swimming beaches and plugging engine cooling systems. Giant Salvinia (*Salvinia molesta*) and other invasive vegetation species can form dense mats, interfering with recreational activities like fishing, boating, skiing and swimming. The financial costs of controlling and/or eradicating these types of invasive species are significant. Additionally, the potential for invasive species to spread to other river drainages and reservoirs via watercraft and other means is a serious threat to all public waters of the state. Zebra mussels have been found in Sister Grove Creek, a tributary to Lavon Reservoir and water conduit for water transfer from Texoma Reservoir, where zebra mussels have established. Portland samplers have been deployed in Lavon Reservoir and Sister Grove Creek.

MANAGEMENT STRATEIES

1. Cooperate with the controlling authority to post appropriate signage at access points around the reservoir.
2. Contact and educate marina owners about invasive species, and provide them with posters, literature, etc… so that they can in turn educate their customers.
3. Educate the public about invasive species through the use of media and the internet.
4. Make a speaking point about invasive species when presenting to constituent and user groups.
5. Keep track of (i.e., map) existing and future inter-basin water transfers to facilitate potential invasive species responses.
6. Monitor Portland samplers deployed in Lavon Reservoir.

SAMPLING SCHEDULE JUSTIFICATION:

Conduct general monitoring surveys in 2018 – 2019 with a creel survey, electrofishing, trap netting, and gill netting. Access and habitat surveys will also be conducted.

LITERATURE CITED

Anderson, R.O. and R.M. Neumann. 1996. Length, weight, and associated structural indices. Pages 447-482 *in* B.R. Murphy and D.W. Willis, editors. Fisheries techniques, 2nd edition. American Fisheries Society, Bethesda, Maryland.

DiCenzo, V.J., M.J. Maceina, and M.R. Stimpert. 1996. Relations between reservoir trophic state and Gizzard Shad population characteristics in Alabama reservoirs. North American Journal of Fisheries Management 16:888-895.

Guy, C.S., R.M. Neumann, D.W. Willis, and R.O. Anderson. 2007. Proportional Size Distribution (PSD): a further refinement of population size structure index terminology. Fisheries 32(7):348

Hysmith, B.T. and J.H. Moczygemba. 1980. Existing reservoir and stream management recommendations. Lake Lavon, 1979. Texas Parks and Wildlife Department, Federal Aid Report F-30-R-3, Austin.

Hysmith, B.T. and J.H. Moczygemba. 2011. Statewide freshwater fisheries monitoring and management program survey report for Lake Lavon, 2010. Texas Parks and Wildlife Department, Federal Aid Report F-221-M-1, Austin.

Texas Commission on Environmental Quality. 2011. Trophic Classification of Texas Reservoirs Quality 2010 Texas Water Inventory and 303(d) List. 18 pp.

United States Geological Society (USGS). 2015. National water information system: Web interface. Available: http://waterdata.usgs.gov/tx/nwis (May 2015).

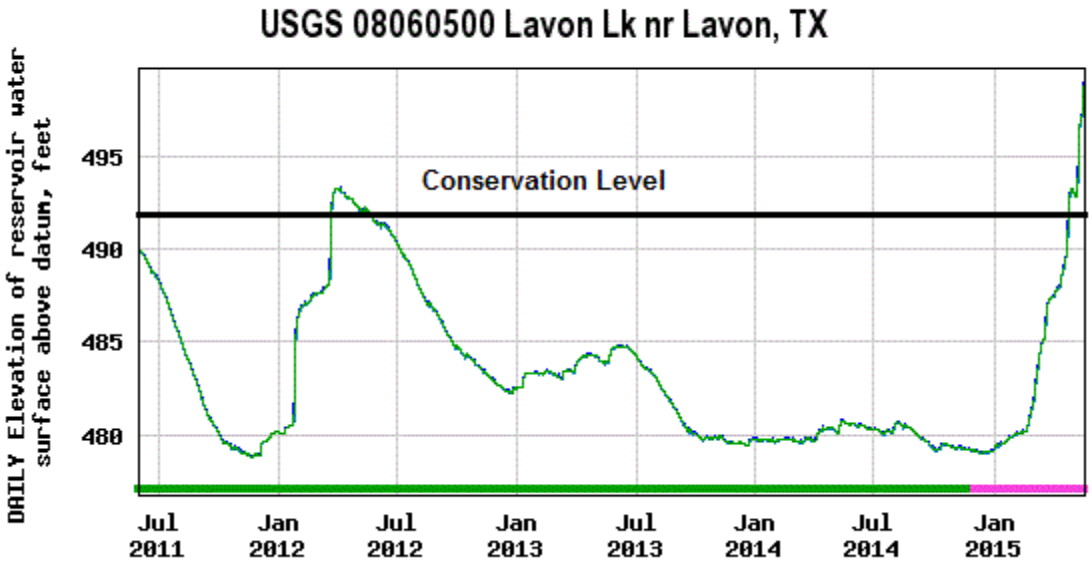

Figure 1. Monthly average water level elevations in feet above mean sea level (MSL) recorded for Lavon Reservoir (U.S. Geological Survey. 2015. USGS real time water data for USGS 08060500 Lavon Lake near Lavon, Texas. http://waterdata.usgs.gov/nwis), Texas, June 2011-May 2015.

Table 1. Characteristics of Lavon Reservoir, Texas.

Characteristic	Description
Year constructed	1953
Controlling authority	U.S. Army Corps of Engineers
Counties	Collin
Reservoir type	Mainstream
Shoreline development index	5.9
Conductivity	286 µmhos/cm

Table 2. Boat ramp characteristics for Lavon Reservoir, Texas, August, 2014. Reservoir elevation at time of survey was 479.09 feet above mean sea level.

Boat ramp	Latitude Longitude (dd)	Public	Parking capacity (N)	Elevation at end of boat ramp (ft)	Condition
Twin Groves	33.16593 -96.44157	Y	40	490[a]	Out of water. Extension is not feasible
Caddo Park	33.16247 -96.41896	Y	30	490[a]	Out of water. Extension is not feasible
Elm Creek	33.14009 -96.42500	Y	30	485[a]	Out of water. Extension is not feasible
Lakeland Park	33.10315 -96.44589	Y	60	478[a]	Out of water. Extension is not feasible
Tickey Creek	33.09562 -96.47443	Y	60	478[a]	Out of water. Extension is not feasible
Pebble Beach	33.08451 -96.45275	Y	45	481[a]	Out of water. Extension is not feasible
Little Ridge	33.06624 -96.45500	Y	60	478	Fair. Extension is feasible.
Mallard Park	33.04860 -96.42698	Y	30	478	Fair. Extension is feasible.
Lavonia Park	33.04178 -96.44335	Y	60	478	Fair. Extension is feasible.
Clear Lake	33.05900 -96.48810	Y	45	478	Fair. Extension is feasible.
Bratonia Park	33.11063 -96.52019	Y	20	490[a]	Out of water. Extension is not feasible
Highland Park	33.10782 -96.54063	Y	30	490[a]	Out of water. Extension is not feasible
Brockdale Park	33.07344 -96.54531	Y	30	484[a]	Out of water. Extension is not feasible
Collin Park	33.05104 -96.53057	Y	85	478	Fair. Extension is feasible.
East Fork Park	33.03705 -96.51466	Y	105	478	Fair. Extension is feasible.
Avalon Park	33.04276 -96.49807	Y	60	474	Excellent. No access issues.

