



Administrative Package Cover Page

This file contains the following documents:

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



Portada de Paquete Administrativo

Este archivo contiene los siguientes documentos:

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



TEXAS COMMISSION ON ENVIRONMENTAL QUALITY

PLAIN LANGUAGE SUMMARY FOR TPDES OR TLAP PERMIT APPLICATIONS

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

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

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

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

ENGLISH TEMPLATE FOR TPDES or TLAP NEW/RENEWAL/AMENDMENT APPLICATIONS Enter 'INDUSTRIAL' or 'DOMESTIC' here 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.

Messer LLC (CN603509266) operates an ASU Plant (RN110995396), an Air Separation Unit. The facility is located at 11605 Strang Road, in La Porte, Harris County, Texas 77571. The facility is requesting renewal of TPDES Permit WQ0005108000.

Discharges from the facility are expected to contain total suspended solids, oil and grease and copper. Wastewater generated at the facility is treated by GAC (Granular Activated Carbon) beds using a lead-lag system prior to discharging from Outfall 001. Wastewater generated at the facility includes process wastewater, cooling tower blowdown, filter backwash water, and utility wastewater, which is discharged via Outfall 001. Process wastewater consists of compressor condensate that is generated from the compression stage of the gas separation process. The condensate generated from the Main Air Compressor (MAC) is treated through GAC (Granular Activated Carbon) beds using a lead-lag system. Cooling tower blowdown is discharged in order to maintain a certain water quality in the cooling tower. Filter backwash water is produced when the side stream filter for the cooling

tower is backwashed periodically with the water supplied to the cooling tower. Utility wastewater includes, but is not limited to, steam condensate and emergency firewater washdown. Wastewater is monitored prior to being routed to a facility storm water ditch, and are then discharged via Outfall 001 to San Jacinto Bay. Discharges of storm water are authorized under the TPDES Stormwater Multi-Sector General Permit (TXR05CH73) and commingle with discharges authorized under the facility's TPDES permit no. WQ0005108000. The facility is requesting renewal of TPDES Permit WQ0005108000 to discharge effluent not exceeding an average flow of 0.25 MGD and a maximum flow of 0.35 MGD. The facility is also requesting a reduction/elimination of copper limits. The facility installed Granular Activated Carbon (GAC) copper beds in October 2022 to treat the condensate generated from the Main Air Compressor (major source of copper in the wastewater). Based on the analytical results for copper for the past 18-months, the average copper concentrations for the period from 10/26/22 to 3/20/24 (after the installation of copper beds) is 0.0248 mg/L, which is less than 70% of daily average limit (0.0305 mg/L) and less than 85% of daily average limit (0.037 mg/L). The average copper concentration for that period is approximately 57% of the daily average limit. Based on this pattern of reduction in the analytical values of copper, the facility requests a reduction/elimination of copper effluent limits in the renewed permit. The analytical sample values for copper after the installation of the copper beds will be provided to the TCEQ upon request.

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

AGUAS RESIDUALES Introduzca 'INDUSTRIALES' o 'DOMÉSTICAS' aquí /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.

Messer LLC (CN603509266) opera una planta ASU (RN110995396), una Unidad de Separación de Aire. La instalación está ubicada en el 11605 Strang Road, en La Porte, Condado de Harris, Texas 77571. La instalación está solicitando renovación del Permiso TPDES WQ0005108000.

Se espera que las descargas de la instalación contengan sólidos suspendidos totales, aceites y grasas y cobre. Las aguas residuales generadas en la instalación son tratadas por lechos de GAC (Carbón Activado Granular) utilizando un sistema de retardo de plomo antes de la descarga del Desagüe 001. Las aguas residuales generadas en la instalación incluyen aguas residuales de proceso, la purga de la torre de enfriamiento, el agua de retrolavado del filtro y las aguas residuales de los servicios públicos, que se descargan a través del Desagüe 001. Las aguas residuales de proceso consisten en condensado del compresor que se genera durante la etapa de compresión del sistema de separación de gases. El condensado generado por el Compresor de Aire Principal (MAC) se trata a través de lechos GAC (Carbón Activado Granular) utilizando un sistema de retardo de plomo. La purga de la torre de enfriamiento se descarga para mantener una cierta calidad del agua en la torre de enfriamiento. El agua de retrolavado del filtro se produce cuando el filtro de flujo lateral de la torre de enfriamiento se lava periódicamente con el agua suministrada a la torre de enfriamiento. Las aguas residuales de los servicios públicos incluyen, entre otras, el condensado de vapor y el lavado de emergencia de aguas contra incendios. Las aguas residuales se monitorean antes de ser enviadas a una zanja de aguas pluviales de la instalación, y luego se descargan a través del Desagüe 001 a la Bahía de San Jacinto. Las descargas de aguas pluviales están autorizadas bajo el Permiso General Multisectorial de Aguas Pluviales (TXR05CH73) de TPDES y se mezclan con las descargas autorizadas bajo el permiso TPDES no. WQ0005108000 de la instalación. La instalación está solicitando la renovación del permiso TPDES WQ0005108000 para descargar efluentes que no excedan un flujo promedio de 0.25 MGD y un flujo máximo de 0.35 MGD. La instalación también está solicitando una reducción/eliminación de los límites de cobre. La instalación instaló lechos de cobre de Carbón Activado Granular (GAC) en octubre de 2022 para tratar el condensado generado por el Compresor de Aire Principal (principal fuente de cobre en las aguas residuales). Con base en los resultados analíticos de cobre de los últimos 18 meses, las concentraciones promedio de cobre para el período del 10/26/22 al 3/20/24 (después de la instalación de los lechos de cobre) son de 0.0248 mg/L, que es menos del 70% del límite promedio diario (0.0305 mg/L) y menos del 85% del límite promedio diario (0.037 mg/L). La concentración promedio de cobre para ese período es aproximadamente el 57% del límite promedio diario. Con base en este patrón de reducción en los valores analíticos del cobre, la instalación solicita una reducción/eliminación de los límites de efluentes de cobre en el permiso renovado. Los valores de las muestras analíticas de cobre después de la instalación de los lechos de cobre se proporcionarán a la TCEQ si lo solicita. . 16. Elija del menú desplegable tratado por .

TEXAS COMMISSION ON ENVIRONMENTAL QUALITY



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

PERMIT NO. WQ0005108000

APPLICATION. Messer LLC, 11605 Strang Road, La Porte, Texas 77571, which owns an air separation plant, has applied to the Texas Commission on Environmental Quality (TCEQ) to amend Texas Pollutant Discharge Elimination System (TPDES) Permit No. WQ0005108000 (EPA I.D. No. TX0135101) to authorize reduction/elimination of the copper effluent limits. The facility is located at 11605 Strang Road, near the city of La Porte, in Harris County, Texas 77571. The discharge route is from the plant site directly to San Jacinto Bay. TCEQ received this application on April 26, 2024. The permit application will be available for viewing and copying at La Porte Public Library, 600 South Broadway Street, La Porte, in Harris County, Texas prior to the date this notice is published in the newspaper. The application, including any updates, and associated notices are available electronically at the following webpage: <https://www.tceq.texas.gov/permitting/wastewater/pending-permits/tpdes-applications>. This link to an electronic map of the site or facility's general location is provided as a public courtesy and not part of the application or notice. For the exact location, refer to the application.

<https://gisweb.tceq.texas.gov/LocationMapper/?marker=-95.053333,29.704444&level=18>

The application is subject to the goals and policies of the Texas Coastal Management Program and must be consistent with the applicable Coastal Management Program goals and policies.

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 Messer LLC at the address stated above or by calling Rami Qafisheh, La Porte Zone Production Manager, at 409-240-9150.

Issuance Date: June 4, 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. WQ0005108000

SOLICITUD. Messer LLC, 11605 Strang Road, La Porte, Texas 7757, propietario de una planta de separación de aire, ha solicitado a la Comisión de Calidad Ambiental de Texas (TCEQ) enmendar el Permiso No. WQ0005108000 (EPA I.D. No. TX0135101) del Sistema de Eliminación de Descargas de Contaminantes de Texas (TPDES) para autorizar la reducción/eliminación de los límites de efluentes de cobre. La planta está ubicada en el 11605 Strang Road, cerca de la ciudad de La Porte, en el Condado de Harris, Texas 77571. La ruta de descarga es desde el sitio de la planta hasta directamente a la Bahía de San Jacinto. La TCEQ recibió esta solicitud el día 26 de abril de 2024. La solicitud para el permiso estará disponible para leerla y copiarla en la Biblioteca Pública de La Porte, 600 South Broadway Street, La Porte, en el Condado de Harris, antes de la fecha de publicación de este aviso en el periódico. Este enlace a un mapa electrónico de la ubicación general del sitio o de la instalación es proporcionado como una cortesía y no es parte de la solicitud o del aviso. Para la ubicación exacta, consulte la solicitud.

<https://gisweb.tceq.texas.gov/LocationMapper/?marker=-95.053333,29.704444&level=18>

El Director Ejecutivo de la TCEQ ha revisado esta medida para ver si está de acuerdo con los objetivos y las regulaciones del Programa de Administración Costero de Texas (CMP) de acuerdo con las regulaciones del Consejo Coordinador de la Costa (CCC) y ha determinado que la acción es conforme con las metas y regulaciones pertinentes del CMP.

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

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

una audiencia administrativa de lo contencioso.

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

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

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

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

designe cual lista(s) y envía por correo su pedido a la Oficina del secretario Principal de la TCEQ.

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

También se puede obtener información adicional por parte de Messer LLC en la dirección indicada arriba o llamando a Rami Qafisheh, Gerente de producción Zona de La Porte al 409-240-9150.

Fecha de emisión el 4 de junio de 2024



April 26, 2024

Hand Delivery

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

Re: Submittal of Permit Renewal and Major Amendment Request Application
Messer LLC
TPDES Permit No. WQ0005108000
La Porte Air Separation Unit
11605 Strang Road, La Porte, TX 77571
Regulated Entity Number: RN110995396
Customer Reference Number: CN603509266

Applications Review and Processing Team,

On behalf of Messer LLC, please find attached the Texas Pollutant Discharge Elimination System (TPDES) permit renewal and major amendment request application for the Messer LLC La Porte Air Separation Unit (ASU) Facility. Three copies of the application package are included. Wet signatures for the three signature pages will be provided next week.

If you have any questions, please contact me at (609) 213-7245.

Sincerely,

A handwritten signature in black ink, reading "Andrea Wagner".

Andrea Wagner
Project Manager, AECOM

**TEXAS COMMISSION ON ENVIRONMENTAL
QUALITY**

**TPDES PERMIT RENEWAL APPLICATION
DRAFT**

MESSER LLC
LA PORTE AIR SEPARATION UNIT
11605 STRANG ROAD
LA PORTE, TEXAS 77571

TPDES permit number WQ0005108000

EPA ID number TX0135101

Prepared by:

AECOM
19219 Katy Freeway, Suite 100
Houston, Texas 77094

April 2024

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INDUSTRIAL ADMINISTRATIVE REPORT 1.1

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INDUSTRIAL ADMINISTRATIVE REPORT 1.0



TEXAS COMMISSION ON ENVIRONMENTAL QUALITY

INDUSTRIAL WASTEWATER PERMIT APPLICATION CHECKLIST

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

APPLICANT NAME: Messer LLC

PERMIT NUMBER (If new, leave blank): WQ00_05108000

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

	Y	N		Y	N
Administrative Report 1.0	<input checked="" type="checkbox"/>	<input type="checkbox"/>	Worksheet 8.0	<input type="checkbox"/>	<input checked="" type="checkbox"/>
Administrative Report 1.1	<input checked="" type="checkbox"/>	<input type="checkbox"/>	Worksheet 9.0	<input type="checkbox"/>	<input checked="" type="checkbox"/>
SPIF	<input checked="" type="checkbox"/>	<input type="checkbox"/>	Worksheet 10.0	<input type="checkbox"/>	<input checked="" type="checkbox"/>
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Worksheet 1.0	<input checked="" type="checkbox"/>	<input type="checkbox"/>	Original USGS Map	<input checked="" type="checkbox"/>	<input type="checkbox"/>
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Worksheet 4.0	<input checked="" type="checkbox"/>	<input type="checkbox"/>	Design Calculations	<input type="checkbox"/>	<input checked="" type="checkbox"/>
Worksheet 4.1	<input type="checkbox"/>	<input checked="" type="checkbox"/>	Solids Management Plan	<input type="checkbox"/>	<input checked="" type="checkbox"/>
Worksheet 5.0	<input checked="" type="checkbox"/>	<input type="checkbox"/>	Water Balance	<input checked="" type="checkbox"/>	<input type="checkbox"/>
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Worksheet 7.0	<input type="checkbox"/>	<input checked="" type="checkbox"/>			

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-inst¹](#)).

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

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

Applicant Name: Messer LLC

Permit No.: WQ0005108000

EPA ID No.: TX0135101

Expiration Date: October 22, 2024

- 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: Please see Attachment AR.1.0.1.f-Major Amendment Request.

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)	<input type="checkbox"/> \$350	<input type="checkbox"/> \$350	<input type="checkbox"/> \$315	<input type="checkbox"/> \$150
Minor facility subject to EPA categorical effluent guidelines (40 CFR Parts 400-471)	<input type="checkbox"/> \$1,250	<input checked="" type="checkbox"/> \$1,250	<input type="checkbox"/> \$1,215	<input type="checkbox"/> \$150
Major facility	N/A ²	<input type="checkbox"/> \$2,050	<input type="checkbox"/> \$2,015	<input type="checkbox"/> \$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: 702415 & 702416

Copy of voucher attachment: AR.1.0-1h - Copy of Applicant Fee Payment

Item 2. Applicant Information (Instructions, Pages 26)

a. Customer Number, if applicant is an existing customer: CN603509266

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: Messer LLC.

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: N/A Full Name (Last/First Name): Agle Samuel

Title: Vice President of Operations Credential: N/A

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

☒ Yes ☐ No

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>

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

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

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

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

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

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

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

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

Prefix: Click to enter text.

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

Title: Click to enter text.

Credential: Click to enter text.

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

☐ Yes ☐ No

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

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

a. Complete 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.1.0.4.a – Core Data Form

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: N/A Full Name (Last/First Name): Qafisheh, Rami

Title: La Porte Zone Production Manager Credential: N/A

Organization Name: Messer LLC

Mailing Address: 11605 Strang Road

City/State/Zip: La Porte, TX

Phone No: 409-204-9150

Email: rami.qafisheh@messer-us.com

b. ☐ Administrative Contact ☒ Technical Contact

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

Title: Project Manager

Credential: N/A

Organization Name: AECOM

Mailing Address: 625 West Ridge Pike, Suite E-100 City/State/Zip: Conshohocken, Pennsylvania, 19428

Phone No: 609-213-7245

Email: andrea.wagner@aecom.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: N/A Full Name (Last/First Name): Qafisheh Rami

Title: La Porte Zone Production Manager Credential: N/A

Organization Name: Messer LLC

Mailing Address: 11605 Strang Road

City/State/Zip: La Porte, TX 77571

Phone No: 409-204-9150

Email: rami.qafisheh@messer-us.com

b. Prefix: N/A Full Name (Last/First Name): Armstrong Hunter

Title: Production Supervisor Credential: N/A

Organization Name: Messer LLC

Mailing Address: 11605 Strang Road

City/State/Zip: La Porte, TX 77571

Phone No: 281-687-0261

Email: hunter.armstrong@messer-us.com

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: N/A Full Name (Last/First Name): Qafisheh Rami

Title: La Porte Zone Production Manager Credential: N/A

Organization Name: Messer LLC

Mailing Address: 11605 Strang Road

City/State/Zip: La Porte, TX 77571

Phone No: 409-204-9150

Email: rami.qafisheh@messer-us.com

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

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

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

Title: La Porte Zone Production Manger Credential: N/A

Organization Name: Messer LLC

Mailing Address: 11605 Strang Road

City/State/Zip: La Porte, TX 77571

Phone No: 409-204-9150

Email: rami.qafisheh@messer-us.com

Item 9. Notice Information (Instructions, Pages 28)

a. Individual Publishing the Notices

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

Title: La Porte Zone Production Manger Credential: N/A

Organization Name: Messer LLC

Mailing Address: 11605 Strang Road

City/State/Zip: La Porte, TX 77571

Phone No: 409-204-9150

Email: rami.qafisheh@messer-us.com

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

☒ E-mail: rami.qafisheh@messer-us.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: N/A Full Name (Last/First Name): Qafisheh Rami

Title: La Porte Zone Production Manager Credential: N/A

Organization Name: Messer LLC

Phone No: 409-204-9150

Email: rami.qafisheh@messer-us.com

d. Public Viewing Location Information

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

Public building name: La Porte Public Library
Section / Information Desk

Location within the building: Reference

Physical Address of Building: 600 South Broadway Street

City: La Porte, TX 77571

County: Harris

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.1.0-9.f – Plain Language Summary Template

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.1.0.9.g – PIP Form

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

a. TCEQ issued Regulated Entity Number (RN), if available: RN110995396.

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): Messer Air Separation 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: Messer LLC

Mailing Address: 11605 Strang Road

City/State/Zip: La Porte, TX 77571

Phone No: 409-204-9150

Email: rami.qafisheh@messer-us.com

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

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

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

or Organization Name: Messer LLC

Mailing Address: 11605 Strang Road

City/State/Zip: La Porte, TX 77571

Phone No: 409-204-9150

Email: rami.qafisheh@messer-us.com

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

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

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

or Organization Name: Click to enter text.

Mailing Address: Click to enter text.

City/State/Zip: Click to enter text.

Phone No: Click to enter text.

Email: Click to enter text.

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

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

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

or Organization Name: Click to enter text.

Mailing Address: Click to enter text.

City/State/Zip: Click to enter text.

Phone No: Click to enter text.

Email: Click to enter text.

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

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

☒ Three-miles downstream information

☒ Applicant's property boundaries

☐ Treatment facility boundaries

☒ Labeled point(s) of discharge

☒ Highlighted discharge route(s)

☐ Effluent disposal site boundaries

☐ All wastewater ponds

☐ Sewage sludge disposal site

☐ New and future construction

Attachment: AR.1.0.11.b - USGS Topographic Map

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

☐ Yes ☐ No or New Permit

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

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

☒ Yes ☐ No or New Permit

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

- f. City nearest the outfall(s): La Porte

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

- 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: Click to enter text.