[a] Elevations were determined using GPS and may be approximate due to GPS error. Varying lake levels and large amounts of siltation on ramps have prevented more accurate onsite measurements from being taken since original survey date.

Table 3. Harvest regulations for Lavon Reservoir, Texas.

Species	Bag limit	Length limit
Catfish: Channel and Blue Catfish, their hybrids and subspecies	25 (in any combination)	12-inch minimum
Catfish, Flathead	5	18-inch minimum
Bass, White	25	10-inch minimum
Bass, Striped	5	18-inch minimum
Bass, Largemouth	5	14-inch minimum
Crappie: White and Black Crappie, their hybrids and subspecies	25 (in any combination)	10-inch minimum

Table 4. Stocking history of Lavon Reservoir, Texas. Life stages are fry (FRY), fingerlings (FGL), advanced fingerlings (AFGL), adults (ADL) and unknown (UNK). Life stages for each species are defined as having a mean length that falls within the given length range. For each year and life stage the species mean total length (Mean TL; in) is given. For years where there were multiple stocking events for a particular species and life stage the mean TL is an average for all stocking events combined.

Species	Year	Number	Life Stage	Mean TL (in)
Blue catfish	1989	214,259	FGL	2.6
	1997	214,106	FGL	2.0
	1998	214,588	FGL	2.2
	Total	642,953		
Channel catfish	1954	20,000	AFGL	7.9
	1971	26,700	AFGL	7.9
	Total	46,700		
Florida Largemouth bass	1988	67,226	FGL	2.0
	1988	361,652	FRY	1.0
	1997	250,800	FGL	1.2
	2004	539,664	FGL	1.5
	2005	535,577	FGL	1.5
	Total	1,754,919		
Largemouth bass	1954	1,027,000	FRY	0.7
	1968	177,100	UNK	UNK
	Total	1,204,100		
Mixed Largemouth Bass	1988	98,860		1.0
	Total	98,860		
Palmetto Bass (Striped X White Bass hybrid)	1976	39,200	FGL	UNK
	Total	39,200		
Striped bass	1989	213,826	FGL	1.4
	1994	428,402	FGL	1.3
	2004	19,241	FGL	1.9
	2005	107,008	FGL	1.6
	2006	216,086	FGL	1.8
	2007	339,114	FGL	1.5
	2008	216,090	FGL	1.6
	Total	1,539,767		
Threadfin shad	1980	8,250	AFGL	2.9
	1984	2,000	AFGL	3.0
	Total	10,250		

Table 4 continued.

Species	Year	Number	Life Stage	Mean TL (in)
Walleye	1976	86,000	FRY	0.2
	Total	86,000		
White bass	1957	330	ADL	UNK
	Total	330		

Table 5. Survey of structural habitat types, Lavon Reservoir, Texas, 2014. Shoreline habitat type units are in miles and standing timber and piers, boat docks, and marinas in acres.

Habitat type	Estimate	% of total
Bulkhead	0.1 miles	0.1
Piers, boat docks, marinas	100 acres	0.5
Natural	41.2 miles	34.0
Rocky	79.7 miles	65.9
Standing timber	10,700 acres	50.0

Table 6. Survey of aquatic vegetation, Lavon Reservoir, Texas, 2002 – 2014. Surface area (acres) is listed with percent of total reservoir surface area in parentheses.

Vegetation	2002	2006	2010	2014
Native submersed		0.0	10 (<0.1)	0.0
Native emergent	44 (0.2)	0.0	44 (0.2)	0.0

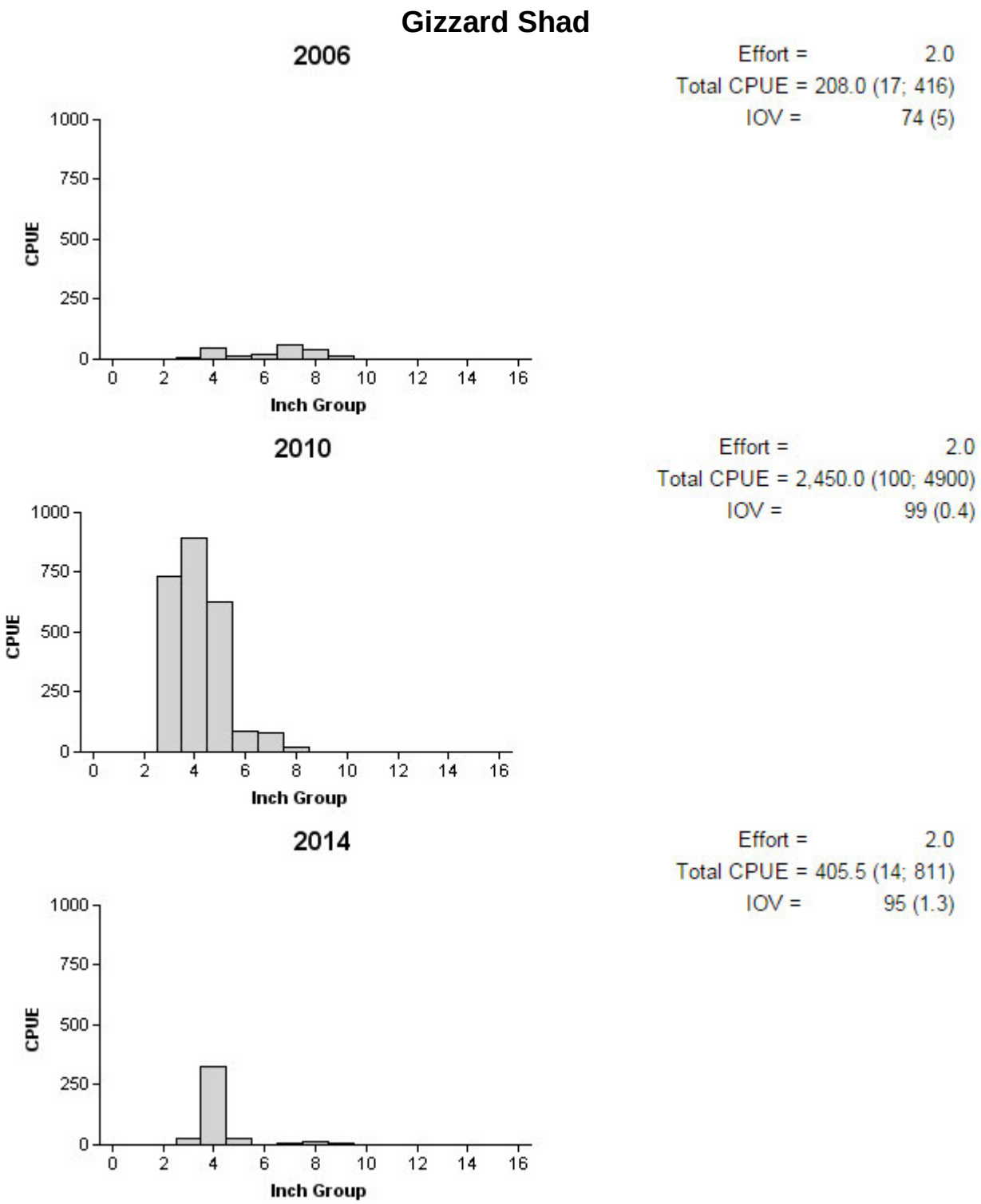

Figure 2. Number of Gizzard Shad caught per hour (CPUE) and population indices (RSE and N for CPUE and SE for IOV are in parentheses) for fall electrofishing surveys, Lavon Reservoir, Texas, 2006, 2010, and 2014.

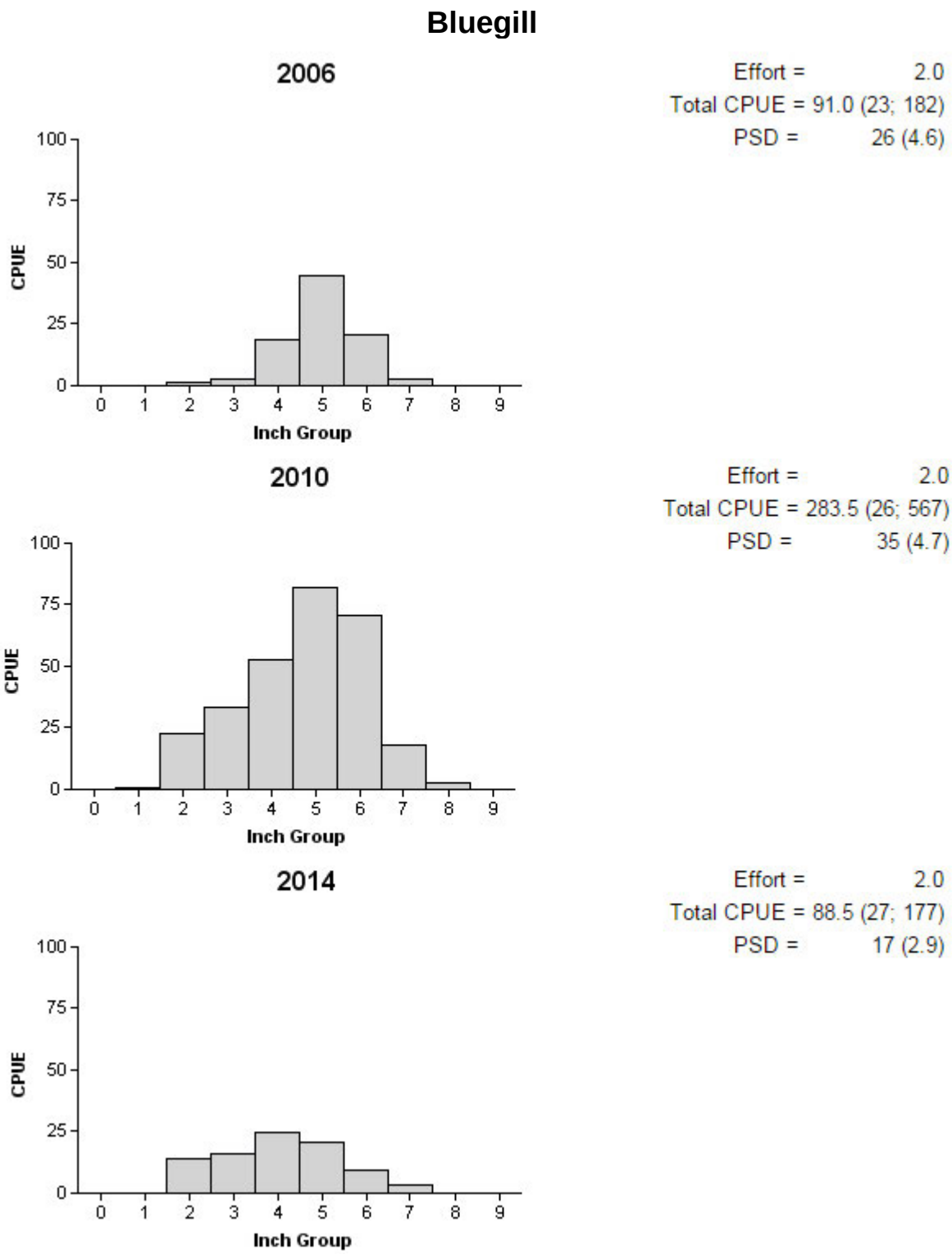

Figure 3. Number of Bluegill caught per hour (CPUE) and population indices (RSE and N for CPUE and SE for size structure are in parentheses) for fall electrofishing surveys, Lavon Reservoir, Texas, 2006, 2010, and 2014.