- 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

Item 13. Signature Page (Instructions, Page 33)

Permit No: WQ0005108000

Applicant Name: Messer LLC

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

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

Signatory name (typed or printed): Samuel Agle

Signatory title: Vice President of Operations

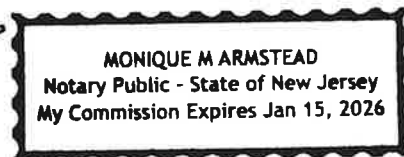
Signature: 
(Use blue ink)

Date: 4/25/2024

Subscribed and Sworn to before me by the said _____
on this 25th day of April, 2024.

My commission expires on the 15th day of January, 2026.


Notary Public



[SEAL]

County, Texas

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

INDUSTRIAL ADMINISTRATIVE REPORT 1.1

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.1.1.1.a - Adjacent Landowner Map and AR.1.1.1 - Adjacent Landowner map cross-reference list

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

☐ Readable/Writeable CD ☒ Four sets of labels

Attachment: AR.1.1.1.b - Adjacent Landowner Labels - 4 sets

- d. Provide the source of the landowners' names and mailing addresses: Harris County Appraisal District

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

☐ Yes ☒ No

If yes, provide the location and foreseeable impacts and effects this application has on the land(s): 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.1.1.2 - Original Photographs

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: AR.SPIF – SPIF Form

WATER QUALITY PERMIT PAYMENT SUBMITTAL FORM

WATER QUALITY PERMIT

PAYMENT SUBMITTAL FORM

Use this form to submit the Application Fee, if mailing the payment. (Instructions, Page 36-37)

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

Mail this form and the check or money order to:

BY REGULAR U.S. MAIL

Texas Commission on Environmental Quality
Financial Administration Division
Cashier's Office, MC-214
P.O. Box 13088
Austin, Texas 78711-3088

BY OVERNIGHT/EXPRESS MAIL

Texas Commission on Environmental Quality
Financial Administration Division
Cashier's Office, MC-214
12100 Park 35 Circle
Austin, Texas 78753

Fee Code: WQP **Permit No: WQ0005108000**

1. Check or Money Order Number: N/A (paid online)
2. Check or Money Order Amount: Click to enter text.
3. Date of Check or Money Order: Click to enter text.
4. Name on Check or Money Order: Click to enter text.
5. APPLICATION INFORMATION

Name of Project or Site: Messer ASU Plant

Physical Address of Project or Site: 11605 Strang Road, La Porte, TX 77571.

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

Attachment: N/A

Staple Check or Money Order in This Space

ATTACHMENT 1 INDIVIDUAL INFORMATION

ATTACHMENT 1

INDIVIDUAL INFORMATION

Item 1. Individual information (Instructions, Page 38)

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

Prefix (Mr., Ms., or Miss): N/A

Full legal name (first, middle, and last): N/A

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

Date of Birth: Click to enter text.

Mailing Address: Click to enter text.

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

Phone No.: Click to enter text.

Fax No.: Click to enter text.

E-mail Address: Click to enter text.

CN: Click to enter text.

CHECKLIST OF COMMON DEFICIENCIES

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)
(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

TECHNICAL REPORT 1.0



TEXAS COMMISSION ON ENVIRONMENTAL QUALITY INDUSTRIAL WASTEWATER PERMIT APPLICATION TECHNICAL REPORT 1.0

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

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

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

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

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

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

The Messer ASU is an air separation plant that falls under the SIC code 2813 (Industrial Gases) and NAICS Code 32120 (Industrial Gas Manufacturing). The unit produces GOX (Gaseous Oxygen), GAN (Gaseous Nitrogen), CDA (Clean Dry Air), Gaseous Neon, Kr/Xe (gaseous), LIN (liquid Nitrogen), LOX (liquid Oxygen), and LAR (liquid Argon) which are manufactured by low temperature distillation of liquid air. More information regarding the manufacturing process are provided in Attachment T.R.1.0.1.a-Facility Description.

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

Wastewater generated at the facility includes process wastewater, cooling tower blowdown, filter backwash water, and utility wastewater, which is discharged via Outfall 001. Process wastewater consists of compressor condensate that is generated from the compression stage of the gas separation process. The condensate from the Main Air Compressor is treated through GAC (Granular Activated Carbon beds) to treat for copper. Cooling tower blowdown is discharged in order to maintain a certain water quality in the cooling tower. Filter backwash water is produced when the side stream filter for the cooling tower is backwashed periodically with the water supplied to the cooling tower. Utility wastewater includes, but is not limited to, steam condensate and emergency firewater washdown. Wastewater is monitored prior to being routed to a facility storm water ditch and are then discharged via Outfall 001 to San Jacinto Bay. Discharges of storm water are authorized under the TPDES Stormwater Multi-Sector General Permit (TXR05CH73) and commingle with discharges authorized under the facility's TPDES permit no. WQ0005108000.

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
Ambient air	None	Oxygen (gas) (7782-44-7)
		Nitrogen (gas) (7727-37-9)
		Clean Dry Air (CDA)
		Neon (gas)
		Krypton (7439-90-9)/Xenon (7440-63-3) (Kr/Xe) (gas)
		Nitrogen (liquid)
		Oxygen (liquid)
		Argon (liquid) (7440-37-1)

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.O.1.d – Facility Map

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

☐ Yes ☒ No

If **yes**, provide background discussion: [Click to enter text.](#)

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

☒ Yes ☐ No

List source(s) used to determine 100-year frequency flood plain: Flood map 48201C0935M on the FEMA website (msc.fema.gov/portal), accessed March 2024.

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

Attachment: 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: [Click to enter text.](#)

Item 2. Treatment System (Instructions, Page 40)

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

Process wastewater generated at the facility consists of compressor condensate which is treated via granular activated carbon beds for the removal of copper. No other treatment processes are used for treating wastewater before being discharged through Outfall 001. Cooling water blowdown and non-process wastewater/filter backwash discharge into a storm water ditch on the east side of the property. The side stream filter treats a slipstream of the bulk recirculating cooling water. The filter is backwashed using the same water supplied to the cooling tower. The ASU process is enclosed, which limits contact of process materials in contact with storm water. Storm water is routed to perimeter ditches and authorized under the TCEQ's MSGP permit.

- 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.1.o.2.b – Water Balance Diagram

Item 3. Impoundments (Instructions, Page 40)

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

☐ Yes ☒ No

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

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

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

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

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

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

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

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

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

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

Impoundment Information

Parameter	Pond #	Pond #	Pond #	Pond #
Use Designation: (T) (D) (C) or (E)	N/A			
Associated Outfall Number				
Liner Type (C) (I) (S) or (A)				
Alt. Liner Attachment Reference				
Leak Detection System, Y/N				
Groundwater Monitoring Wells, Y/N				
Groundwater Monitoring Data Attachment				
Pond Bottom Located Above The Seasonal High-Water Table, Y/N				
Length (ft)				
Width (ft)				
Max Depth From Water Surface (ft), Not Including Freeboard				
Freeboard (ft)				
Surface Area (acres)				
Storage Capacity (gallons)				
40 CFR Part 257, Subpart D, Y/N				
Date of Construction				

Attachment: [Click to enter text.](#)

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

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

1. Liner data

☐ Yes ☐ No ☐ Not yet designed

2. Leak detection system or groundwater monitoring data

☐ Yes ☐ No ☐ Not yet designed

3. Groundwater impacts

☐ Yes ☐ No ☐ Not yet designed

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

Attachment: [Click to enter text.](#)

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

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

Attachment: N/A

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

Attachment: N/A

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

Attachment: N/A

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

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

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

For TLAP applications: Indicate the disposal method and each individual irrigation area **I**, evaporation pond **E**, or subsurface drainage system **S** by providing the appropriate letter designation for the disposal method followed by a numerical designation for each disposal

area in the space provided for **Outfall** number (e.g. E1 for evaporation pond 1, I2 for irrigation area No. 2, etc.).

Outfall Longitude and Latitude

Outfall No.	Latitude (Decimal Degrees)	Longitude (Decimal Degrees)
001	29.706005	-95.052258

Outfall Location Description

Outfall No.	Location Description
001	Directly into San Jacinto Bay

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

Outfall No.	Description of sampling point
001	Temperature - measured at the north end of the facility, prior to the effluent entering San Jacinto Bay
	All other parameters - measured at the effluent sampling station, located near the cooling tower, at the cooling water blowdown collection header, prior to mixing with other waters.

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	0.25	0.35	0.25	0.35	Existing

Outfall Discharge - Method and Measurement

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

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	N	Y	24	31	12

Outfall Wastestream Contributions**Outfall No. 001**

Contributing Wastestream	Volume (MGD)	Percent (%) of Total Flow
Process wastewater*	*	*
Cooling tower blowdown	0.20	80%
Filter backwash water and utility wastewater	0.05	20%
*Process wastewater, which consists of compressor condensate, is routed to the cooling tower system. As such, it is represented as part of the cooling tower blowdown.		

Outfall No. N/A

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

Outfall No. N/A

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

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

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.1.0.5.b-Chemical Information

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	1	200,000	300,000
Boilers	3	<500	500

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: N/A

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.
United Site Services	455120133
City of Houston POTW (Almeda Sims WWTP)	WQ0010495003

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: Permit required facility to implement control measures for the attainment of water quality-based effluent limitations for total copper within 3 years from date of permit issuance. Facility met the compliance schedule. Facility installed granular activated carbon beds for the removal of copper in October 2022.

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: [Click to enter text.](#)

Additionally, attach a copy of all tests performed which **have not** been submitted to the TCEQ or EPA. **Attachment:** [Click to enter text.](#)

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

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

☐ Yes ☒ No

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

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

- b. Attach the following information to the application:

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

Attachment: [Click to enter text.](#)

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

☐ Yes ☒ No

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

Attachment: [Click to enter text.](#)

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

☐ Yes ☒ No

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

Item 11. Radioactive Materials (Instructions, Page 46)

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

☐ Yes ☒ No

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

Radioactive Materials Mined, Used, Stored, or Processed

Radioactive Material Name	Concentration (pCi/L)

- 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)

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	S1013463A (Trinity River)	S1013463B (Lake Houston)		
Owner	-	-		
Operator	Coastal Water Authority	Coastal Water Authority		

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. TX1013463

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: [Click to enter text.](#)

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: [Click to enter text.](#)

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*: [Click to enter text.](#)

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.

Please see attachment AR.1.O.1.f-Major Amendment.

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

☐ Yes ☒ No

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

[Click to enter text.](#)

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

☐ Yes ☒ No

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

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
Inorganic Chemicals Manufacturing	415

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
AW – Oxygen and Nitrogen Production			
Oxygen		2200	Tons
Nitrogen		179	Tons

Click to enter text.

Item 14. Laboratory Accreditation (Instructions, Page 49)

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

- The laboratory is an in-house laboratory and is:
 - periodically inspected by the TCEQ; or
 - located in another state and is accredited or inspected by that state; or
 - performing work for another company with a unit located in the same site; or
 - performing pro bono work for a governmental agency or charitable organization.
- The laboratory is accredited under federal law.
- The data are needed for emergency-response activities, and a laboratory accredited under the Texas Laboratory Accreditation Program is not available.
- The laboratory supplies data for which the TCEQ does not offer accreditation.

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

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

CERTIFICATION:

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

Printed Name: Samuel Agle

Title: Vice President of Operations

Signature: _____

Date: 4/25/2024

Subcategory	Actual Quantity/Day	Design Quantity/Day	Units

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 wastewater, which consists of compressor condensate is routed to copper beds for treatment prior to being routed to a holding tank and subsequently to the cooling tower. It is represented as a part of the cooling tower blowdown.
Cooling tower blowdown – 0.20 MGD
Filter backwash water / utility wastewater – 0.05 MGD

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
Oxygen and Nitrogen Production	415	AW	July 2013

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)

- 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): 3/21/2024 to 4/9/2024
- ☒ Check the box to confirm all samples were collected no more than 12 months prior to the date of application submittal.
- 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.1.0Worksheet2.0.1 – Sampling results

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

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

TABLE 1 and TABLE 2 (Instructions, Page 58)

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

Table 1 for Outfall No.: 001

Samples are (check one): ☐ Composite ☒ Grab

Pollutant	Sample 1 (mg/L)	Sample 2 (mg/L)	Sample 3 (mg/L)	Sample 4 (mg/L)
BOD (5-day)	12	3.0	3.0	12
CBOD (5-day)	3.0	3.0	6.0	30
Chemical oxygen demand	75	3.4	55	86
Total organic carbon	12	5.1	12	13
Dissolved oxygen	5.18	5.92	5.09	5.65
Ammonia nitrogen	0.16	0.37	0.051	0.051
Total suspended solids	13	27	16	9.8
Nitrate nitrogen	4.4	0.94	4.3	5.1
Total organic nitrogen	3.2	1.0	2.9	3.0
Total phosphorus	0.83	0.088	3.2	3.4
Oil and grease	1.6	1.7	1.9	2.6
Total residual chlorine	1.1	0.05	0.88	1.1

Pollutant	Sample 1 (mg/L)	Sample 2 (mg/L)	Sample 3 (mg/L)	Sample 4 (mg/L)
Total dissolved solids	1200	340	1400	1300
Sulfate	330	48	360	320
Chloride	300	41	360	320
Fluoride	1.2	0.24	0.70	2.6
Total alkalinity (mg/L as CaCO3)	150	100	130	210
Temperature (°F)	65	60	61	70
pH (standard units)	7.82	7.9	7.91	8.5

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	210	470	190	190	2.5
Antimony, total	1.6	1.1	1.3	1.1	5
Arsenic, total	4.4	2.9	4.5	5.2	0.5
Barium, total	160	80	170	190	3
Beryllium, total	0.15	0.15	0.15	0.15	0.5
Cadmium, total	0.26	0.26	0.26	0.26	1
Chromium, total	2.8	6.6	2.6	3.1	3
Chromium, hexavalent	3.4	5.4	4.0	3.4	3
Chromium, trivalent	3.4	3.4	3.4	3.4	N/A
Copper, total	36	54	42	36	2
Cyanide, available	8.4	5.0	5.5	6.1	2/10
Lead, total	0.4	4.3	0.59	0.39	0.5
Mercury, total	0.016	0.0043	0.015	0.018	0.005/0.0005
Nickel, total	15	9.4	16	18	2
Selenium, total	1.7	0.69	0.95	2.0	5
Silver, total	0.12	0.12	0.12	0.22	0.5
Thallium, total	0.22	0.22	0.22	0.22	0.5
Zinc, total	12	130	17	18	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	14	14	14	14	50
Anthracene	1.5	1.5	1.5	1.5	10
Benzene	0.46	0.46	0.46	0.46	10
Benzidine	4.8	4.8	4.8	4.8	50
Benzo(a)anthracene	0.17	0.17	0.17	0.17	5
Benzo(a)pyrene	0.36	0.36	0.36	0.36	5
Bis(2-chloroethyl)ether	2.2	2.2	2.2	2.2	10
Bis(2-ethylhexyl)phthalate	0.28	0.28	0.28	0.28	10
Bromodichloromethane [Dichlorobromomethane]	1.8	0.55	6.0	5.0	10
Bromoform	0.63	0.63	0.63	0.63	10
Carbon tetrachloride	0.90	0.90	0.90	0.90	2
Chlorobenzene	0.46	0.46	0.46	0.46	10
Chlorodibromomethane [Dibromochloromethane]	0.55	0.55	1.2	0.55	10
Chloroform	17	0.46	54	59	10
Chrysene	0.22	0.22	0.22	0.22	5
m-Cresol [3-Methylphenol]	2.6	2.6	2.6	2.6	10
o-Cresol [2-Methylphenol]	1.6	1.6	1.6	1.6	10
p-Cresol [4-Methylphenol]	2.6	2.6	2.6	2.6	10
1,2-Dibromoethane	1.0	1.0	1.0	1.0	10
m-Dichlorobenzene [1,3-Dichlorobenzene]	0.41	0.41	0.41	0.41	10
o-Dichlorobenzene [1,2-Dichlorobenzene]	0.43	0.43	0.43	0.43	10
p-Dichlorobenzene [1,4-Dichlorobenzene]	0.45	0.45	0.45	0.45	10
3,3'-Dichlorobenzidine	0.34	0.34	0.34	0.34	5
1,2-Dichloroethane	0.37	0.37	0.37	0.37	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]	0.74	0.74	0.74	0.74	10
Dichloromethane [Methylene chloride]	1.7	1.7	1.7	1.7	20
1,2-Dichloropropane	0.56	0.56	0.56	0.56	10
1,3-Dichloropropene [1,3-Dichloropropylene]	1.3	1.3	1.3	1.3	10
2,4-Dimethylphenol	0.65	0.65	0.65	0.65	10
Di-n-Butyl phthalate	0.25	13	0.25	0.25	10
Ethylbenzene	0.39	0.59	0.39	0.39	10
Fluoride	1200	240	700	2600	500
Hexachlorobenzene	0.31	0.31	0.31	0.31	5
Hexachlorobutadiene	0.63	0.63	0.63	0.63	10
Hexachlorocyclopentadiene	4.6	4.6	4.6	4.6	10
Hexachloroethane	0.53	0.53	0.53	0.53	20
Methyl ethyl ketone	8.3	8.3	8.3	8.3	50
Nitrobenzene	1.7	1.7	1.7	1.7	10
N-Nitrosodiethylamine	1.8	1.8	1.8	1.8	20
N-Nitroso-di-n-butylamine	1.8	1.5	1.5	1.5	20
Nonylphenol	10	10	10	10	333
Pentachlorobenzene	1.1	1.1	1.1	1.1	20
Pentachlorophenol	0.23	0.23	0.23	0.23	5
Phenanthrene	1.4	1.4	1.4	1.4	10
Polychlorinated biphenyls (PCBs) (**)	<0.1	< 0.1	<0.1	<0.1	0.2
Pyridine	2.6	2.6	2.6	2.6	20
1,2,4,5-Tetrachlorobenzene	1.3	1.3	1.3	1.3	20
1,1,2,2-Tetrachloroethane	0.47	0.47	0.47	0.47	10
Tetrachloroethene [Tetrachloroethylene]	0.66	0.66	0.66	0.66	10
Toluene	0.48	0.48	0.48	0.48	10
1,1,1-Trichloroethane	0.59	0.59	0.59	0.59	10
1,1,2-Trichloroethane	0.41	0.41	0.41	0.41	10
Trichloroethene [Trichloroethylene]	1.5	1.5	1.5	1.5	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	2.0	2.2	2.0	2.0	50
TTHM (Total trihalomethanes)	19	0.63	61	64	10
Vinyl chloride	0.43	0.43	0.43	0.43	10

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

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

TABLE 4 (Instructions, Pages 58–59)

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

a. Tributyltin

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

☐ Yes ☒ No

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

- ☐ Manufacturers and formulators of tributyltin or related compounds.
- ☐ Painting of ships, boats and marine structures.
- ☐ Ship and boat building and repairing.
- ☐ Ship and boat cleaning, salvage, wrecking and scaling.
- ☐ Operation and maintenance of marine cargo handling facilities and marinas.
- ☐ Facilities engaged in wood preserving.
- ☐ Any other industrial/commercial facility for which tributyltin is known to be present, or for which there is any reason to believe that tributyltin may be present in the effluent.

b. Enterococci (discharge to saltwater)

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

☐ Yes ☒ No

Domestic wastewater is/will be discharged.