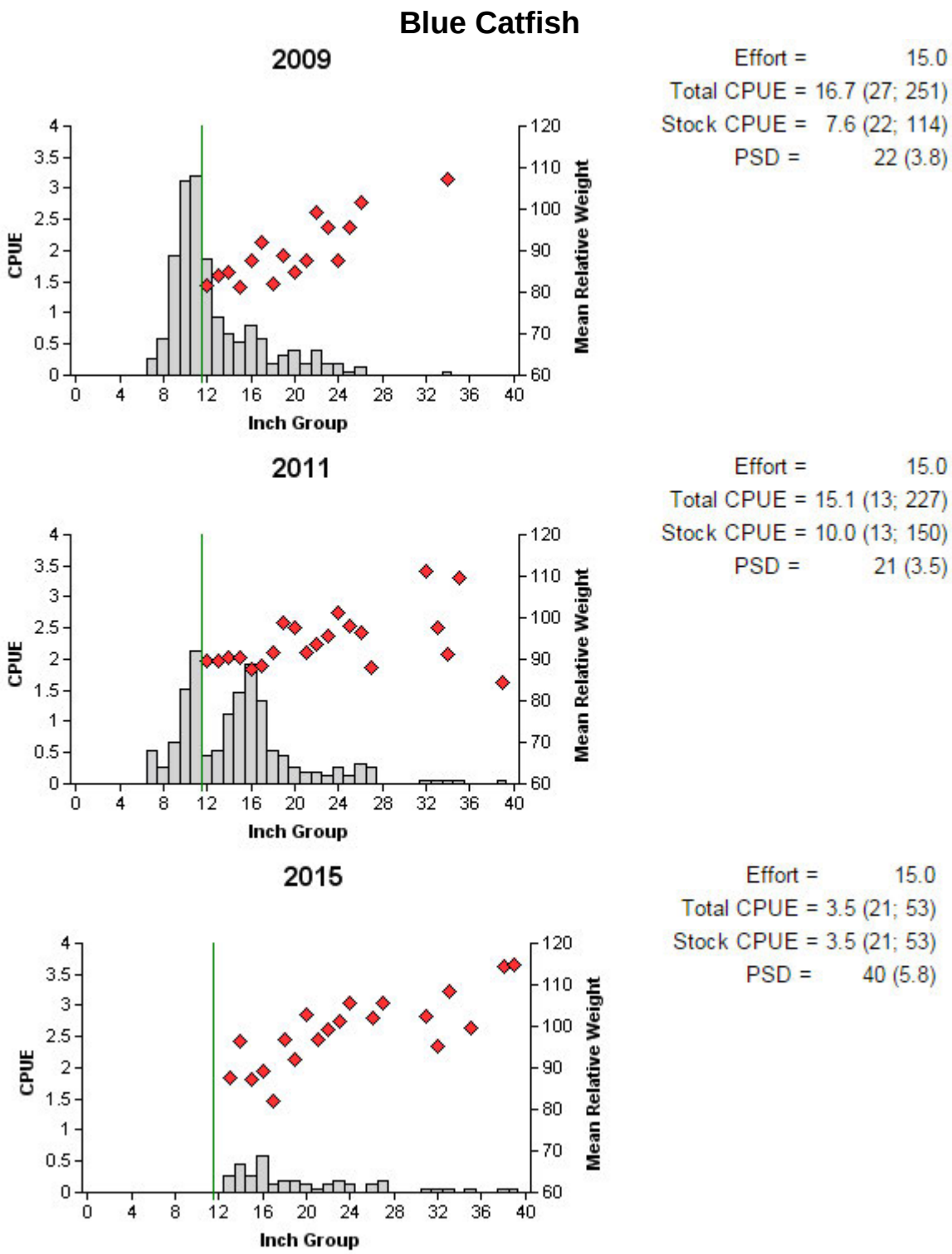

Figure 4. Number of Blue Catfish caught per net night (CPUE, bars), mean relative weight (diamonds), and population indices (RSE and N for CPUE and SE for size structure are in parentheses) for spring gill net surveys, Lavon Reservoir, Texas, 2009, 2011, and 2015. Vertical lines represent length limit at time of collection.

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Channel Catfish

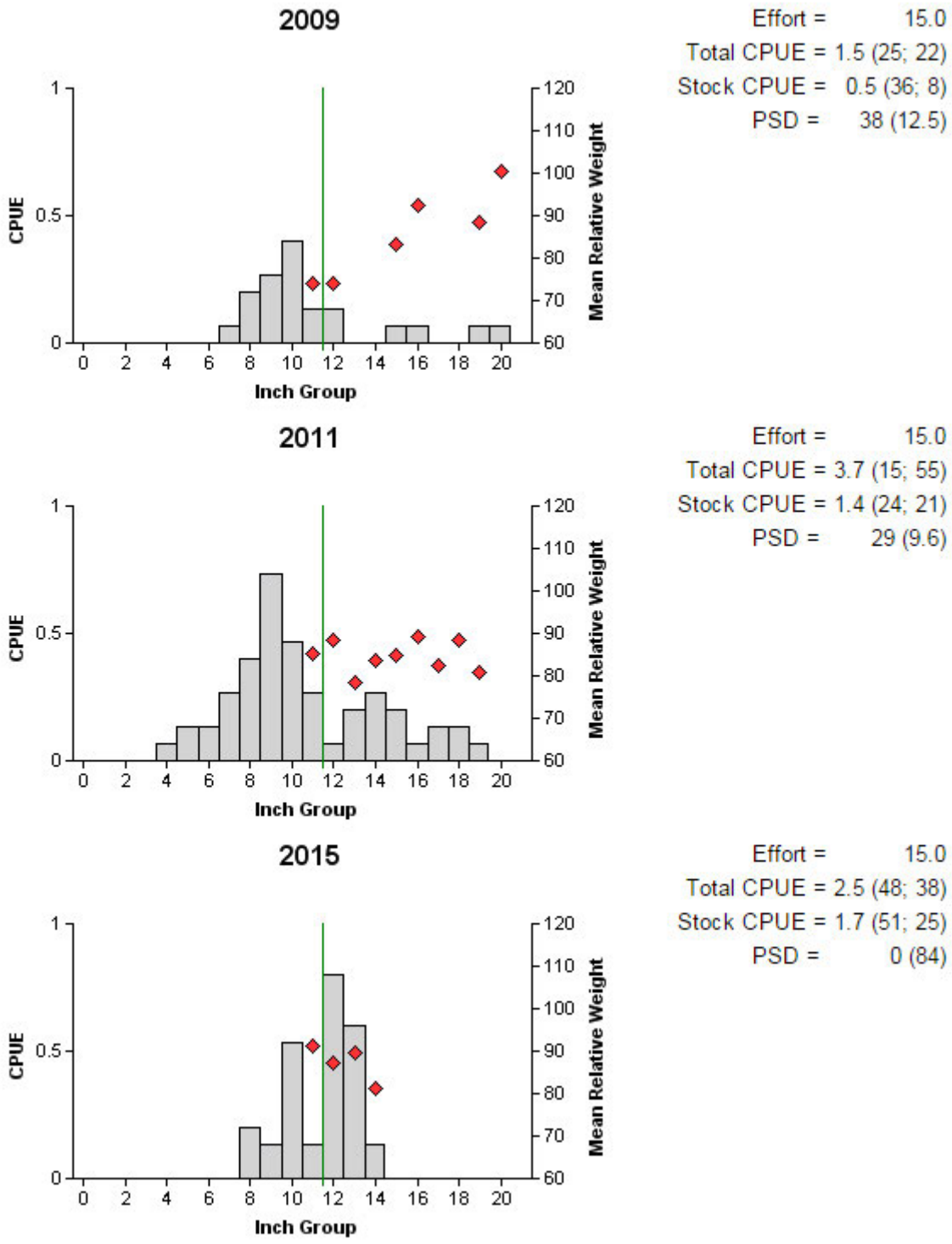


Figure 5. Number of Channel Catfish caught per net night (CPUE, bars), mean relative weight (diamonds), and population indices (RSE and N for CPUE and SE for size structure are in parentheses) for spring gill net surveys, Lavon Reservoir, Texas, 2009, 2011, and 2015. Vertical lines represent length limit at time of collection.

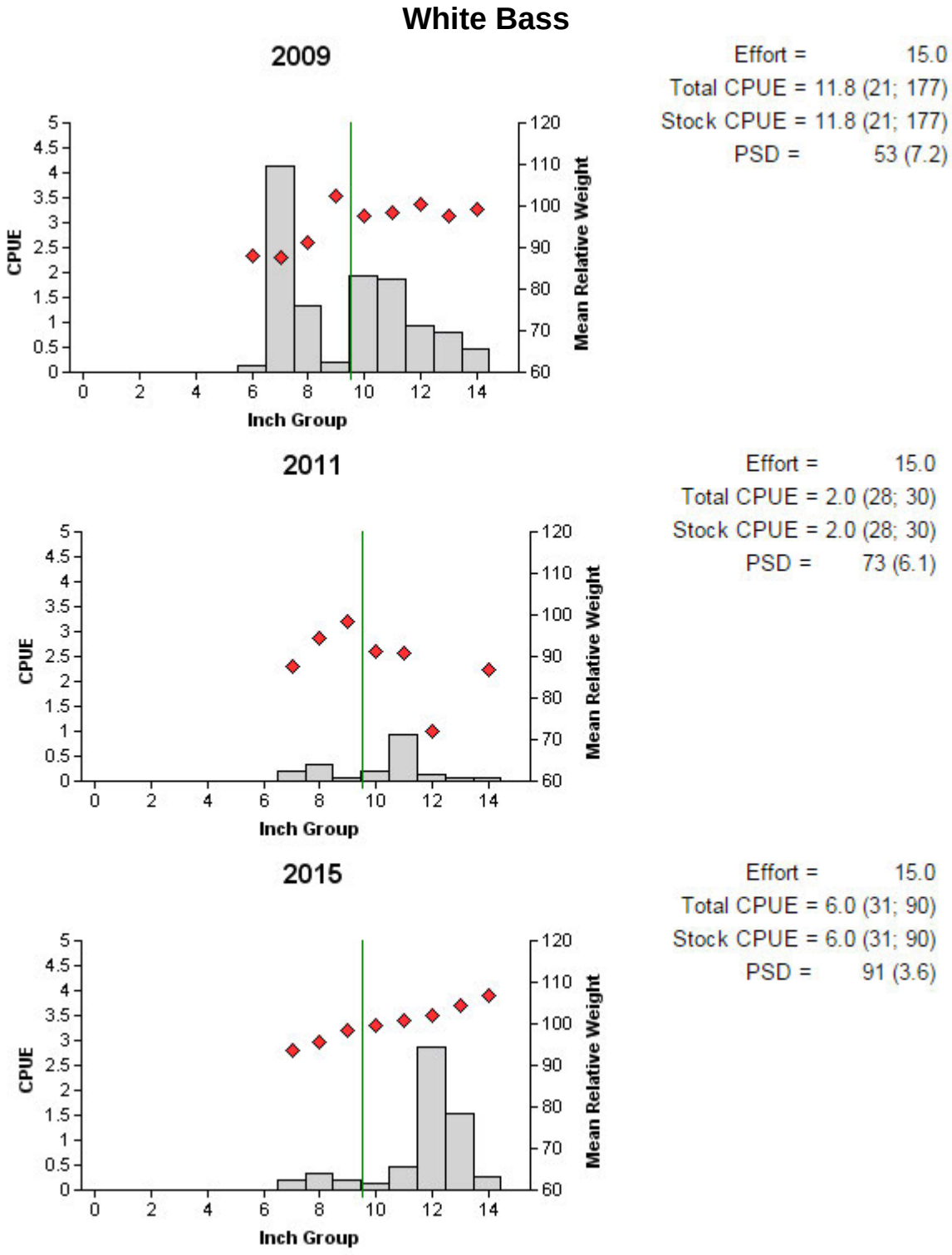


Figure 6. Number of White Bass caught per net night (CPUE, bars), mean relative weight (diamonds), and population indices (RSE and N for CPUE and SE for size structure are in parentheses) for spring gill net surveys, Lavon Reservoir, Texas, 2009, 2011, and 2015. Vertical lines represent length limit at time of collection.