☐ Yes ☒ No

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

c. **E. coli (discharge to freshwater)**

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

☐ Yes ☒ No

Domestic wastewater is/will be discharged.

☐ Yes ☒ No

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

Table 4 for Outfall No.: [Click to enter text.](#) Samples are (check one): ☐ Composite ☐ Grab

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

TABLE 5 (Instructions, Page 59)

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

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

☒ N/A

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

Pollutant	Sample 1 (µg/L)*	Sample 2 (µg/L)*	Sample 3 (µg/L)*	Sample 4 (µg/L)*	MAL (µg/L)*
Aldrin					0.01
Carbaryl					5
Chlordane					0.2
Chlorpyrifos					0.05
4,4'-DDD					0.1
4,4'-DDE					0.1
4,4'-DDT					0.02
2,4-D					0.7
Danitol [Fenpropathrin]					—
Demeton					0.20
Diazinon					0.5/0.1
Dicofol [Kelthane]					1
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 (<i>alpha</i>)					0.01
Endosulfan II (<i>beta</i>)					0.02
Endosulfan sulfate					0.1
Endrin					0.02
Guthion [Azinphos methyl]					0.1
Heptachlor					0.01
Heptachlor epoxide					0.01
Hexachlorocyclohexane (<i>alpha</i>)					0.05
Hexachlorocyclohexane (<i>beta</i>)					0.05
Hexachlorocyclohexane (<i>gamma</i>) [Lindane]					0.05
Hexachlorophene					10
Malathion					0.1
Methoxychlor					2.0
Mirex					0.02
Parathion (ethyl)					0.1
Toxaphene					0.3
2,4,5-TP [Silvex]					0.3

* Indicate units if different from µg/L.

TABLE 6 (Instructions, Page 59)

Completion of Table 6 is required for all external outfalls.

Table 6 for Outfall No.: **001**

Samples are (check one): ☐ Composite ☒ Grab

Pollutants	Believed Present	Believed Absent	Sample 1 (mg/L)	Sample 2 (mg/L)	Sample 3 (mg/L)	Sample 4 (mg/L)	MAL (µg/L)*
Bromide	<input checked="" type="checkbox"/>	<input type="checkbox"/>	0.23	0.071	0.071	0.071	400
Color (PCU)	<input checked="" type="checkbox"/>	<input type="checkbox"/>	20	10	15	NA	—
Nitrate-Nitrite (as N)	<input checked="" type="checkbox"/>	<input type="checkbox"/>	4.4	1.4	4.3	5.1	—
Sulfide (as S)	<input checked="" type="checkbox"/>	<input type="checkbox"/>	0.040	0.040	0.040	0.040	—
Sulfite (as SO ₃)	<input checked="" type="checkbox"/>	<input type="checkbox"/>	5.0	5.0	5.0	1.5	—
Surfactants	<input type="checkbox"/>	<input type="checkbox"/>	0.28	< 0.1	< 0.1	<0.1	—
Boron, total	<input checked="" type="checkbox"/>	<input type="checkbox"/>	0.34	0.098	0.35	0.32	20
Cobalt, total	<input checked="" type="checkbox"/>	<input type="checkbox"/>	.00060	0.00069	0.00065	0.00085	0.3
Iron, total	<input checked="" type="checkbox"/>	<input type="checkbox"/>	0.79	0.91	0.80	0.61	7
Magnesium, total	<input checked="" type="checkbox"/>	<input type="checkbox"/>	16	7.8	16	17	20
Manganese, total	<input checked="" type="checkbox"/>	<input type="checkbox"/>	0.032	0.074	0.035	0.024	0.5
Molybdenum, total	<input checked="" type="checkbox"/>	<input type="checkbox"/>	0.0097	0.015	0.0086	0.0078	1
Tin, total	<input checked="" type="checkbox"/>	<input type="checkbox"/>	0.00065	0.00069	0.0004	0.00033	5
Titanium, total	<input checked="" type="checkbox"/>	<input type="checkbox"/>	0.0021	0.018	0.0018	0.0026	30

TABLE 7 (Instructions, Page 60)

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

☐ N/A

Table 7 for Applicable Industrial Categories

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

* Test if believed present.

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

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

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

Table 8 for Outfall No.: 001

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	11	11	11	11	50
Acrylonitrile	14	14	14	14	50
Benzene	0.46	0.46	0.46	0.46	10
Bromoform	0.63	0.63	0.63	0.63	10
Carbon tetrachloride	0.90	0.90	0.90	0.90	2
Chlorobenzene	0.46	0.46	0.46	0.46	10
Chlorodibromomethane	0.55	0.55	1.2	0.55	10
Chloroethane	2	2	2	2	50
2-Chloroethylvinyl ether	0.75	0.75	0.75	0.75	10
Chloroform	17	0.46	54	59	10
Dichlorobromomethane [Bromodichloromethane]	1.8	0.55	6.0	5.0	10
1,1-Dichloroethane	0.64	0.64	0.64	0.64	10
1,2-Dichloroethane	0.37	0.37	0.37	0.37	10
1,1-Dichloroethylene [1,1-Dichloroethene]	0.74	0.74	0.74	0.74	10
1,2-Dichloropropane	0.56	0.56	0.56	0.56	10
1,3-Dichloropropylene [1,3-Dichloropropene]	1.3	1.3	1.3	1.3	10
Ethylbenzene	0.39	0.59	0.39	0.39	10
Methyl bromide [Bromomethane]	1.4	1.4	1.4	1.4	50
Methyl chloride [Chloromethane]	2	2	2	2	50
Methylene chloride [Dichloromethane]	1.7	1.7	1.7	1.7	20
1,1,2,2-Tetrachloroethane	0.47	0.47	0.47	0.47	10
Tetrachloroethylene [Tetrachloroethene]	0.66	0.66	0.66	0.66	10
Toluene	0.48	0.48	0.48	0.48	10
1,2-Trans-dichloroethylene [1,2-Trans-dichloroethene]	0.37	0.37	0.37	0.37	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	0.59	0.59	0.59	0.59	10
1,1,2-Trichloroethane	0.41	0.41	0.41	0.41	10
Trichloroethylene [Trichloroethene]	1.5	1.5	1.5	1.5	10
Vinyl chloride	0.43	0.43	0.43	0.43	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	0.65	0.65	0.65	0.65	10
2,4-Dichlorophenol	0.31	0.31	0.31	0.31	10
2,4-Dimethylphenol	0.65	0.65	0.65	0.65	10
4,6-Dinitro-o-cresol	1.4	1.4	1.4	1.4	50
2,4-Dinitrophenol	1.6	1.6	1.6	1.6	50
2-Nitrophenol	1.7	1.7	1.7	1.7	20
4-Nitrophenol	4.9	4.9	4.9	4.9	50
p-Chloro-m-cresol	1.6	1.6	1.6	1.6	10
Pentachlorophenol	0.23	0.23	0.23	0.23	5
Phenol	0.42	0.42	0.42	0.42	10
2,4,6-Trichlorophenol	1.4	1.4	1.4	1.4	10

* Indicate units if different from µg/L.

Table 10 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)
Acenaphthene	1.4	1.4	1.4	1.4	10
Acenaphthylene	1.4	1.4	1.4	1.4	10
Anthracene	1.5	1.5	1.5	1.5	10
Benzidine	4.8	4.8	4.8	4.8	50
Benzo(a)anthracene	0.17	0.17	0.17	0.17	5
Benzo(a)pyrene	0.36	0.36	0.36	0.36	5
3,4-Benzofluoranthene [Benzo(b)fluoranthene]	2.0	2.0	2.0	2.0	10
Benzo(ghi)perylene	2.7	2.7	2.7	2.7	20
Benzo(k)fluoranthene	0.38	0.38	0.38	0.38	5
Bis(2-chloroethoxy)methane	1.8	1.8	1.8	1.8	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	2.2	2.2	2.2	2.2	10
Bis(2-chloroisopropyl)ether	1.8	1.8	1.8	1.8	10
Bis(2-ethylhexyl)phthalate	0.28	0.28	0.28	0.28	10
4-Bromophenyl phenyl ether	0.26	0.26	0.26	0.26	10
Butylbenzyl phthalate	0.34	0.34	0.34	0.34	10
2-Chloronaphthalene	0.46	0.46	0.46	0.46	10
4-Chlorophenyl phenyl ether	1.3	1.3	1.3	1.3	10
Chrysene	0.22	0.22	0.22	0.22	5
Dibenzo(a,h)anthracene	0.25	0.25	0.25	0.25	5
1,2-Dichlorobenzene [o-Dichlorobenzene]	0.43	1.6	1.6	1.6	10
1,3-Dichlorobenzene [m-Dichlorobenzene]	0.41	1.4	1.4	1.4	10
1,4-Dichlorobenzene [p-Dichlorobenzene]	0.45	1.6	1.6	1.6	10
3,3'-Dichlorobenzidine	0.34	0.34	0.34	0.34	5
Diethyl phthalate	1.6	1.6	1.6	1.6	10
Dimethyl phthalate	0.30	0.30	0.30	0.30	10
Di-n-butyl phthalate	0.25	13	0.25	0.25	10
2,4-Dinitrotoluene	1.3	1.3	1.3	1.3	10
2,6-Dinitrotoluene	1.6	1.6	1.6	1.6	10
Di-n-octyl phthalate	0.37	0.37	0.37	0.37	10
1,2-Diphenylhydrazine (as Azobenzene)	1.5	1.5	1.5	1.5	20
Fluoranthene	1.6	1.6	1.6	1.6	10
Fluorene	1.6	1.6	1.6	1.6	10
Hexachlorobenzene	0.31	0.31	0.31	0.31	5
Hexachlorobutadiene	0.24	0.24	0.24	0.24	10
Hexachlorocyclopentadiene	4.6	4.6	4.6	4.6	10
Hexachloroethane	0.53	0.53	0.53	0.53	20
Indeno(1,2,3-cd)pyrene	2.3	2.3	2.3	2.3	5
Isophorone	1.6	1.6	1.6	1.6	10
Naphthalene	0.54	0.54	0.54	0.54	10
Nitrobenzene	1.7	1.7	1.7	1.7	10
N-Nitrosodimethylamine	2.0	2.0	2.0	2.0	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	2.9	2.9	2.9	2.9	20
N-Nitrosodiphenylamine	1.8	1.8	1.8	1.8	20
Phenanthrene	1.4	1.4	1.4	1.4	10
Pyrene	0.18	0.18	0.18	0.18	10
1,2,4-Trichlorobenzene	1.8	1.6	1.6	1.6	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: [Click to enter text.](#)

TABLE 12 (DIOXINS/FURAN COMPOUNDS)

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

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

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

Description: [Click to enter text.](#)

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

- ☐ Yes ☒ No

Description: [Click to enter text.](#)

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

Table 12 for Outfall No.: [Click to enter text.](#) Samples are (check one): ☐ Composite ☐ Grab

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

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.: [Click to enter text.](#) Samples are (check one): ☐ Composite ☐ Grab

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

INDUSTRIAL WASTEWATER PERMIT APPLICATION WORKSHEET 3.0: LAND APPLICATION OF EFFLUENT

This worksheet is required for all applications for a permit to disposal of wastewater by land application (i.e., TLAP)).

Item 1. Type of Disposal System (Instructions, Page 69)

Check the box next to the type of land disposal requested by this application:

- | | |
|--|---|
| <input type="checkbox"/> Irrigation | <input type="checkbox"/> Subsurface application |
| <input type="checkbox"/> Evaporation | <input type="checkbox"/> Subsurface soils absorption |
| <input type="checkbox"/> Evapotranspiration beds | <input type="checkbox"/> Surface application |
| <input type="checkbox"/> Drip irrigation system | <input type="checkbox"/> Other, specify: Click to enter text. |

Item 2. Land Application Area (Instructions, Page 69)

Land Application Area Information

Effluent Application (gallons/day)	Irrigation Acreage (acres)	Describe land use & indicate type(s) of crop(s)	Public Access? (Y/N)

Item 3. Annual Cropping Plan (Instructions, Page 69)

Attach the required cropping plan that includes each of the following:

- Cool and warm season plant species
- Breakdown of acreage and percent of total acreage for each crop
- Crop growing season
- Harvesting method/number of harvests
- Minimum/maximum harvest height
- Crop yield goals
- Soils map
- Nitrogen requirements per crop
- Additional fertilizer requirements
- Supplemental watering requirements
- Crop salt tolerances
- Justification for not removing existing vegetation to be irrigated

Attachment:

Item 4. Well and Map Information (Instructions, Page 70)

- a. Check each box to confirm the required information is shown and labeled on the attached USGS map:

- ☐ The exact boundaries of the land application area
- ☐ On-site buildings
- ☐ Waste-disposal or treatment facilities
- ☐ Effluent storage and tailwater control facilities
- ☐ Buffer zones
- ☐ All surface waters in the state onsite and within 500 feet of the property boundaries
- ☐ All water wells within ½-mile of the disposal site, wastewater ponds, or property boundaries
- ☐ All springs and seeps onsite and within 500 feet of the property boundaries

Attachment: [Click to enter text.](#)

- b. List and cross reference all water wells located on or within 500 feet of the disposal site, wastewater ponds, or property boundaries in the following table. Attach additional pages as necessary to include all of the wells.

Well and Map Information Table

Well ID	Well Use	Producing? Y/N/U	Open, cased, capped, or plugged?	Proposed Best Management Practice

Attachment: [Click to enter text.](#)

- c. Groundwater monitoring wells or lysimeters are/will be installed around the land application site or wastewater ponds.

☐ Yes ☐ No

If **yes**, provide the existing/proposed location of the monitoring wells or lysimeters on the site map attached for Item 4.a. Additionally, attach information on the depth of the wells or lysimeters, sampling schedule, and monitoring parameters for TCEQ review, possible modification, and approval.

Attachment: [Click to enter text.](#)

- d. Attach a short groundwater technical report using *30 TAC § 309.20(a)(4)* as guidance.

Attachment:

Item 5. Soil Map and Soil Information (Instructions, Page 71)

Check each box to confirm that the following information is attached:

- a. ☐ USDA NRCS Soil Survey Map depicting the area to be used for land application with the locations identified by fields and crops.
- b. ☐ Breakdown of acreage and percent of total acreage for each soil type.
- c. ☐ Copies of laboratory soil analyses. **Attachment:**

Item 6. Effluent Monitoring Data (Instructions, Page 72)

- a. Completion of Table 14 **is required** for all **renewal** and **major amendment** applications. Complete the table with monitoring data for the previous two years for all parameters regulated in the current permit. An additional table has been provided with blank headers for parameters regulated in the current permit which are not listed in Table 14.

Table 14 for Outfall No.: Samples are (check one): ☐ Composite ☐ Grab

[illegible]

- c. Attach an explanation of all persistent excursions to permitted parameters and corrective actions taken. **Attachment:** [Click to enter text.](#)

Item 7. Pollutant Analysis (Instructions, Page 72)

- a. Provide the date range of all sampling events conducted to obtain the analytical data submitted with this application (e.g., 05/01/2018-05/30/2018): [Click to enter text.](#)
- b. ☐ Check the box to confirm all samples were collected no more than 12 months prior to the date of application submittal.
- c. Complete Tables 15 and 16.

Table 15 for Outfall No.: **001**

Samples are (check one): ☐ Composite ☒ Grab

Pollutant	Sample 1 (mg/L)	Sample 2 (mg/L)	Sample 3 (mg/L)	Sample 4 (mg/L)
BOD (5-day)				
CBOD (5-day)				
Chemical oxygen demand				
Total organic carbon				
Dissolved oxygen				
Ammonia nitrogen				
Total suspended solids				
Nitrate nitrogen				
Total organic nitrogen				
Total phosphorus				
Oil and grease				
Total residual chlorine				
Total dissolved solids				
Sulfate				
Chloride				
Fluoride				
Total alkalinity (mg/L as CaCO ₃)				
Temperature (°F)				
pH (standard units)				

Table 16 for Outfall No.: [Click to enter text.](#)

Samples are (check one): ☐ Composite ☐ Grab

Pollutant	Sample 1 (µg/L)	Sample 2 (µg/L)	Sample 3 (µg/L)	Sample 4 (µg/L)	MAL (µg/L)
Aluminum, total					2.5
Antimony, total					5

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

INDUSTRIAL WASTEWATER PERMIT APPLICATION WORKSHEET 3.1: SURFACE LAND APPLICATION AND APPLICATION

This worksheet is required for all applications for a permit to disposal of wastewater by surface land application or evaporation.

Item 1. Edwards Aquifer (Instructions, Page 73)

a. Is the facility subject to *30 TAC Chapter 213*, Edwards Aquifer Rules?

☐ Yes ☐ No

If **no**, proceed to Item 2. If **yes**, complete Items 1.b and 1.c.

b. Check the box next to the subchapter applicable to the facility.

☐ 30 TAC Chapter 213, Subchapter A

☐ 30 TAC Chapter 213, Subchapter B

c. If *30 TAC Chapter 213, Subchapter A* applies, attach **either**: 1) a Geologic Assessment (if conducted in accordance with *30 TAC § 213.5*) **or** 2) a report that contains the following:

- A description of the surface geological units within the proposed land application site and wastewater pond area.
- The location and extent of any sensitive recharge features in the land application site and wastewater pond area
- A list of any proposed BMPs to protect the recharge features.

Attachment: [Click to enter text.](#)

Item 2. Surface Spray/Irrigation (Instructions, Page 73)

a. Provide the following information on the irrigation operations:

Area under irrigation (acres): [Click to enter text.](#)

Design application rate (acre-ft/acre/yr): [Click to enter text.](#)

Design application frequency (hours/day): [Click to enter text.](#)

Design application frequency (days/week): [Click to enter text.](#)

Design total nitrogen loading rate (lbs nitrogen/acre/year): [Click to enter text.](#)

Average slope of the application area (percent): [Click to enter text.](#)

Maximum slope of the application area (percent): [Click to enter text.](#)

Irrigation efficiency (percent): [Click to enter text.](#)

Effluent conductivity (mmhos/cm): [Click to enter text.](#)

Soil conductivity (mmhos/cm): [Click to enter text.](#)

Curve number: [Click to enter text.](#)

Describe the application method and equipment: [Click to enter text.](#)

- b. Attach a detailed engineering report which includes a water balance, storage volume calculations, and a nitrogen balance. **Attachment:** [Click to enter text.](#)

Item 3. Evaporation Ponds (Instructions, Page 74)

- a. Daily average effluent flow into ponds: [Click to enter text.](#) gallons per day
- b. Attach a separate engineering report of evaporation calculations for average long-term and worst-case critical conditions. **Attachment:** [Click to enter text.](#)

Item 4. Evapotranspiration Beds (Instructions, Page 74)

- a. Provide the following information on the evapotranspiration beds:
- Number of beds: [Click to enter text.](#)
- Area of bed(s) (acres): [Click to enter text.](#)
- Depth of bed(s) (feet): [Click to enter text.](#)
- Void ratio of soil in the beds: [Click to enter text.](#)
- Storage volume within the beds (include units): [Click to enter text.](#)
- Description of any lining to protect groundwater: [Click to enter text.](#)
- b. Attach a certification by a licensed Texas professional engineer that the liner meets TCEQ requirements. **Attachment:** [Click to enter text.](#)
- c. Attach a separate engineering report with water balance, storage volume calculations, and description of the liner. **Attachment:** [Click to enter text.](#)

Item 5. Overland Flow (Instructions, Page 74)

- a. Provide the following information on the overland flow:
- Area used for application (acres): [Click to enter text.](#)
- Slopes for application area (percent): [Click to enter text.](#)
- Design application rate (gpm/foot of slope width): [Click to enter text.](#)
- Slope length (feet): [Click to enter text.](#)
- Design BOD5 loading rate (lbs BOD5/acre/day): [Click to enter text.](#)
- Design application frequency (hours/day): [Click to enter text.](#)
- Design application frequency (days/week): [Click to enter text.](#)
- b. Attach a separate engineering report with the method of application and design requirements according to 30 TAC § 217.212. **Attachment:** [Click to enter text.](#)

INDUSTRIAL WASTEWATER PERMIT APPLICATION

WORKSHEET 3.2: SUBSURFACE IRRIGATION (NON-DRIP)

This worksheet **is required** for all applications for a permit to disposal of wastewater by subsurface land application.

- ☐ Check the box to confirm the Class V Injection Well Inventory/Authorization Form (Worksheet 9.0) has been submitted to the TCEQ UIC Permits Team as directed.

Item 1. Edwards Aquifer (Instructions, Page 75)

- a. The subsurface system is/will be located on the Edwards Aquifer Recharge Zone, as mapped by TCEQ?
- ☐ Yes ☐ No
- b. The subsurface system is/will be located on the Edwards Aquifer Transition Zone, as mapped by TCEQ?
- ☐ Yes ☐ No

If **yes** to Item 1.a **or** 1.b, the subsurface system may be prohibited by *30 TAC § 213.8*. Contact the Water Quality Assessment Section at (512) 239-4671 for a preapplication meeting.

Item 2. Subsurface Application (Instructions, Page 75)

- a. Check the box next to the type of subsurface land disposal system requested:
- ☐ Conventional drainfield, beds, or trenches
- ☐ Low pressure dosing
- ☐ Other: [Click to enter text.](#)
- b. Provide the following information on the irrigation operations:
- Application area (acres): [Click to enter text.](#)
- Area of drainfield (square feet): [Click to enter text.](#)
- Application rate (gal/square ft/day): [Click to enter text.](#)
- Depth to groundwater (feet): [Click to enter text.](#)
- Area of trench (square feet): [Click to enter text.](#)
- Dosing duration per area (hours): [Click to enter text.](#)
- Number of beds: [Click to enter text.](#)
- Dosing amount per area (inches/day): [Click to enter text.](#)
- Soil infiltration rate (inches/hour): [Click to enter text.](#)
- Storage volume (gallons): [Click to enter text.](#)
- Area of bed(s) (square feet): [Click to enter text.](#)
- Soil classification: [Click to enter text.](#)
- c. Attach a separate engineering report using *30 TAC § 309.20, Subchapter C, Land Disposal of Sewage Effluent* as guidance, excluding items b(3)(A) and b(3)(B). Include a description of the schedule of dosing basin rotation. **Attachment:** [Click to enter text.](#)

INDUSTRIAL WASTEWATER PERMIT APPLICATION

WORKSHEET 3.3: SUBSURFACE AREA DRIP DISPERSAL SYSTEMS

This worksheet **is required** for all applications for a permit to dispose of wastewater using a subsurface area drip dispersal system (SADDs).

- ☐ Check the box to confirm the Class V Injection Well Inventory/Authorization Form (Worksheet 9.0) has been submitted to the TCEQ UIC Permits Team as directed.

Item 1. Edwards Aquifer (Instructions, Page 76)

- a. The subsurface system is/will be located on the Edwards Aquifer Recharge Zone, as mapped by TCEQ?
- ☐ Yes ☐ No
- b. The subsurface system is/will be located on the Edwards Aquifer Transition Zone, as mapped by TCEQ?
- ☐ Yes ☐ No

If **yes** to Item 1.a **or** 1.b, the subsurface system may be prohibited by *30 TAC § 213.8*. Contact the Water Quality Assessment Section at (512) 239-4671 for a preapplication meeting.

Item 2. Administrative Information (Instructions, Page 76)

- a. Provide the legal name of all corporations or other business entities managed, owned, or otherwise closely related to the owner of the treatment facility: [Click to enter text.](#)
- b. The owner of the land where the WWTF is/will be located is the same as the owner of the WWTF.
- ☐ Yes ☐ No

If **no**, provide the legal name of all corporations or other business entities managed, owned, or otherwise closely related to the owner of the land where the WWTF is/will be located: [Click to enter text.](#)

- c. Provide the legal name of the owner of the SADDs: [Click to enter text.](#)
- d. The owner of the SADDs is the same as the owner of the WWTF or the site where the WWTF is/will be located.
- ☐ Yes ☐ No

If **no**, identify the legal name of all corporations or other business entities managed, owned, or otherwise closely related to the entity identified in Item 1.c: [Click to enter text.](#)

- e. Provide the legal name of the owner of the land where the SADDs is located: [Click to enter text.](#)
- f. The owner of the land where the SADDs is/will be located is the same as owner of the WWTF, the site where the WWTF is located, or the owner of the SADDs.
- ☐ Yes ☐ No

If **no**, provide the legal name of all corporations or other business entities managed, owned, or otherwise closely related to the entity identified in item 1.e: [Click to enter text.](#)

Item 3. SADDs (Instructions, Page 77)

a. Check the box next to the type SADDs requested by this application:

- ☐ Subsurface drip/trickle irrigation
- ☐ Surface drip irrigation
- ☐ Other: [Click to enter text.](#)

b. Attach a description of the SADDs proposed/used by the facility (see instructions for guidance). **Attachment:** [Click to enter text.](#)

c. Provide the following information on the SADDs:

Application area (acres): [Click to enter text.](#)

Soil infiltration rate (inches/hour): [Click to enter text.](#)

Average slope of the application area: [Click to enter text.](#)

Maximum slope of the application area: [Click to enter text.](#)

Storage volume (gallons): [Click to enter text.](#)

Major soil series: [Click to enter text.](#)

Depth to groundwater (feet): [Click to enter text.](#)

Effluent conductivity (mmhos/cm): [Click to enter text.](#)

d. The facility is/will be located west of the boundary shown in 30 TAC § 222.83 **and** using a vegetative cover of non-native grasses over seeded with cool-season grasses.

☐ Yes ☐ No

If **yes**, the facility may propose a hydraulic application rate up to, but not to exceed, 0.1 gal/ft²/day.

e. The facility is/will be located east of the boundary shown in 30 TAC § 222.83 **or** is the facility proposing any crop other than non-native grasses.

☐ Yes ☐ No

If **yes**, the facility must use the formula in 30 TAC § 222.83 to calculate the maximum hydraulic application rate.

f. The facility has or plans to submit an alternative method to calculate the hydraulic application rate for approval by the ED.

☐ Yes ☐ No

If **yes**, provide the following information on the hydraulic application rates:

- Hydraulic application rate (gal/square foot/day): [Click to enter text.](#)
- Nitrogen application rate (gal/square foot/day): [Click to enter text.](#)

g. Provide the following dosing information:

Number of doses per day: [Click to enter text.](#)

Dosing duration per area (hours): [Click to enter text.](#)

Rest period between doses (hours): [Click to enter text.](#)

Dosing amount per area (inches/day): [Click to enter text.](#)

Number of zones: [Click to enter text.](#)

- h. The system is/will be a surface drip irrigation system using existing native vegetation as a crop?

☐ Yes ☐ No

If **yes**, attach the following information:

- A vegetation survey by a certified arborist describing the percent canopy cover and relative percentage of major overstory and understory plant species.

Attachment: [Click to enter text.](#)

- Attach a separate engineering report using *30 TAC § 309.20, Subchapter C, Land Disposal of Sewage Effluent* as guidance, excluding items b(3)(A) and b(3)(B). Include a description of the schedule of dosing basin rotation.

Attachment: [Click to enter text.](#)

Item 4. Required Plans (Instructions, Page 78)

- a. Attach a Soil Evaluation with all information required in *30 TAC § 222.73*.

Attachment: [Click to enter text.](#)

- b. Attach a Site Preparation Plan with all information required in *30 TAC § 222.75*.

Attachment: [Click to enter text.](#)

- c. Attach a Recharge Feature Plan with all information required in *30 TAC § 222.79*.

Attachment: [Click to enter text.](#)

- d. Provide soil sampling and testing with all information required in *30 TAC § 222.157*.

Attachment: [Click to enter text.](#)

Item 5. Flood and Run-On Protection (Instructions, Page 79)

- a. Is the existing/proposed SADDs located within the 100-year frequency flood level?

☐ Yes ☐ No

Source: [Click to enter text.](#)

If **yes**, describe how the site will be protected from inundation: [Click to enter text.](#)

- b. Is the existing/proposed SADDs within a designated floodway?

☐ Yes ☐ No

If **yes**, attach either the FEMA flood map or alternate information used to make this determination. **Attachment:** [Click to enter text.](#)

Item 6. Surface Waters in The State (Instructions, Page 79)

- a. Attach a buffer map which shows the appropriate buffers on surface waters in the state, water wells, and springs/seeps. **Attachment:** [Click to enter text.](#)
- b. The facility has or plans to request a buffer variance from water wells or waters in the state?

☐ Yes ☐ No

If **yes**, attach the additional information required in *30 TAC § 222.81(c)*. **Attachment:** [Click to enter text.](#)

INDUSTRIAL WASTEWATER PERMIT APPLICATION

WORKSHEET 4.0: RECEIVING WATERS

This worksheet is required for all TPDES permit applications.

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

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

☐ Yes ☒ No

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

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

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

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

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

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

- a. Width of the receiving water at the outfall: ~4000 feet

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

☐ Yes ☒ No

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

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

☐ Yes ☒ No

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

Item 3. Classified Segment (Instructions, Page 80)

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

☒ Yes ☐ No

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

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

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

- a. Name of the immediate receiving waters: [Click to enter text.](#)
- 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):

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

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

<input type="checkbox"/> livestock watering	<input type="checkbox"/> industrial water supply
<input type="checkbox"/> non-contact recreation	<input type="checkbox"/> irrigation withdrawal
<input type="checkbox"/> domestic water supply	<input type="checkbox"/> navigation
<input type="checkbox"/> contact recreation	<input type="checkbox"/> picnic/park activities
<input type="checkbox"/> fishing	<input type="checkbox"/> other, specify: 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 4.1: WATERBODY PHYSICAL CHARACTERISTICS

The following information **is required** for new applications, EPA-designated Major facilities, and major amendment applications requesting to add an outfall if the receiving waters are perennial or intermittent with perennial pools (including impoundments) for a TDPES permit. Complete the transects downstream of the existing or proposed discharges.

Item 1. Data Collection (Instructions, Page 82)

- a. Date of study: [Click to enter text.](#) Time of study: [Click to enter text.](#)
Waterbody name: [Click to enter text.](#)
General location: [Click to enter text.](#)
- b. Type of stream upstream of an existing discharge or downstream of a proposed discharge (check only one):
☐ perennial ☐ intermittent with perennial pools ☐ impoundment
- c. No. of defined stream bends:
Well: [Click to enter text.](#) Moderately: [Click to enter text.](#) Poorly: [Click to enter text.](#)
- d. No. of riffles: [Click to enter text.](#)
- e. Evidence of flow fluctuations (check one):
☐ Minor ☐ Moderate ☐ Severe
- f. Provide the observed stream uses and where there is evidence of channel obstructions/modifications: [Click to enter text.](#)
- g. Complete the following table with information regarding the transect measurements.

Stream Transect Data

Transect Location	Habitat Type*	Water Surface Width (ft)	Stream Depths (ft)**								

* riffle, run, glide, or pool

** channel bed to water surface

Item 2. Summarize Measurements (Instructions, Page 83)

Provide the following information regarding the transect measurements:

Streambed slope of entire reach (from USGS map in ft. /ft.): [Click to enter text.](#)

Approximate drainage area above the most downstream transect from USGS map or county highway map (square miles): [Click to enter text.](#)

Length of stream evaluated (ft): [Click to enter text.](#)

Number of lateral transects made: [Click to enter text.](#)

Average stream width (ft): [Click to enter text.](#)

Average stream depth (ft): [Click to enter text.](#)

Average stream velocity (ft/sec): [Click to enter text.](#)

Instantaneous stream flow (ft³/sec): [Click to enter text.](#)

Indicate flow measurement method (VERY IMPORTANT – type of meter, floating chip timed over a fixed distance, etc.): [Click to enter text.](#)

Flow fluctuations (i.e., minor, moderate, or severe): [Click to enter text.](#)

Size of pools (i.e., large, small, moderate, or none): [Click to enter text.](#)

Maximum pool depth (ft): [Click to enter text.](#)

Total number of stream bends: [Click to enter text.](#)

Number well defined: [Click to enter text.](#)

Number moderately defined: [Click to enter text.](#)

Number poorly defined: [Click to enter text.](#)

Total number of riffles: [Click to enter text.](#)

INDUSTRIAL WASTEWATER PERMIT APPLICATION WORKSHEET 5.0: SEWAGE SLUDGE MANAGEMENT AND DISPOSAL

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

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

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

☐ Yes ☒ No

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

☐ Yes ☒ No

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

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

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

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

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

Attachment: [Click to enter text.](#)

b. Provide the following information for each disposal site:

Disposal site name: City of Houston POTW (Almeda Sims WWTP)

TCEQ Permit/Registration Number: WQ0010495003

County where disposal site is located: Harris

c. Method of sewage sludge transportation:

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

TCEQ Hauler Registration Number: 455120133

d. Sludge is transported as a:

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

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

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

Attachment: N/A

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

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

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

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

Attachment: N/A

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

INDUSTRIAL WASTEWATER PERMIT APPLICATION

WORKSHEET 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		
SIU - Non-categorical		
Other IU		

- 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: [Click to enter text.](#)

- 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: [Click to enter text.](#)

- 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: [Click to enter text.](#)

- 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: [Click to enter text.](#)

- 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: [Click to enter text.](#)

- 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.: [Click to enter text.](#) First/Last Name: [Click to enter text.](#)

Organization Name: [Click to enter text.](#) SIC Code: [Click to enter text.](#)

Phone number: [Click to enter text.](#) Email address: [Click to enter text.](#)

Physical Address: [Click to enter text.](#) City/State/ZIP Code: [Click to enter text.](#)

Attachment: [Click to enter text.](#)

- 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): [Click to enter text.](#)

c. Provide a description of the principal products(s) or service(s) performed: [Click to enter text.](#)

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): [Click to enter text.](#)

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
	<input type="checkbox"/>	<input type="checkbox"/>
	<input type="checkbox"/>	<input type="checkbox"/>
	<input type="checkbox"/>	<input type="checkbox"/>
	<input type="checkbox"/>	<input type="checkbox"/>
	<input type="checkbox"/>	<input type="checkbox"/>
	<input type="checkbox"/>	<input type="checkbox"/>
	<input type="checkbox"/>	<input type="checkbox"/>
	<input type="checkbox"/>	<input type="checkbox"/>

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: [Click to enter text.](#)

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: [Click to enter text.](#)
- Average rainfall for wettest month (total inches): [Click to enter text.](#)
- 25-year, 24-hour rainfall (inches): [Click to enter text.](#)
- Source: [Click to enter text.](#)
- c. Attach an inventory, or list, of materials currently handled at the facility that may be exposed to precipitation. **Attachment:** [Click to enter text.](#)
- 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:** [Click to enter text.](#)
- e. Describe any BMPs and controls the facility uses/proposes to prevent or effectively reduce pollution in stormwater discharges from the facility: [Click to enter text.](#)

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): [Click to enter text.](#)
- b. ☐ Check the box to confirm all samples were collected no more than 12 months prior to the date of application submittal.
- c. Complete Table 17 as directed on page 92 of the Instructions.