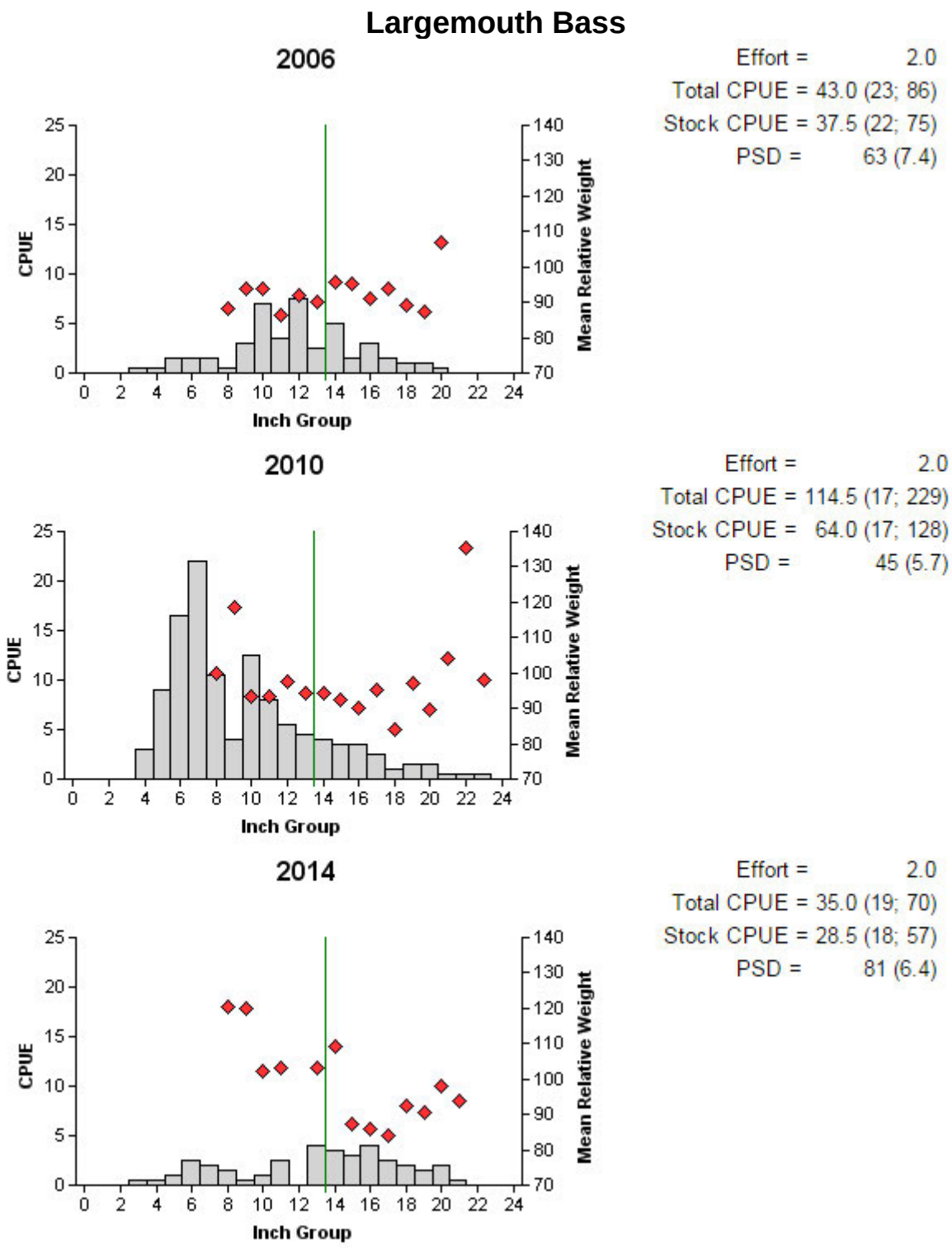


Figure 7. Number of Largemouth Bass caught per hour (CPUE, bars), mean relative weight (diamonds), and population indices (RSE and N for CPUE and SE for size structure are in parentheses) for fall electrofishing surveys, Lavon Reservoir, Texas, 2006, 2010, and 2014. Vertical lines represent length limit at time of collection.

Table 7. Results of genetic analysis of Largemouth Bass collected by fall electrofishing, Lavon Reservoir, Texas, 1990, 1996, 1999, 2002, 2006, and 2014. FLMB = Florida Largemouth Bass, NLMB = Northern Largemouth Bass, Intergrade = hybrid between a FLMB and a NLMB. Genetic composition was determined by electrophoresis prior to 2005 and with micro-satellite DNA analysis since 2005.

		Number of fish				
Year	Sample size	FLMB	Intergrade	NLMB	% FLMB alleles	% FLMB
1990	36	1	6	29	6.9	2.8
1996	40	1	37	2	52.6	2.5
1999	33	1	17	15	23.5	3.0
2002	24	0	7	17	10.4	0.0
2006	30	1	24	5	42.0	3.3
2014	30	2	23	5	39.0	6.7