Table 17 for Outfall No.: [Click to enter text.](#)

Pollutant	Grab Sample* Maximum (mg/L)	Composite Sample** Maximum (mg/L)	Grab Sample* Average (mg/L)	Composite Sample** Average (mg/L)	Number of Storm Events Sampled	MAL (mg/L)
pH (standard units)	(max)	—	(min)	—		—
Total suspended solids						—
Chemical oxygen demand						—
Total organic carbon						—
Oil and grease						—
Arsenic, total						0.0005
Barium, total						0.003
Cadmium, total						0.001
Chromium, total						0.003
Chromium, trivalent						—
Chromium, hexavalent						0.003
Copper, total						0.002
Lead, total						0.0005

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)
Mercury, total						0.000005
Nickel, total						0.002
Selenium, total						0.005
Silver, total						0.0005
Zinc, total						0.005

* Taken during first 30 minutes of storm event

** Flow-weighted composite sample

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

Table 18 for Outfall No.: [Click to enter text.](#)

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

* Taken during first 30 minutes of storm event

** Flow-weighted composite sample

Attachment: [Click to enter text.](#)

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

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

Date of storm event: [Click to enter text.](#)

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

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

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

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

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

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

INDUSTRIAL WASTEWATER PERMIT APPLICATION

WORKSHEET 8.0: AQUACULTURE

This worksheet is required for all TPDES permit applications requesting individual permit coverage for discharges of aquaculture wastewater.

Item 1. Facility/Site Information (Instructions, Page 94)

- a. Complete the following table with information regarding production ponds, raceways, and fabricated tanks at the facility.

Production Pond Descriptions

Number of Ponds	Dimensions (include units)	Area of Each Pond (include units)	Number of Ponds x Area of Ponds (include Units)

Total surface area of all ponds: [Click to enter text.](#)

Raceway Descriptions

Number of Raceways	Dimensions (include units)

Fabricated Tank Descriptions

Number of Tanks	Dimensions (include units)

b. Does the facility have a TPWD-approved emergency plan?

☐ Yes ☐ No

If **yes**, attach a copy of the approved plan.

Attachment: [Click to enter text.](#)

c. Does the facility have an aquatic plant transplant authorization?

☐ Yes ☐ No

If **yes**, attach a copy of the authorization letter.

Attachment: [Click to enter text.](#)

d. Provide the number of aquaculture facilities located within 25-miles of this facility: [Click to enter text.](#)

Item 2. Species Identification (Instructions, Page 95)

Complete the following table regarding each species raised, source, origin, and disease status of the stock. Identify and attach copies of any current relevant authorizations or permits that authorize the species.

Stock Species Information

Species	Source of Stock	Origin of Stock	Disease Status	Authorizations

Attachment: [Click to enter text.](#)

Item 3. Stock Management Plan (Instructions, Page 95)

Attach a detailed stock management plan: [Click to enter text.](#)

Item 4. Water Treatment and Discharge Description (Instructions, Page 96)

Attach a detailed description of the discharge practices and water treatment process(es): [Click to enter text.](#)

Item 5. Solid Waste Management (Instructions, Page 96)

Attach a description of the solid waste-disposal practices: [Click to enter text.](#)

Item 6. Site Assessment Report (Instructions, Page 96)

All new and expanding commercial shrimp facilities located/to be located within the coastal zone must attach a detailed site assessment report which identifies sensitive aquatic habitats within the coastal zone: [Click to enter text.](#)

WORKSHEET 9.0

TEXAS COMMISSION ON ENVIRONMENTAL QUALITY

CLASS V INJECTION WELL INVENTORY/AUTHORIZATION FORM

Submit the completed form to:

TCEQ
IUC Permits Team
Radioactive Materials Division
MC-233
PO Box 13087
Austin, Texas 78711-3087
512-239-6466

For TCEQ Use Only

Reg. No. _____

Date Received _____

Date Authorized _____

Item 1. General Information (Instructions Page 99)

1. TCEQ Program Area

Program Area (PST, VCP, IHW, etc.): [Click to enter text.](#)

Program ID: [Click to enter text.](#)

Contact Name: [Click to enter text.](#)

Phone Number: [Click to enter text.](#)

2. Agent/Consultant Contact Information

Contact Name: [Click to enter text.](#)

Address: [Click to enter text.](#)

City, State, and Zip Code: [Click to enter text.](#)

Phone Number: [Click to enter text.](#)

3. Owner/Operator Contact Information

☐ Owner ☐ Operator

Owner/Operator Name: [Click to enter text.](#)

Contact Name: [Click to enter text.](#)

Address: [Click to enter text.](#)

City, State, and Zip Code: [Click to enter text.](#)

Phone Number: [Click to enter text.](#)

4. Facility Contact Information

Facility Name: [Click to enter text.](#)

Address: [Click to enter text.](#)

City, State, and Zip Code: [Click to enter text.](#)

Location description (if no address is available): [Click to enter text.](#)

Facility Contact Person: [Click to enter text.](#)

Phone Number: [Click to enter text.](#)

5. Latitude and Longitude, in degrees-minutes-seconds

Latitude: [Click to enter text.](#)

Longitude: [Click to enter text.](#)

Method of determination (GPS, TOPO, etc.): [Click to enter text.](#)

Attach topographic quadrangle map as attachment A.

6. Well Information

Type of Well Construction, select one:

- ☐ Vertical Injection
- ☐ Subsurface Fluid Distribution System
- ☐ Infiltration Gallery
- ☐ Temporary Injection Points
- ☐ Other, Specify: [Click to enter text.](#)

Number of Injection Wells: [Click to enter text.](#)

7. Purpose

Detailed Description regarding purpose of Injection System:

[Click to enter text.](#)

Attach a Site Map as Attachment B (Attach the Approved Remediation Plan, if appropriate.)

8. Water Well Driller/Installer

Water Well Driller/Installer Name: [Click to enter text.](#)

City, State, and Zip Code: [Click to enter text.](#)

Phone Number: [Click to enter text.](#)

License Number: [Click to enter text.](#)

Item 2. Proposed Down Hole Design

Attach a diagram signed and sealed by a licensed engineer as Attachment C.

Down Hole Design Table

Name of String	Size	Setting Depth	Sacks Cement/Grout - Slurry Volume - Top of Center	Hole Size	Weight (lbs/ft) PVC/Steel
Casing					
Tubing					
Screen					

Item 3. Proposed Trench System, Subsurface Fluid Distribution System, or Infiltration Gallery

Attach a diagram signed and sealed by a licensed engineer as Attachment D.

System(s) Dimensions: [Click to enter text.](#)

System(s) Construction: [Click to enter text.](#)

Item 4. Site Hydrogeological and Injection Zone Data

1. Name of Contaminated Aquifer: [Click to enter text.](#)

2. Receiving Formation Name of Injection Zone: [Click to enter text.](#)

3. Well/Trench Total Depth: [Click to enter text.](#)

4. Surface Elevation: [Click to enter text.](#)

5. Depth to Ground Water: [Click to enter text.](#)

6. Injection Zone Depth: [Click to enter text.](#)

7. Injection Zone vertically isolated geologically? ☐ Yes ☐ No

Impervious Strata between Injection Zone and nearest Underground Source of Drinking Water:

Name: [Click to enter text.](#)

Thickness: [Click to enter text.](#)

8. Attach a list of contaminants and the levels (ppm) in contaminated aquifer as Attachment E.

9. Attach the Horizontal and Vertical extent of contamination and injection plume as Attachment F.

10. Attach Formation (Injection Zone) Water Chemistry (Background levels) TDS, etc., as Attachment G.

11. Injection Fluid Chemistry in PPM at point of injection. Attach as Attachment H.

12. Lowest Known Depth of Ground Water with < 10,000 PPM TDS: [Click to enter text.](#)

13. Maximum injection Rate/Volume/Pressure: [Click to enter text.](#)

14. Water wells within 1/4 mile radius (attach map as Attachment I): [Click to enter text.](#)

15. Injection wells within 1/4 mile radius (attach map as Attachment J): [Click to enter text.](#)

16. Monitor wells within 1/4 mile radius (attach drillers logs and map as Attachment K): [Click to enter text.](#)

17. Sampling frequency: [Click to enter text.](#)

18. Known hazardous components in injection fluid: [Click to enter text.](#)

Item 5. Site History

1. Type of Facility: [Click to enter text.](#)
2. Contamination Dates: [Click to enter text.](#)
3. Original Contamination (VOCs, TPH, BTEX, etc.) and Concentrations. Attach as Attachment L.
4. Previous Remediation. Attach results of any previous remediation as Attachment M.

NOTE: Authorization Form should be completed in detail and authorization given by the TCEQ before construction, operation, and/or conversion can begin. Attach additional pages as necessary.

Item 6. CLASS V INJECTION WELL DESIGNATIONS

- 5A07 Heat Pump/AC return (IW used for groundwater to heat or cool buildings)
- 5A19 Industrial Cooling Water Return Flow (IW used to cool industrial process equipment)
- 5B22 Salt Water Intrusion Barrier (IW used to inject fluids to prevent the intrusion of salt water into an aquifer)
- 5D02 Stormwater Drainage (IW designed for the disposal of rain water)
- 5D04 Industrial Stormwater Drainage Wells (IW designed for the disposal of rain water associated with industrial facilities)
- 5F01 Agricultural Drainage (IW that receive agricultural runoff)
- 5R21 Aquifer Recharge (IW used to inject fluids to recharge an aquifer)
- 5S23 Subsidence Control Wells (IW used to control land subsidence caused by groundwater withdrawal)
- 5W09 Untreated Sewage
- 5W10 Large Capacity Cesspools (Cesspools that are designed for 5,000 gpd or greater)
- 5W11 Large Capacity Septic systems (Septic systems designed for 5,000 gpd or greater)
- 5W12 WTP disposal
- 5W20 Industrial Process Waste-disposal Wells
- 5W31 Septic System (Well Disposal method)
- 5W32 Septic System Drainfield Disposal
- 5X13 Mine Backfill (IW used to control subsidence, dispose of mining byproducts, or fill sections of a mine)
- 5X25 Experimental Wells (Pilot Test) (IW used to test new technologies or tracer dye studies)
- 5X26 Aquifer Remediation (IW used to clean up, treat, or prevent contamination of a USDW)
- 5X27 Other Wells
- 5X28 Motor Vehicle Waste-disposal Wells (IW used to dispose of waste from a motor vehicle site - These are currently banned)
- 5X29 Abandoned Drinking Water Wells (waste disposal)

INDUSTRIAL WASTEWATER PERMIT APPLICATION

WORKSHEET 10.0: QUARRIES IN THE JOHN GRAVES SCENIC RIVERWAY

This worksheet **is required** for all applications for individual permits for a municipal solid waste facility or mining facility located within a Water Quality Protection Area in the John Graves Scenic Riverway. **Note: Review 30 TAC §§ 311.71–311.82 thoroughly prior to completing any portion of this worksheet.**

Item 1. Exclusions (Instructions, Page 100)

- a. Is this a municipal solid waste facility?
☐ Yes ☐ No
- b. Has this quarry been in operation since January 1, 1994 without cessation of operation for more than 30 consecutive days and under the same ownership?
☐ Yes ☐ No
- c. Is this a coal mine?
☐ Yes ☐ No
- d. Is this facility mining clay and/or shale for use in manufacturing structural clay products?
☐ Yes ☐ No

If **yes** to **any** above question, **stop here**. The facility is required to maintain documentation, as outlined in 30 TAC § 311.72(c), at the facility to demonstrate the exclusion(s).

Item 2. Location of the Quarry (Instructions, Page 101)

Check the box next to the distance between the quarry and the nearest navigable water body:

- ☐ < 200 feet ☐ 200 feet – 1,500 feet ☐ 1,500 feet – 1 mile ☐ > 1 mile

NOTE: The construction or operation of any new quarry or expansion of any existing quarry **is prohibited** within 200 feet of any water body located within a Water Quality Protection Area in the John Graves Scenic Riverway.

Item 3. Additional Requirements (Instructions, Page 101)

Use the table in the Instructions to determine if additional application requirements apply to the facility based on distance between the quarry and the nearest waterway. Attach as appropriate or enter N/A.

- a. Attach a Restoration Plan: [Click to enter text.](#)
- b. Amount of Financial Assurance for Restoration: \$ [Click to enter text.](#)
Mechanism: [Click to enter text.](#)
- c. Attach a Technical Demonstration: [Click to enter text.](#)
- d. Attach a Reclamation Plan: [Click to enter text.](#)
- e. Amount of Financial Assurance for Reclamation: \$ [Click to enter text.](#)
Mechanism: [Click to enter text.](#)

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	
Total AIF	
Intake Flow Use(s) (%)	
Contact cooling	
Non-contact cooling	
Process Wastewater	
Other	

b. Attach the following information:

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

Attachment: [Click to enter text.](#)

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				
DIF (include units)				
AIF (include units)				
Intake Flow Use(s) (%)				
Contact cooling				
Non-contact cooling				
Process Wastewater				
Other				
Latitude (decimal degrees)				
Longitude (decimal degrees)				

- 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: [Click to enter text.](#)

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				
Source Waterbody				
Mean Annual Flow				
Source				

- 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: [Click to enter text.](#)

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: [Click to enter text.](#)

- 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: [Click to enter text.](#)

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: [Click to enter text.](#)

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: [Click to enter text.](#)

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: [Click to enter text.](#)

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 withdrawals.

Attachment: [Click to enter text.](#)

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): [Click to enter text.](#)
- 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: [Click to enter text.](#)

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: [Click to enter text.](#)

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: [Click to enter text.](#)

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: [Click to enter text.](#)

- 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: [Click to enter text.](#)

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: [Click to enter text.](#)

- 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: [Click to enter text.](#)

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: [Click to enter text.](#)

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: [Click to enter text.](#)

- 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: [Click to enter text.](#)

- 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: [Click to enter text.](#)

- 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: [Click to enter text.](#)

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: [Click to enter text.](#)

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

- Attach an entrainment characterization study, as described at 40 CFR § 122.21(r)(9). [Click to enter text.](#)
- Attach a comprehensive feasibility study, as described as 40 CFR § 122.21(r)(10). [Click to enter text.](#)
- Attach a benefits valuation study, as described as 40 CFR § 122.21(r)(11). [Click to enter text.](#)
- Attach a non-water quality environmental and other impacts study, as described as 40 CFR § 122.21(r)(12). [Click to enter text.](#)
- Attach a peer review analysis, as described as 40 CFR § 122.21(r)(13). [Click to enter text.](#)

INDUSTRIAL WASTEWATER PERMIT APPLICATION WORKSHEET 12.0: OIL AND GAS EXPLORATION, DEVELOPMENT, AND PRODUCTION WASTEWATER DISCHARGES

This worksheet is **required** for all TPDES permit applications that are subject to Effluent Limitation Guidelines in 40 CFR Part 435.

Item 1. Operational Information (Instructions, Page 112)

- a. Is the wastewater from an oil and gas exploration, development, or production facility located west of the 98th meridian?

☐ Yes ☐ No

If yes, continue to the next question. If no, skip to Item 2 relating to Production/Process Data.

- b. Provide justification for how the wastewater is/will be used for agriculture or wildlife propagation.

Click to enter text.

Item 2. Production/Process Data (Instructions, Page 112)

- a. Provide the applicable 40 CFR Part 435 Subpart(s).

Click to enter text.

- b. Describe if the permit being sought is for discharges from exploration, development, production, or for a combination of more than one of those activities.

Click to enter text.

c. Provide information on all waste-streams generated and specify which waste-streams you are requesting to be authorized for discharge.

Wastestreams Generated

Wastestream	Requesting authorization to discharge? (Yes/No)	Volume (MGD)	% of Total Flow

d. Describe how the facility will manage wastestreams for which discharge authorization is not being sought.

Click to enter text.

Attachment: Click to enter text.

e. Provide information on miscellaneous discharges.

Click to enter text.

Attachment: Click to enter text.

- f. List of chemicals that are in use, or will be used, downhole. Provide the category, concentration used/to be used, and purpose of using the chemical. Attach a safety data sheet for each chemical listed.

Chemicals List

Category	Chemical Name	Concentration (include units)	Purpose

Attachment: [Click to enter text.](#)

- g. List of chemicals that are in use, or will be used, to treat the wastewater to be discharged under this authorization. Provide the concentration used/to be used and purpose of using the chemical. Attach a safety data sheet for each chemical listed.

Water Treatment Chemicals List

Category	Chemical Name	Concentration (include units)	Purpose

Attachment: [Click to enter text.](#)

Item 3. Pollutant Analysis (Instructions, Page 113)

Tables 1, 2, 6, and 7 located in Worksheet 2.0 are required. In addition, Table 19 below is required and must be completed for each outfall and submitted with this application. The remaining tables in Worksheet 2.0, are required as applicable.

- a. Provide the date range of all sampling events conducted to obtain the analytical data submitted with this application (e.g., 05/01/2018-05/30/2018): [Click to enter text.](#)
- b. ☐ Check the box to confirm all samples were collected no more than 12 months prior to the date of application submittal.
- c. Read the general testing requirements in the instructions for important information about sampling, test methods, and MALs. If a contact laboratory was used, attach a list which includes the name, contact information, and pollutants analyzed for each laboratory/firm. **Attachment:** [Click to enter text.](#)
- d. Attach correspondence from TCEQ approving submittal of less than the required number of samples, if applicable. **Attachment:** [Click to enter text.](#)

Table 19 for Outfall No.: [Click to enter text.](#) Samples are (check one): ☐ Composite ☐ Grab

Pollutant	Sample 1 (mg/L)*	Sample 2 (mg/L)*	Sample 3 (mg/L)*	Sample 4 (mg/L)*
Calcium				
Potassium				
Sodium				

*Indicate units if different from mg/L.

AR.1.0.1.f – Major Amendment Request

AR.1.01.f -Major Amendment Request

The facility installed Granular Activated Carbon (GAC) copper beds in October 2022 to treat the condensate generated from the Main Air Compressor (major source of copper in the wastewater). Based on the analytical results for copper for the past 18-months, the average copper concentrations for the period from 10/26/22 to 3/20/24 (after the installation of copper beds) is 0.0248 mg/L, which is less than 70% of daily average limit (0.0305 mg/L) and less than 85% of daily average limit (0.037 mg/L). The average copper concentration for that period is approximately 57% of the daily average limit.

Based on this pattern of reduction in the analytical values of copper, the facility requests a reduction/elimination of copper effluent limits in the renewed permit. The analytical sample values for copper after the installation of the copper beds will be provided to the TCEQ upon request.

AR.1.0.1.h – Copy of Applicant Fee Payment

Your transaction is complete. Thank you for using TCEQ ePay.

Note: It may take up to 3 working days for this electronic payment to be processed and be reflected in the TCEQ ePay system. Print this receipt and the vouchers for your records. An email receipt has also been sent.

Transaction Information

Trace Number: 582EA000607444
Date: 04/22/2024 02:55 PM
Payment Method: CC - Authorization 0000095438
ePay Actor: HUDA SHIHADA
Actor Email: huda.shihada@aecom.com
IP: 165.85.199.60
TCEQ Amount: \$1,250.00
Texas.gov Price: \$1,278.38*

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

Payment Contact Information

Name: HUNTER ARMSTRONG
Company: MESSER LLC
Address: 11605 STRANG RD, LA PORTE, TX 77571
Phone: 281-687-0261

Cart Items

Click on the voucher number to see the voucher details.

Voucher	Fee Description	AR Number	Amount
702415	WW PERMIT - MINOR FACILITY SUBJECT TO 40 CFR 400-471 - MAJOR AMENDMENT		\$1,200.00
702416	30 TAC 305.53B WQ NOTIFICATION FEE		\$50.00
TCEQ Amount:			\$1,250.00

[ePay Again](#)[Exit ePay](#)

Note: It may take up to 3 working days for this electronic payment to be processed and be reflected in the TCEQ ePay system. Print this receipt for your records.

Print this voucher for your records. If you are sending the TCEQ hardcopy documents related to this payment, include a copy of this voucher.

Transaction Information**Voucher Number:** 702415**Trace Number:** 582EA000607444**Date:** 04/22/2024 02:55 PM**Payment Method:** CC - Authorization 0000095438**Voucher Amount:** \$1,200.00**Fee Type:** WW PERMIT - MINOR FACILITY SUBJECT TO 40 CFR 400-471 - MAJOR AMENDMENT**ePay Actor:** HUDA SHIHADA**Actor Email:** huda.shihada@aecom.com**IP:** 165.85.199.60**Payment Contact Information****Name:** HUNTER ARMSTRONG**Company:** MESSER LLC**Address:** 11605 STRANG RD, LA PORTE, TX 77571**Phone:** 281-687-0261**Site Information****RN:** RN110995396**Site Name:** MESSER LA PORTE**Site Address:** 11605 STRANG RD, LA PORTE, TX 77571**Site Location:** 11605 STRANG RD LA PORTE TX 77571**Customer Information****CN:** CN603509266**Customer Name:** MESSER LLC**Customer Address:** 11605 STRANG RD, LA PORTE, TX 77571**Other Information****Program Area ID:** WQ0005108000[Close](#)

Print this voucher for your records. If you are sending the TCEQ hardcopy documents related to this payment, include a copy of this voucher.

Transaction Information

Voucher Number: 702416
Trace Number: 582EA000607444
Date: 04/22/2024 02:55 PM
Payment Method: CC - Authorization 0000095438
Voucher Amount: \$50.00
Fee Type: 30 TAC 305.53B WQ NOTIFICATION FEE
ePay Actor: HUDA SHIHADA
Actor Email: huda.shihada@aecom.com
IP: 165.85.199.60

Payment Contact Information

Name: HUNTER ARMSTRONG
Company: MESSER LLC
Address: 11605 STRANG RD, LA PORTE, TX 77571
Phone: 281-687-0261

[Close](#)

AR.1.0.4.a – Core Data Form



TCEQ Core Data Form

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

SECTION I: General Information

1. Reason for Submission (If other is checked please describe in space provided.)		
<input type="checkbox"/> New Permit, Registration or Authorization (Core Data Form should be submitted with the program application.)		
<input checked="" type="checkbox"/> Renewal (Core Data Form should be submitted with the renewal form)		<input type="checkbox"/> 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 603509266		RN 110995396

SECTION II: Customer Information

4. General Customer Information		5. Effective Date for Customer Information Updates (mm/dd/yyyy)			
<input type="checkbox"/> New Customer <input type="checkbox"/> Update to Customer Information <input type="checkbox"/> Change in Regulated Entity Ownership					
<input type="checkbox"/> Change in Legal Name (Verifiable with the Texas Secretary of State or Texas Comptroller of Public Accounts)					
<i>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).</i>					
6. Customer Legal Name (If an individual, print last name first: eg: Doe, John)				<i>If new Customer, enter previous Customer below:</i>	
Messer LLC					
7. TX SOS/CPA Filing Number		8. TX State Tax ID (11 digits)		9. Federal Tax ID (9 digits) 51-0120061	10. DUNS Number (if applicable) 00-136-8141
11. Type of Customer:		<input checked="" type="checkbox"/> Corporation		<input type="checkbox"/> Individual	Partnership: <input type="checkbox"/> General <input type="checkbox"/> Limited
Government: <input type="checkbox"/> City <input type="checkbox"/> County <input type="checkbox"/> Federal <input type="checkbox"/> Local <input type="checkbox"/> State <input type="checkbox"/> Other		<input type="checkbox"/> Sole Proprietorship		<input type="checkbox"/> Other:	
12. Number of Employees				13. Independently Owned and Operated?	
<input type="checkbox"/> 0-20 <input type="checkbox"/> 21-100 <input type="checkbox"/> 101-250 <input type="checkbox"/> 251-500 <input checked="" type="checkbox"/> 501 and higher				<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No	
14. Customer Role (Proposed or Actual) – as it relates to the Regulated Entity listed on this form. Please check one of the following					
<input type="checkbox"/> Owner <input type="checkbox"/> Operator <input checked="" type="checkbox"/> Owner & Operator <input type="checkbox"/> Other:					
<input type="checkbox"/> Occupational Licensee <input type="checkbox"/> Responsible Party <input type="checkbox"/> VCP/BSA Applicant					
15. Mailing Address:	11605 Strang Road				
	City	La Porte	State	TX	ZIP 77571 ZIP + 4 9749
16. Country Mailing Information (if outside USA)			17. E-Mail Address (if applicable)		
N/A			N/A		
18. Telephone Number		19. Extension or Code		20. Fax Number (if applicable)	

SECTION III: Regulated Entity Information

21. General Regulated Entity Information (If 'New Regulated Entity' is selected, a new permit application is also required.)								
<input type="checkbox"/> New Regulated Entity <input type="checkbox"/> Update to Regulated Entity Name <input checked="" type="checkbox"/> Update to Regulated Entity Information								
<i>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).</i>								
22. Regulated Entity Name (Enter name of the site where the regulated action is taking place.)								
Messer La Porte								
23. Street Address of the Regulated Entity: (No PO Boxes)	11605 Strang Road							
	City	La Porte	State	TX	ZIP	77571	ZIP + 4	9749
24. County	Harris							

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

25. Description to Physical Location:	N/A							
26. Nearest City					State		Nearest ZIP Code	
<i>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).</i>								
27. Latitude (N) In Decimal:		29.704264			28. Longitude (W) In Decimal:		-95.053570	
Degrees	Minutes	Seconds	Degrees	Minutes	Seconds			
29	42	15.26	95	3	12.87			
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)		
2813				325120				
33. What is the Primary Business of this entity? (Do not repeat the SIC or NAICS description.)								
Industrial Gas Manufacturing								
34. Mailing Address:	11605 Strang Road							
	City	La Porte	State	TX	ZIP	77571	ZIP + 4	
35. E-Mail Address:		rami.qafisheh@messer-us.com						
36. Telephone Number			37. Extension or Code			38. Fax Number (if applicable)		
(409) 204-9150						() -		

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.

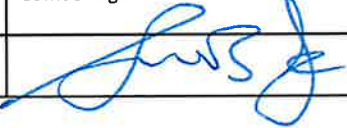
<input type="checkbox"/> Dam Safety	<input type="checkbox"/> Districts	<input type="checkbox"/> Edwards Aquifer	<input type="checkbox"/> Emissions Inventory Air	<input checked="" type="checkbox"/> Industrial Hazardous Waste
				41967
<input type="checkbox"/> Municipal Solid Waste	<input checked="" type="checkbox"/> New Source Review Air	<input type="checkbox"/> OSSF	<input type="checkbox"/> Petroleum Storage Tank	<input type="checkbox"/> PWS
	158367, 156746			
<input type="checkbox"/> Sludge	<input checked="" type="checkbox"/> Storm Water	<input type="checkbox"/> Title V Air	<input type="checkbox"/> Tires	<input type="checkbox"/> Used Oil
	TXR05CH73			
<input type="checkbox"/> Voluntary Cleanup	<input checked="" type="checkbox"/> Wastewater	<input type="checkbox"/> Wastewater Agriculture	<input type="checkbox"/> Water Rights	<input type="checkbox"/> Other:
	WQ0005108000			

SECTION IV: Preparer Information

40. Name:	Divya Dhiman			41. Title:	Environmental Engineer
42. Telephone Number	43. Ext./Code	44. Fax Number	45. E-Mail Address		
(832) 812-7265		() -	divya.dhiman@aecom.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:	Messer, LLC	Job Title:	Vice President of Operations
Name (In Print):	Samuel Agle	Phone:	(267) 799- 6244
Signature:			Date: 4/24/2024

AR.1.0.9.f - PLAIN LANGUAGE SUMMARY TEMPLATE



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 Enter 'INDUSTRIAL' or 'DOMESTIC' here 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.

Messer LLC (CN603509266) operates an ASU Plant (RN110995396), an Air Separation Unit. The facility is located at 11605 Strang Road, in La Porte, Harris County, Texas 77571. The facility is requesting renewal of TPDES Permit WQ0005108000.

Discharges from the facility are expected to contain total suspended solids, oil and grease and copper. Wastewater generated at the facility is treated by GAC (Granular Activated Carbon) beds using a lead-lag system prior to discharging from Outfall 001. Wastewater generated at the facility includes process wastewater, cooling tower blowdown, filter backwash water, and utility wastewater, which is discharged via Outfall 001. Process wastewater consists of compressor condensate that is generated from the compression stage of the gas separation process. The condensate generated from the Main Air Compressor (MAC) is treated through GAC (Granular Activated Carbon) beds using a lead-lag system. Cooling tower blowdown is discharged in order to maintain a certain water quality in the cooling tower. Filter backwash water is produced when the side stream filter for the cooling

tower is backwashed periodically with the water supplied to the cooling tower. Utility wastewater includes, but is not limited to, steam condensate and emergency firewater washdown. Wastewater is monitored prior to being routed to a facility storm water ditch, and are then discharged via Outfall 001 to San Jacinto Bay. Discharges of storm water are authorized under the TPDES Stormwater Multi-Sector General Permit (TXR05CH73) and commingle with discharges authorized under the facility's TPDES permit no. WQ0005108000. The facility is requesting renewal of TPDES Permit WQ0005108000 to discharge effluent not exceeding an average flow of 0.25 MGD and a maximum flow of 0.35 MGD. The facility is also requesting a reduction/elimination of copper limits. The facility installed Granular Activated Carbon (GAC) copper beds in October 2022 to treat the condensate generated from the Main Air Compressor (major source of copper in the wastewater). Based on the analytical results for copper for the past 18-months, the average copper concentrations for the period from 10/26/22 to 3/20/24 (after the installation of copper beds) is 0.0248 mg/L, which is less than 70% of daily average limit (0.0305 mg/L) and less than 85% of daily average limit (0.037 mg/L). The average copper concentration for that period is approximately 57% of the daily average limit. Based on this pattern of reduction in the analytical values of copper, the facility requests a reduction/elimination of copper effluent limits in the renewed permit. The analytical sample values for copper after the installation of the copper beds will be provided to the TCEQ upon request.

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

AGUAS RESIDUALES Introduzca 'INDUSTRIALES' o 'DOMÉSTICAS' aquí /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.

Messer LLC (CN603509266) opera una planta ASU (RN110995396), una Unidad de Separación de Aire. La instalación está ubicada en el 11605 Strang Road, en La Porte, Condado de Harris, Texas 77571. La instalación está solicitando renovación del Permiso TPDES WQ0005108000.

Se espera que las descargas de la instalación contengan sólidos suspendidos totales, aceites y grasas y cobre. Las aguas residuales generadas en la instalación son tratadas por lechos de GAC (Carbón Activado Granular) utilizando un sistema de retardo de plomo antes de la descarga del Desagüe 001. Las aguas residuales generadas en la instalación incluyen aguas residuales de proceso, la purga de la torre de enfriamiento, el agua de retrolavado del filtro y las aguas residuales de los servicios públicos, que se descargan a través del Desagüe 001. Las aguas residuales de proceso consisten en condensado del compresor que se genera durante la etapa de compresión del sistema de separación de gases. El condensado generado por el Compresor de Aire Principal (MAC) se trata a través de lechos GAC (Carbón Activado Granular) utilizando un sistema de retardo de plomo. La purga de la torre de enfriamiento se descarga para mantener una cierta calidad del agua en la torre de enfriamiento. El agua de retrolavado del filtro se produce cuando el filtro de flujo lateral de la torre de enfriamiento se lava periódicamente con el agua suministrada a la torre de enfriamiento. Las aguas residuales de los servicios públicos incluyen, entre otras, el condensado de vapor y el lavado de emergencia de aguas contra incendios. Las aguas residuales se monitorean antes de ser enviadas a una zanja de aguas pluviales de la instalación, y luego se descargan a través del Desagüe 001 a la Bahía de San Jacinto. Las descargas de aguas pluviales están autorizadas bajo el Permiso General Multisectorial de Aguas Pluviales (TXR05CH73) de TPDES y se mezclan con las descargas autorizadas bajo el permiso TPDES no. WQ0005108000 de la instalación. La instalación está solicitando la renovación del permiso TPDES WQ0005108000 para descargar efluentes que no excedan un flujo promedio de 0.25 MGD y un flujo máximo de 0.35 MGD. La instalación también está solicitando una reducción/eliminación de los límites de cobre. La instalación instaló lechos de cobre de Carbón Activado Granular (GAC) en octubre de 2022 para tratar el condensado generado por el Compresor de Aire Principal (principal fuente de cobre en las aguas residuales). Con base en los resultados analíticos de cobre de los últimos 18 meses, las concentraciones promedio de cobre para el período del 10/26/22 al 3/20/24 (después de la instalación de los lechos de cobre) son de 0.0248 mg/L, que es menos del 70% del límite promedio diario (0.0305 mg/L) y menos del 85% del límite promedio diario (0.037 mg/L). La concentración promedio de cobre para ese período es aproximadamente el 57% del límite promedio diario. Con base en este patrón de reducción en los valores analíticos del cobre, la instalación solicita una reducción/eliminación de los límites de efluentes de cobre en el permiso renovado. Los valores de las muestras analíticas de cobre después de la instalación de los lechos de cobre se proporcionarán a la TCEQ si lo solicita. . 16. Elija del menú desplegable tratado por .

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 WO-ARPTeam@tceq.texas.gov or by phone at (512) 239-4671.

Example

Individual Industrial Wastewater Application

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

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

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

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

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

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

AR.1.0.9.g – Public Involvement Form



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.

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.

Messer LLC (CN603509266) operates an ASU Plant (RN110995396), an Air Separation Unit. The facility is located at 11605 Strang Road, in La Porte, Harris County, Texas 775571. The facility is requesting renewal of TPDES Permit WQ0005108000.

Discharges from the facility are expected to contain total suspended solids, oil and grease and copper. Wastewater generated at the facility is treated by GAC (Granular Activated Carbon) beds using a lead-lag system prior to discharging from Outfall 001. Wastewater generated at the facility includes process wastewater, cooling tower blowdown, filter backwash water, and utility wastewater, which is discharged via Outfall 001. Process wastewater consists of compressor condensate that is generated from the compression stage of the gas separation process. The condensate generated from the Main Air Compressor (MAC) is treated through GAC (Granular Activated Carbon) beds using a lead-lag system. Cooling tower blowdown is discharged in order to maintain a certain water quality in the cooling tower. Filter backwash water is produced when the side stream filter for the cooling tower is backwashed periodically with the water supplied to the cooling tower. Utility wastewater includes, but is not limited to, steam condensate and emergency firewater washdown. Wastewater is monitored prior to being routed to a facility storm water ditch, and are then discharged via Outfall 001 to San Jacinto Bay. Discharges of storm water are authorized under the

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) La Porte

(County) Harris

(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

Less than 50 percentile.

(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

English - Less than 50 percentile.

(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) La Porte Public Library

Section 7. Voluntary Submittal

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

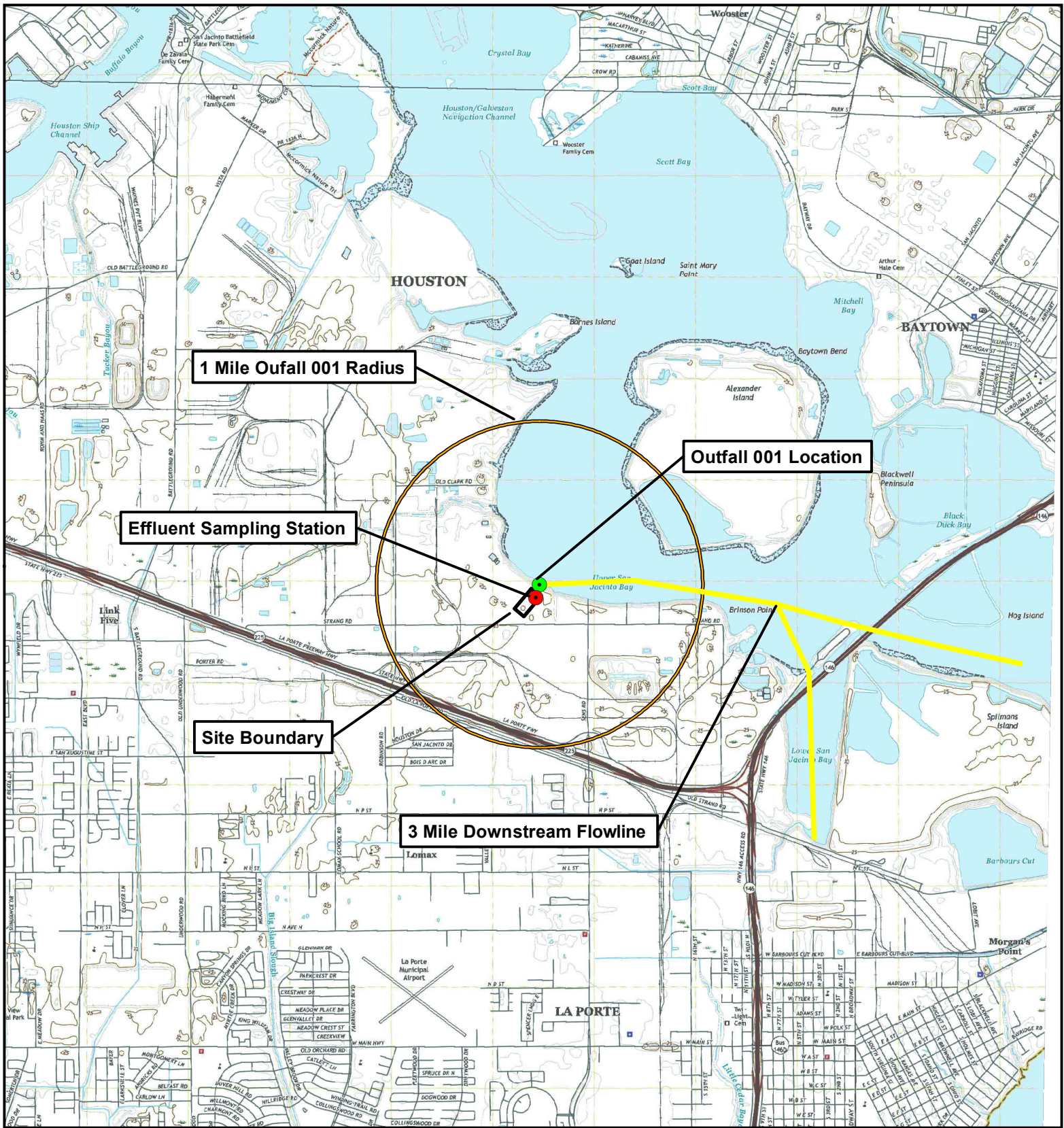
Will you provide notice of this application, including notice in alternative languages?