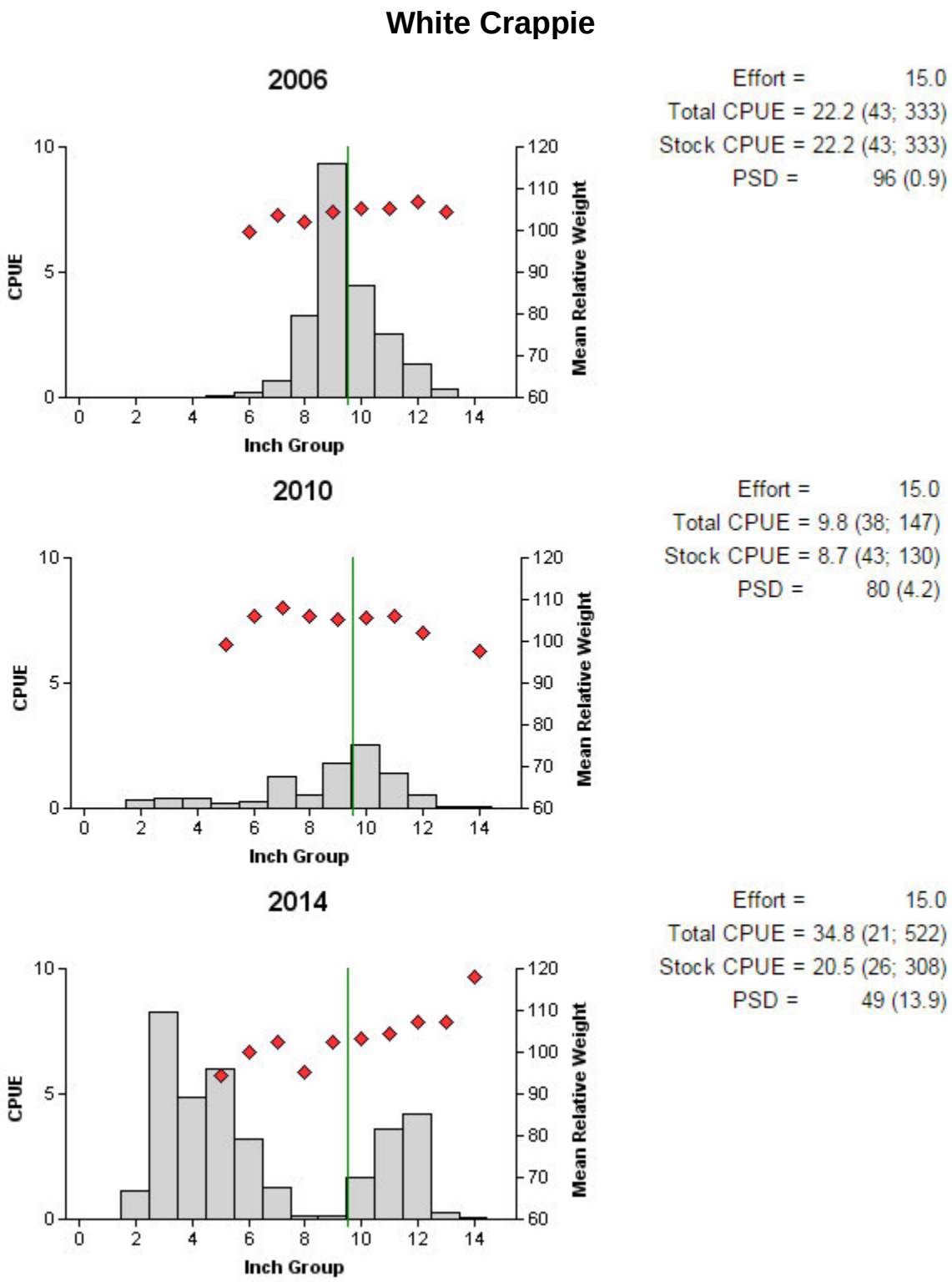


Figure 8. Number of White Crappie caught per net night (CPUE, bars), mean relative weight (diamonds), and population indices (RSE and N for CPUE and SE for size structure are in parentheses) for fall trap netting surveys, Lavon Reservoir, Texas, 2006, 2010, and 2014. Vertical lines represent length limit at time of collection.

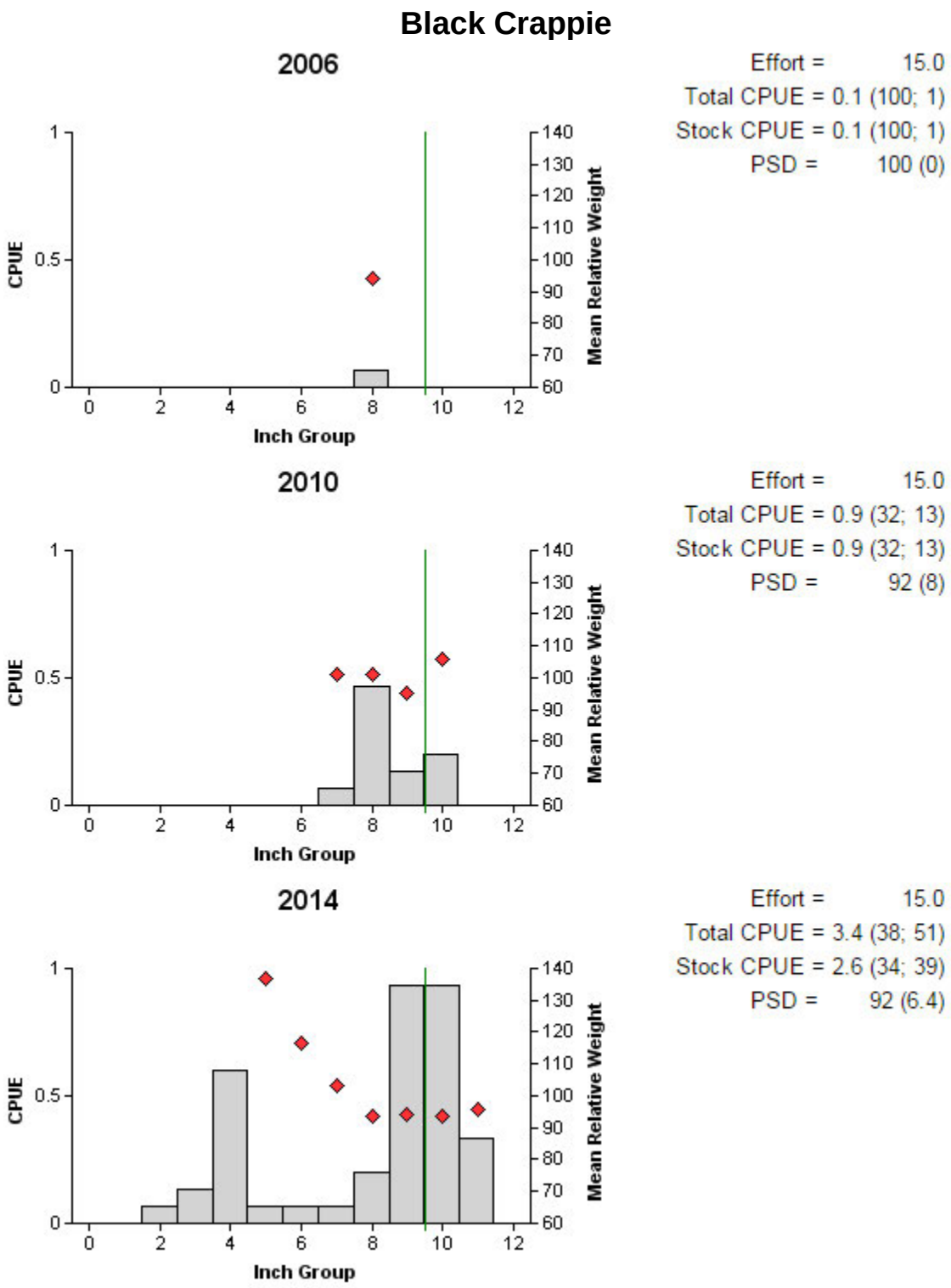


Figure 9. Number of Black Crappie caught per net night (CPUE, bars), mean relative weight (diamonds), and population indices (RSE and N for CPUE and SE for size structure are in parentheses) for fall trap netting surveys, Lavon Reservoir, Texas, 2006, 2010, and 2014. Vertical lines represent length limit at time of collection.

Table 8. Proposed sampling schedule for Lavon Reservoir, Texas. Survey period is June through May. Gill netting surveys are conducted in the spring, while electrofishing and trap netting surveys are conducted in the fall. Standard survey denoted by S.