☐ Yes ☐ No

What types of notice will be provided?

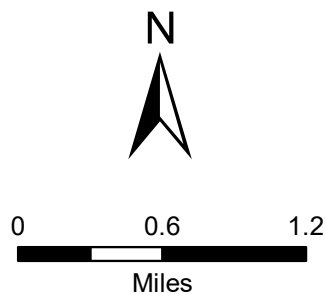
- ☐ Publish in alternative language newspaper
- ☐ Posted on Commissioner's Integrated Database Website
- ☐ Mailed by TCEQ's Office of the Chief Clerk
- ☐ Other (specify)

AR.1.0.11.b – USGS Topographic Map



- Site Boundary
- 1 Mile Outfall 001 Radius
- 3 Mile Downstream Flowline
- Outfall 001 Location
- Effluent Sampling Location

Source: USGS Quads - 2022 La Porte and 2022 Highlands

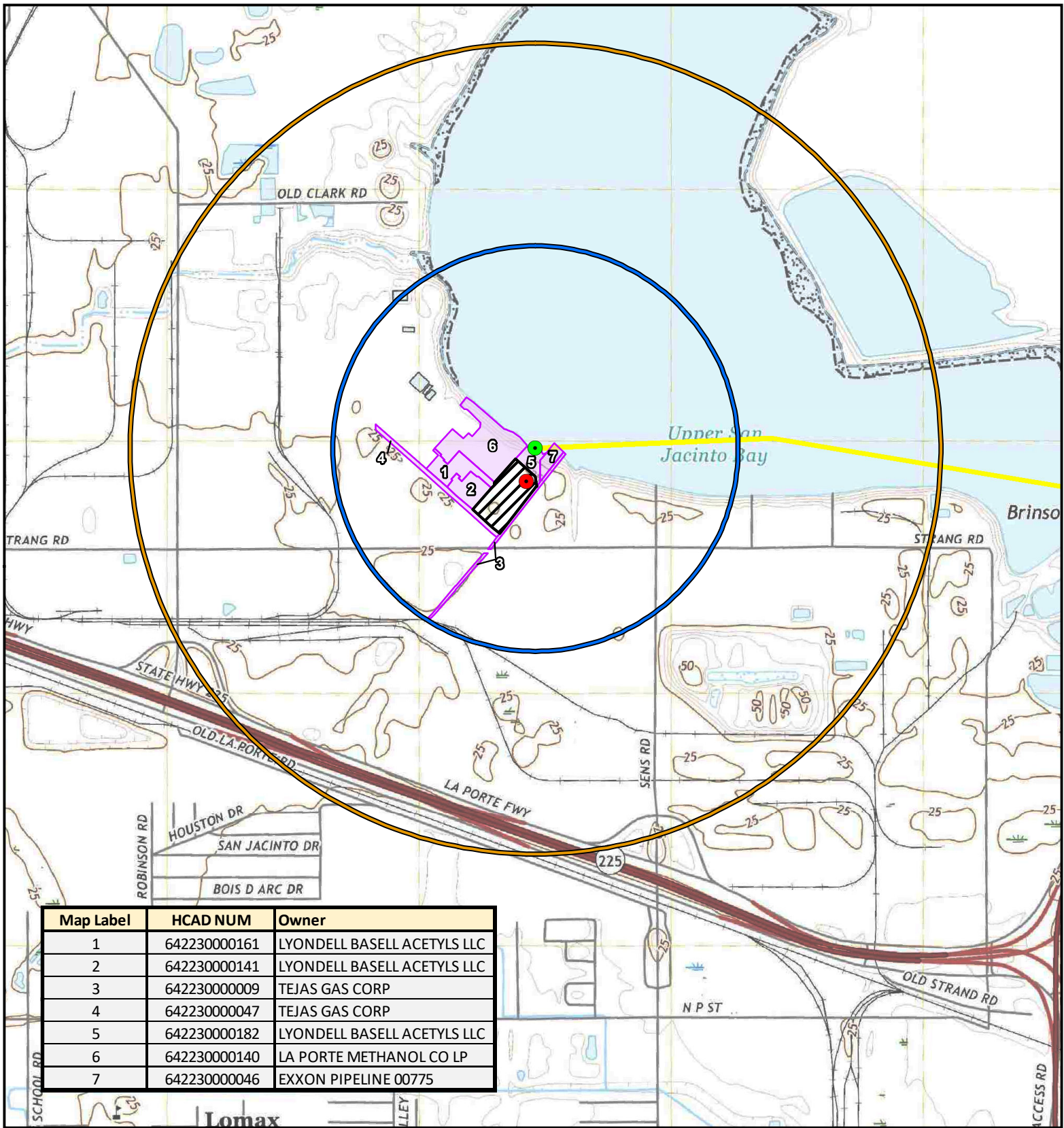


Name:
AR.1.0.11.b - USGS Topographic Map
Site Address: 11605 Strang Rd.
La Porte, Texas 77571
Project Number: 60730161








Client: Messer LLC

AECOM

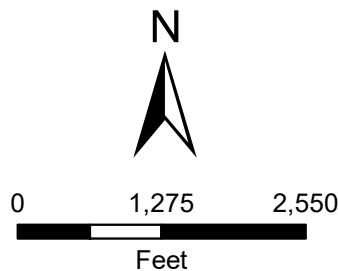
AR.1.1.1.a – Adjacent Landowner Map



Map Label	HCAD NUM	Owner
1	642230000161	LYONDELL BASELL ACETYLS LLC
2	642230000141	LYONDELL BASELL ACETYLS LLC
3	642230000009	TEJAS GAS CORP
4	642230000047	TEJAS GAS CORP
5	642230000182	LYONDELL BASELL ACETYLS LLC
6	642230000140	LA PORTE METHANOL CO LP
7	642230000046	EXXON PIPELINE 00775

-  1 Mile Outfall 001 Radius
-  1/2 Mile Outfall 001 Radius
-  Messer LLC Parcel Boundary
-  Adjacent Parcels
-  3 Mile Downstream Flowline
-  Outfall 001 Location
-  Effluent Sampling Location

Source: USGS Quads - 2022 La Porte and 2022 Highlands



Name: A.1.1.1.a
Adjacent Landowner Map
11605 Strang Road,
La Porte, TX 77571

Client: Messer LLC

AECOM

AR.1.1.1 – Adjacent Landowner Cross-reference list

AR.1.1.1 – Adjacent Landowner Cross-reference List

Map ID	Adjacent Landowner Name	Adjacent Landowner Address
1	Lyondell Basell Acetyls LLC	Lyondell chemical CO 1221 McKinney St STE 300 Houston TX 77010-2036
2	Lyondell Basell Acetyls LLC	Lyondell chemical CO 1221 McKinney St STE 300 Houston TX 77010-2036
3	Tejas Gas Corp	PROPERTY TAX DEPT 500 DALLAS ST STE 100 HOUSTON TX 77002-4804
4	Tejas Gas Corp	PROPERTY TAX DEPT 500 DALLAS ST STE 100 HOUSTON TX 77002-4804
5	Lyondell Basell Acetyls LLC	Lyondell chemical CO 1221 McKinney St STE 300 Houston TX 77010-2036
6	La Porte Methanol CO LP	MILLENNIUM CHEMICALS TAX DEPT PO BOX 3646 HOUSTON TX 77253-36
7	Exxon Pipeline 00775	EXXON PIPELINE 00775 PO BOX 53 HOUSTON TX 77001-0053

AR.1.1.1.b – Adjacent Landowner Labels – 4 sets

LYONDELL BASELL ACETYLS LLC
LYONDELL CHEMICAL CO
1221 MCKINNEY ST STE 300
HOUSTON TX 77010-2036

EXXON PIPELINE 00775
PO BOX 53
HOUSTON TX 77001-0053

TEJAS GAS CORP
PROPERTY TAX DEPT
500 DALLAS ST STE 100
HOUSTON TX77002-4804

LYONDELL BASELL ACETYLS LLC
LYONDELL CHEMICAL CO
1221 MCKINNEY ST STE 300
HOUSTON TX 77010-2036

EXXON PIPELINE 00775
PO BOX 53
HOUSTON TX 77001-0053

TEJAS GAS CORP
PROPERTY TAX DEPT
500 DALLAS ST STE 100
HOUSTON TX77002-4804

LYONDELL BASELL ACETYLS LLC
LYONDELL CHEMICAL CO
1221 MCKINNEY ST STE 300
HOUSTON TX 77010-2036

EXXON PIPELINE 00775
PO BOX 53
HOUSTON TX 77001-0053

TEJAS GAS CORP
PROPERTY TAX DEPT
500 DALLAS ST STE 100
HOUSTON TX77002-4804

LYONDELL BASELL ACETYLS LLC
LYONDELL CHEMICAL CO
1221 MCKINNEY ST STE 300
HOUSTON TX 77010-2036

EXXON PIPELINE 00775
PO BOX 53
HOUSTON TX 77001-0053

TEJAS GAS CORP
PROPERTY TAX DEPT
500 DALLAS ST STE 100
HOUSTON TX77002-4804

LA PORT METHANOL CO LP
MILLENNIUM CHEMICALS TAX DEPT
PO BOX 3646
HOUSTON TX 77253-36

LA PORT METHANOL CO LP
MILLENNIUM CHEMICALS TAX DEPT
PO BOX 3646
HOUSTON TX 77253-36

EXXON PIPELINE 00775
PO BOX 53
HOUSTON TX 77001-0053

LA PORT METHANOL CO LP
MILLENNIUM CHEMICALS TAX DEPT
PO BOX 3646
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PO BOX 53
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EXXON PIPELINE 00775
PO BOX 53
HOUSTON TX 77001-0053

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MILLENNIUM CHEMICALS TAX DEPT
PO BOX 3646
HOUSTON TX 77253-36

EXXON PIPELINE 00775
PO BOX 53
HOUSTON TX 77001-0053

AR.1.1.2 – Original Photographs

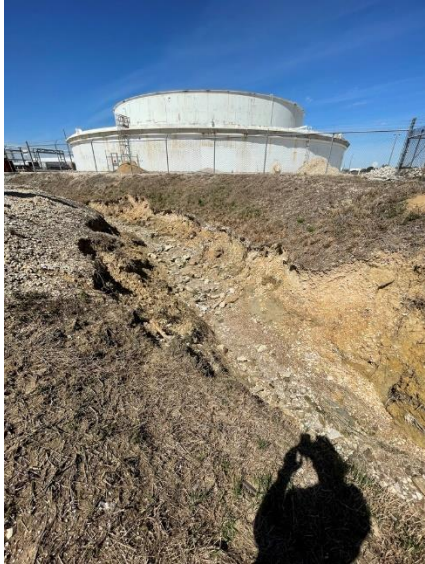
AR1.1-2 ORIGINAL PHOTOGRAPHS



Picture 1 – Outfall 001 (downstream)



Picture 2 – Outfall 001 (downstream)



Picture 3 (Area around Outfall 001)



Picture 4 (Area upstream of Outfall 001)

AR.SPIF – 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: Messer LLC

Permit No. WQ00 05108000

EPA ID No. TX 0135101

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

11605 Strang Road, La Porte, Harris County, Texas 77571.

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):

First and Last Name: Rami Qafisheh

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

Title: La Porte Zone Production Manager

Mailing Address: 11605 Strang Road

City, State, Zip Code: La Porte, TX 77571

Phone No.: 409-204-9150 Ext.: N/A Fax No.: N/A

E-mail Address: rami.qafisheh@messer-us.com

2. List the county in which the facility is located: Harris
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.

Effluent is discharged from Outfall 001 directly into San Jacinto Bay in Segment No. 2427 of the Bays and Estuaries.

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

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

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

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

☐ Disturbance of vegetation or wetlands

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

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

The site is an industrial manufacturing site.

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

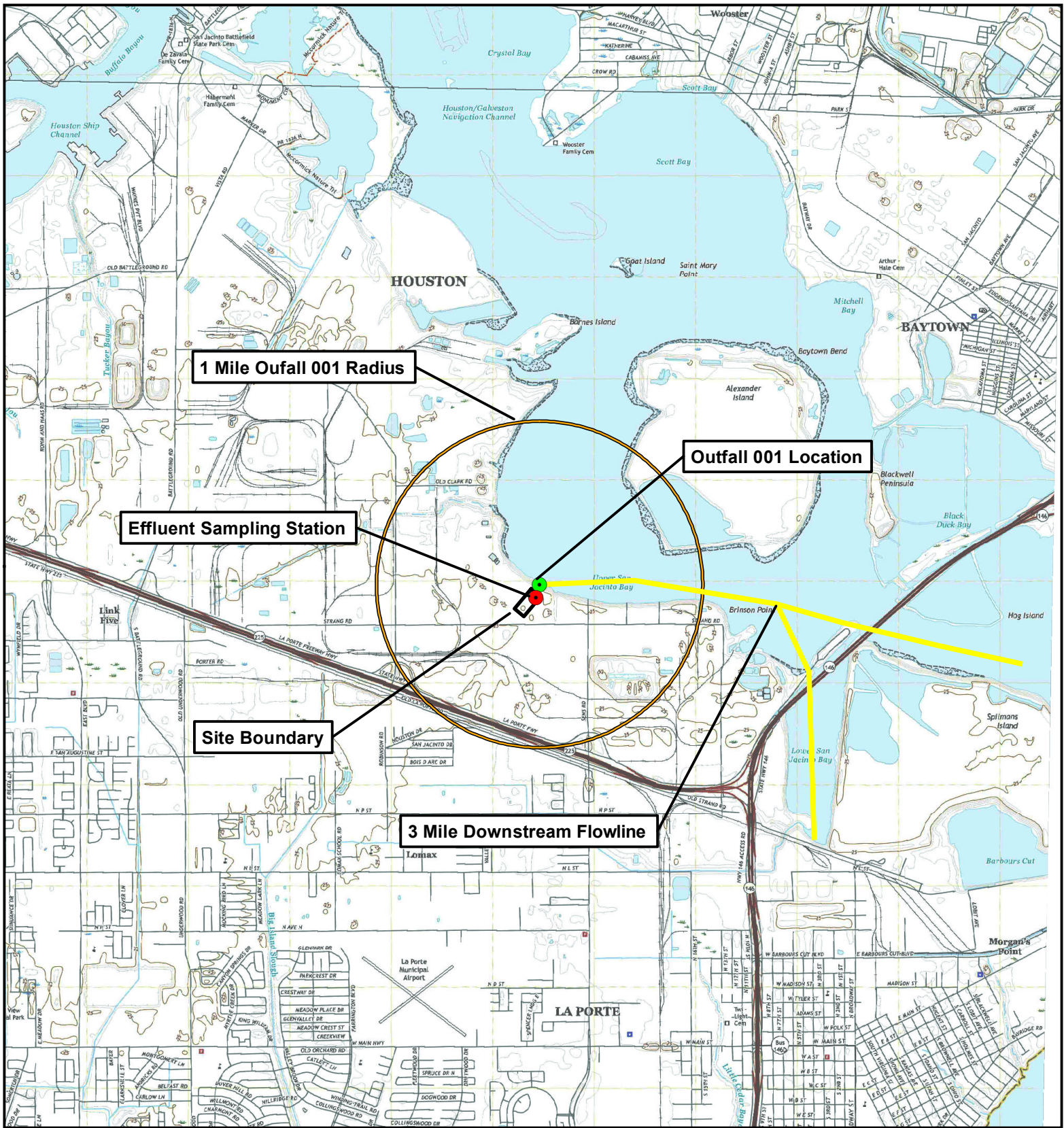
3. List construction dates of all buildings and structures on the property:






The Air Separation Unit was constructed and started in 2014. Prior to the ASU, the site was used as an equipment laydown and auxiliary parking area for the adjacent Syngas plant.

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

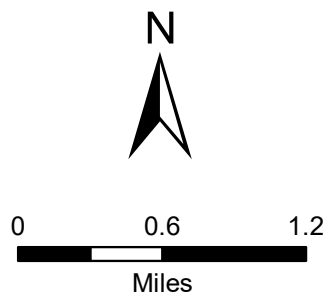
Based on aerial photographs since the 1980s, the site was formerly either vacant or used as an equipment laydown and auxiliary parking area.

AR.SPIF.5 – SPIF Map



-  Site Boundary
-  1 Mile Outfall 001 Radius
-  3 Mile Downstream Flowline
-  Outfall 001 Location
-  Effluent Sampling Location

Source: USGS Quads - 2022 La Porte and 2022 Highlands



Name:
AR.SPIF.5 - SPIF Map
Site Address: 11605 Strang Rd.
La Porte, Texas 77571
Project Number: 60730161

Client:
Messer LLC

AECOM

TR.1.0.1.a – Facility Description

Attachment TR.1.0.1.a – Facility Description

The LaPorte, TX Air Separation Unit (ASU) facility # 5187, was commissioned in January 2015. It has industrial gas manufacturing, distribution, and customer service operations.

This ASU produces: GOX (Gas Oxygen), GAN (Gas Nitrogen), CDA (Clean dry Air), Neon (Gaseous), Kr/Xe (gaseous Krypton/Xenon - future), LIN (liquid Nitrogen), LOX (liquid Oxygen), and LAR (liquid Argon) which are manufactured by low temperature distillation of liquid air.