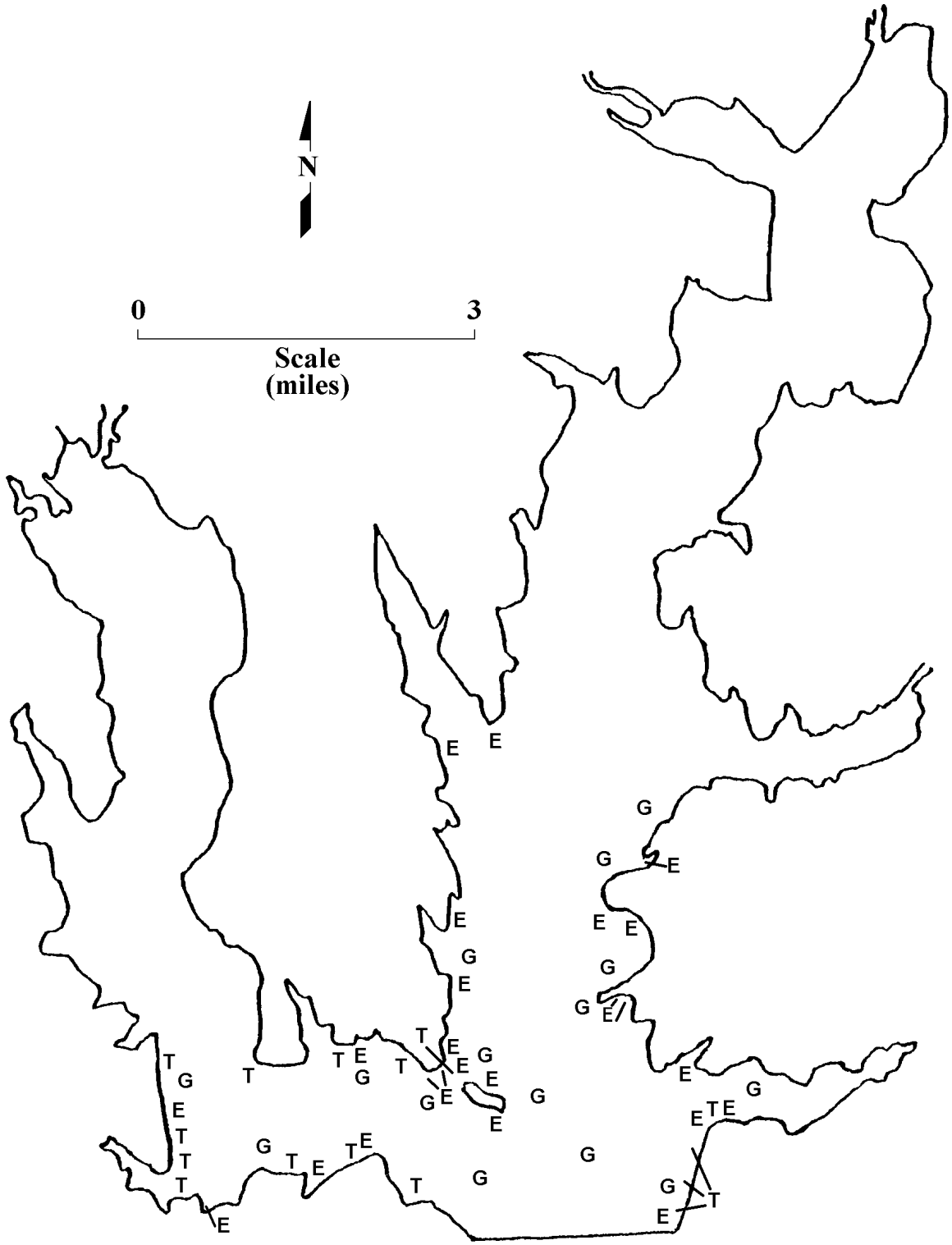
Survey year	Electrofish Fall(Spring)	Trap net	Gill net	Habitat		Access	Creel survey	Report
				Structural	Vegetation			
2015-2016								
2016-2017								
2017-2018								
2018-2019	S	S	S		S	S	S	S

APPENDIX A

Number (N) and catch rate (CPUE) of all target species collected from all gear types from Lavon Reservoir, Texas, 2014-2015. Sampling effort was 15 net nights for gill netting, 15 net nights for trap netting, and 2 hours for electrofishing.

	Gill Netting		Trap Netting		Electrofishing	
Species	N	CPUE	N	CPUE	N	CPUE
Gizzard Shad					811	405.5
Threadfin Shad					28	14.0
Blue Catfish	53	3.5				
Channel Catfish	38	2.5				
White Bass	90	6.0				
Green Sunfish					8	4.0
Warmouth					9	4.5
Orangespotted Sunfish					32	16.0
Bluegill					177	88.5
Longear Sunfish					171	85.5
Largemouth Bass					70	35.0
White Crappie			522	34.8		
Black Crappie			51	3.4		

APPENDIX B



Location of sampling sites, Lavon Reservoir, Texas, 2014-2015. Electrofishing, trap netting, and gill netting stations are indicated by E, T, and G, respectively. Water level was 12.5 feet below conservation for electrofishing, 12.9 feet below during trap netting, and 7.1 feet below during gill netting.

APPENDIX C

Historical catch rates of targeted species by gear type for Lavon Reservoir, Texas, 1996, 1999, 2002, 2006, 2009, 2010, and 2014.

		Year							
Gear	Species	1996[a]	1999	2002[b]	2006[b]	2009	2010[b]	2014[b]	**Avg.**
Gill Netting	Blue catfish	1.1	8.3	14.8	16.7	15.5	15.1	3.5	**10.7**
(fish/net night)	Channel catfish	1.9	2.5	0.9	1.5	1.3	3.7	2.5	**2.0**
	Flathead catfish	0.0	0.0	0.0	0.1	0.0	0.1		**0.0**
	White bass	3.8	3.8	2.5	0.1	11.8	2.0	6.0	**4.3**
	Striped bass	1.3	1.5	0.1	0.1	0.1	0.2		**0.5**
Electrofishing	Gizzard shad	202.5	215.5	209.5	208.0		2450.0	405.5	**527.3**
(fish/hour)	Threadfin shad	120.5	330.0	58.5	832.0		170.5	14.0	**217.9**
	Green sunfish	1.5	4.0	0.0	0.0		6.5	4.0	**2.3**
	Warmouth	0.5	3.0	2.5	8.0		14.5	4.5	**4.7**
	Orangespotted sunfish	0.0	0.0	2.5	0.0		1.0	16.0	**2.3**
	Bluegill	33.0	40.5	79.0	91.0		283.5	88.5	**87.9**
	Longear sunfish	4.0	88.0	66.5	65.5		244.5	85.5	**79.1**
	Redear sunfish	0.0	0.0	0.0	1.0		3.0	0.0	**0.6**
	Largemouth bass	9.0	66.0	18.5	43.0		114.5	35.0	**40.9**
Trap Netting	White Crappie	3.5	17.8	17.5	22.2		9.8	34.8	**15.1**
(fish/net night)	Black Crappie	0.0	0.0	0.0	0.1		0.9	3.4	**0.6**

[a] Trap netting was conducted in January 1997.

[b] Gill netting was conducted in the spring of the following year.

ATTACHMENT TR-10

Existing Entrainment Performance Studies

No studies have been conducted at the Ray Olinger Power Plant or Lake Lavon documenting technology efficacy or through-facility entrainment survival. A literature review was conducted, and no studies were found that are comparable to the Ray Olinger Power Plant or Lake Lavon.