Production Capacity.

At complex sites like LaPorte, the production mix will vary depending upon a number of factors. The plant is capable of delivering the maximum flow rates as listed below. However, the plant will not produce the maximum quantity for all the products at the same time:

GOX = 2200 TPD

LOX = 172 TPD

GAN = 179 TPD

LIN = 344 TPD

LAR = 108 TPD

CDA = 85 TPD

Neon = 0.17 TPD

Kr/Xe = 0.0115 TPD (future)

Storage Facilities.

The following storage capacity is provided for this plant:

6,653 Tons of Liquid Oxygen

1,851 Tons of Liquid Nitrogen

1,096 Tons of Liquid Pure Argon

87 Tons of Liquid Crude Argon

Air Separation Process.

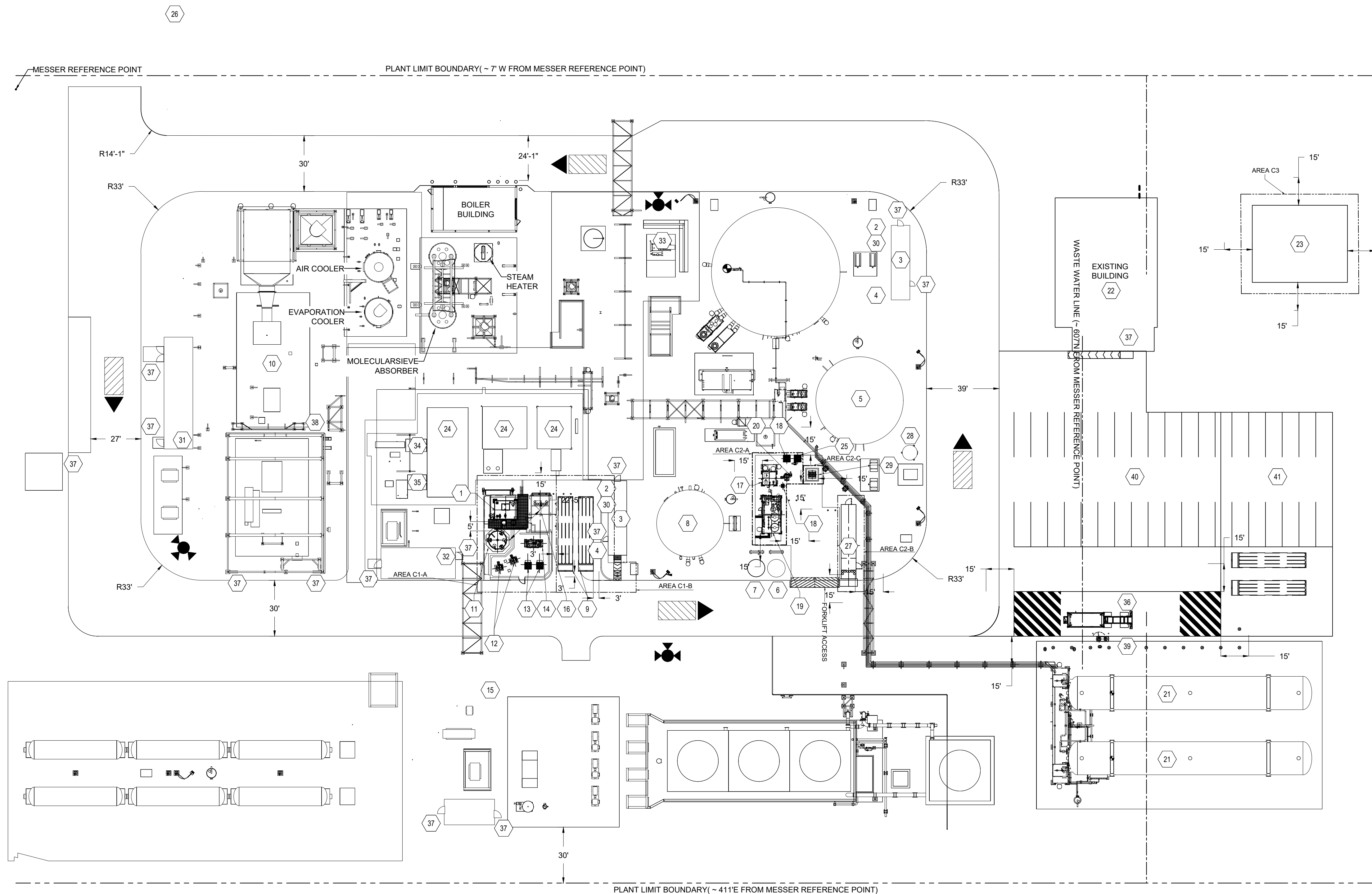
Atmospheric air is filtered and compressed. This high-pressure air is then chilled. The chilled air enters a distillation column where the air is fractionally distilled at very low temperature into its components: oxygen, nitrogen, argon, neon, Kr/Xe (future), etc. The heat exchanger and distillation column are housed in a structure known as a cold box. Products (GOX, GAN & CDA) are delivered to the HYCO site (LyondellBasell) by pipeline as a gas. Liquid oxygen, liquid nitrogen, and liquid argon are delivered by truck to merchant customers, and liquid argon is also railed out. Neon is compressed and loaded into a tube trailer. Kr/Xe is collected in cylinders.

There are 10 buildings (Control Room / Office Building, Driver's Room, ASU Analytical Equipment Room, ATF Analytical Equipment Room, Kr/Xe Analytical Room, Multipurpose Kr/Xe Analytical room / Motor Control Center, Boiler Building, and 3 Power Distribution Centers) and 7 product storage tanks. The total site area covers approximately 10 acres. The facility operates 24 hours per day, 7 days per week. It employs 8 people on day shifts, and 1 on the night shift. The facility is operated by the Remote Operations Center (ROC).

Temporary Natural Gas Supply

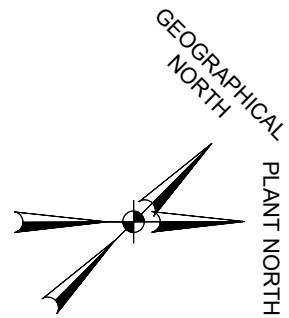
Stabilis Solutions has temporarily placed a 14,400-gallon Queen liquefied natural gas (LNG) trailer, ambient vaporization trailer, and odorization skid end to end at the Facility. Vehicle and containment barriers have been erected around all three units. The units are connected via stainless steel flex hoses to transfer LNG to the ambient vaporization trailer where it is vaporized to a gas using passive stainless steel coils and then odorized before being delivered to the plant natural gas supply line. This natural gas is used as fuel for the three steam generation units in the boiler building.

TR.1.0.1.d – Facility Map



KEY NOTES:

- 1 CRUDE KR/XE DISTILLATION COLUMN.
- 2 COMPRESSED OXYGEN CYLINDER STORAGE.
- 3 PROCESS GAS TESTING BUILDING.
- 4 FLAMMABLE GAS CYLINDER STORAGE.
- 5 CRYOGENIC LIQUID NITROGEN STORAGE VESSEL, 72,000 CU. FT.
- 6 HIGH PRESSURE LIQUID NITROGEN VESSEL, 15,000 GALLONS.
- 7 HIGH PRESSURE LIQUID ARGON VESSEL, 15,000 GALLONS.
- 8 CRYOGENIC ARGON STORAGE VESSEL, 25,000 CU. FT.
- 9 RELOCATED NEON GAS TUBE TRAILER.
- 10 MAIN AIR COMPRESSOR.
- 11 KR / XE / LOX STORAGE TANK (6,000 GAL).
- 12 LOX PUMP.
- 13 LOX VAPORIZER.
- 14 LOX VAP. VALVE SKID.
- 15 DIESEL FUEL GENERATOR WITH 2051 GALLON DIESEL FUEL TANK.
- 16 Kr/Xe C1 RIO / ANALYTICAL BUILDING.
- 17 Kr/Xe DISTILLATION COLUMN (COLD BOX).
- 18 AMBIENT VAPORIZERS.
- 19 CH4 REMOVAL SKID.
- 20 PRODUCT PUMP.
- 21 HIGH PRESSURE LIQUID OXYGEN STORAGE TANK.
- 22 MAIN OFFICE/CONTROL ROOM.
- 23 Kr/Xe STORAGE. UP TO 13,000 SCF.
- 24 PROCESS COLD BOX.
- 25 PRODUCT VAPORIZER.
- 26 SECONDARY EMERGENCY EVACUATION GATHERING LOCATION.
- 27 MCC / RIO / ANALYZER PANEL.
- 28 HIGH PRESSURE LIQUID NITROGEN STORAGE VESSEL, 6,000 GALLONS.
- 29 SCALE HOUSE BUILDING (CYLINDER FILLING & WEIGHT STATION).
- 30 INERT GAS CYLINDERS.
- 31 LEAD ACID BATTERY BANK (COMPRESSOR SWITCHGEAR).
- 32 LEAD ACID BATTERY BANK (PLANT SWITCHGEAR).
- 33 PAN NITROGEN COMPRESSOR.
- 34 EXP TURBINE (HYDRAULIC OIL RESERVOIR).
- 35 DENSE LIQUID TURBINE (HYDRAULIC OIL RESERVOIR).
- 36 ARGON PURGING AREA.
- 37 EXIT DOOR FROM BUILDING.
- 38 FIRE DETECTION AND ALARM CONTROL PANEL.
- 39 ARGON PURGING STATION.
- 40 PARKING AREA (OLD).
- 41 PARKING AREA (NEW).

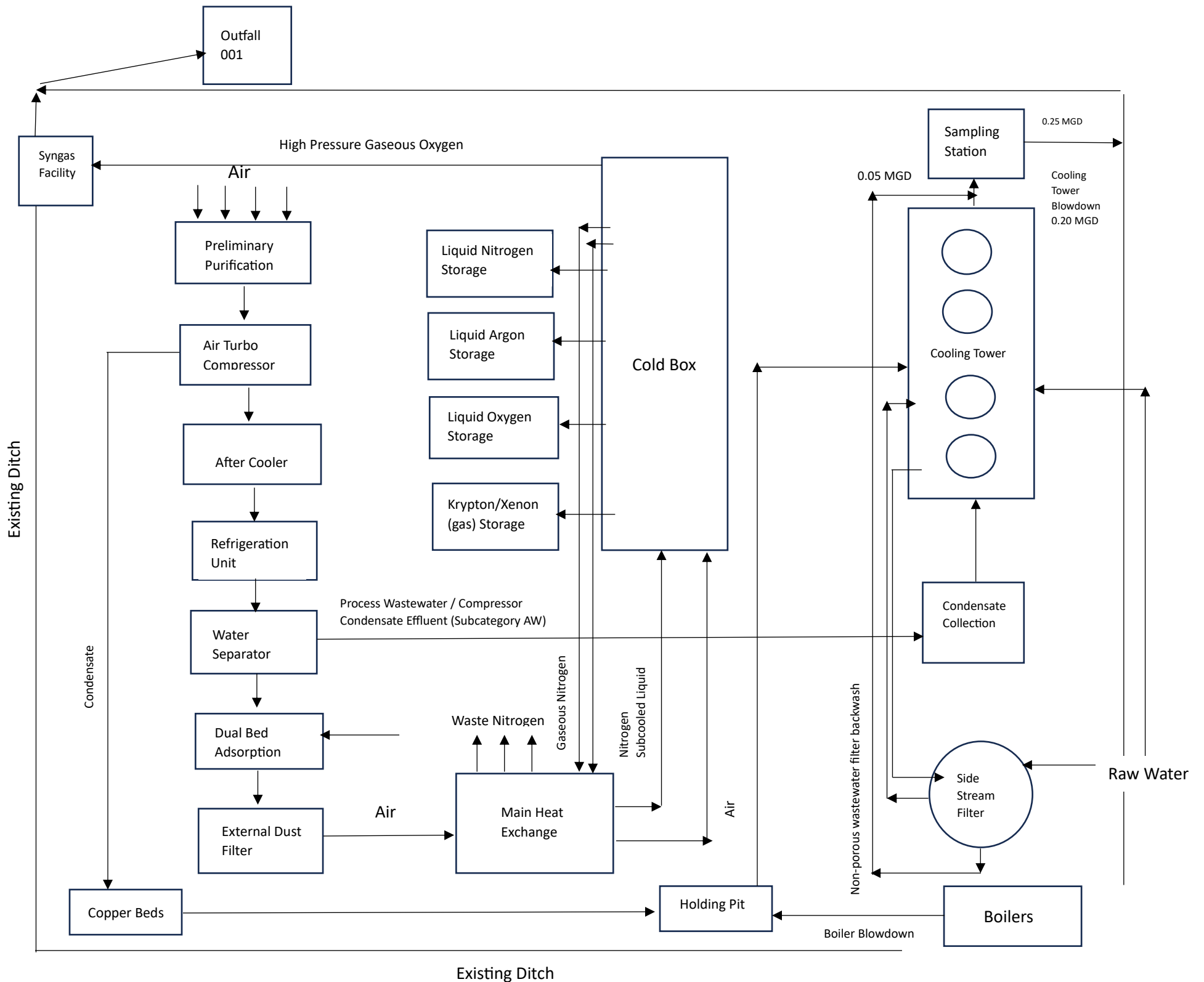


TR.1.0.1.d – Facility Map
11605 Strang Road,
La Porte, TX 77571

Client:
Messer LLC

AECOM

TR.1.0.2.b – Water Balance Diagram



TR.1.0.worksheet2.0.1 – Sampling Results

ANALYTICAL REPORT

PREPARED FOR

Attn: Rami Qafisheh

Messer LLC

11605 Strang Rd.

La Porte, Texas 77571

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JOB DESCRIPTION

Messer Gas ASU Permit Renewal 3-21-24

JOB NUMBER

860-70454-1

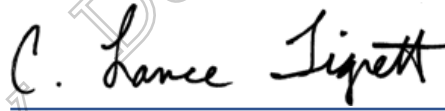
Eurofins Houston

Job Notes

This report may not be reproduced except in full, and with written approval from the laboratory. The results relate only to the samples tested. For questions please contact the Project Manager at the e-mail address or telephone number listed on this page.

Analytical test results meet all requirements of the associated regulatory program (i.e., NELAC (TNI), DoD, and ISO 17025) unless otherwise noted under the individual analysis.

Authorization



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4/15/2024 8:14:24 PM

Authorized for release by
Lance Tigrett, Project Manager II
Lance.Tigrett@et.eurofinsus.com
(979)484-9088

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Preliminary Data

Definitions/Glossary

Client: Messer LLC

Job ID: 860-70454-1

Project/Site: Messer Gas ASU Permit Renewal 3-21-24

Qualifiers

GC/MS VOA

Qualifier	Qualifier Description
U	Indicates the analyte was analyzed for but not detected.

GC/MS Semi VOA

Qualifier	Qualifier Description
*-	LCS and/or LCSD is outside acceptance limits, low biased.
*1	LCS/LCSD RPD exceeds control limits.
J	Result is less than the RL but greater than or equal to the MDL and the concentration is an approximate value.
S1-	Surrogate recovery exceeds control limits, low biased.
U	Indicates the analyte was analyzed for but not detected.

HPLC/IC

Qualifier	Qualifier Description
4	MS, MSD: The analyte present in the original sample is greater than 4 times the matrix spike concentration; therefore, control limits are not applicable.
F1	MS and/or MSD recovery exceeds control limits.
J	Result is less than the RL but greater than or equal to the MDL and the concentration is an approximate value.
U	Indicates the analyte was analyzed for but not detected.

Metals

Qualifier	Qualifier Description
J	Result is less than the RL but greater than or equal to the MDL and the concentration is an approximate value.
U	Indicates the analyte was analyzed for but not detected.

General Chemistry

Qualifier	Qualifier Description
4	MS, MSD: The analyte present in the original sample is greater than 4 times the matrix spike concentration; therefore, control limits are not applicable.
HF	Parameter with a holding time of 15 minutes. Test performed by laboratory at client's request. Sample was analyzed outside of hold time.
J	Result is less than the RL but greater than or equal to the MDL and the concentration is an approximate value.
U	Indicates the analyte was analyzed for but not detected.

Glossary

Abbreviation	These commonly used abbreviations may or may not be present in this report.
α	Listed under the "D" column to designate that the result is reported on a dry weight basis
%R	Percent Recovery
CFL	Contains Free Liquid
CFU	Colony Forming Unit
CNF	Contains No Free Liquid
DER	Duplicate Error Ratio (normalized absolute difference)
Dil Fac	Dilution Factor
DL	Detection Limit (DoD/DOE)
DL, RA, RE, IN	Indicates a Dilution, Re-analysis, Re-extraction, or additional Initial metals/anion analysis of the sample
DLC	Decision Level Concentration (Radiochemistry)
EDL	Estimated Detection Limit (Dioxin)
LOD	Limit of Detection (DoD/DOE)
LOQ	Limit of Quantitation (DoD/DOE)
MCL	EPA recommended "Maximum Contaminant Level"
MDA	Minimum Detectable Activity (Radiochemistry)
MDC	Minimum Detectable Concentration (Radiochemistry)
MDL	Method Detection Limit
ML	Minimum Level (Dioxin)
MPN	Most Probable Number
MQL	Method Quantitation Limit
NC	Not Calculated
ND	Not Detected at the reporting limit (or MDL or EDL if shown)

Eurofins Houston

Definitions/Glossary

Client: Messer LLC

Job ID: 860-70454-1

Project/Site: Messer Gas ASU Permit Renewal 3-21-24

Glossary (Continued)

Abbreviation **These commonly used abbreviations may or may not be present in this report.**

NEG	Negative / Absent
POS	Positive / Present
PQL	Practical Quantitation Limit
PRES	Presumptive
QC	Quality Control
RER	Relative Error Ratio (Radiochemistry)
RL	Reporting Limit or Requested Limit (Radiochemistry)
RPD	Relative Percent Difference, a measure of the relative difference between two points
TEF	Toxicity Equivalent Factor (Dioxin)
TEQ	Toxicity Equivalent Quotient (Dioxin)
TNTC	Too Numerous To Count

Preliminary Data

Case Narrative

Client: Messer LLC
Project: Messer Gas ASU Permit Renewal 3-21-24

Job ID: 860-70454-1

Job ID: 860-70454-1

Eurofins Houston

Job Narrative 860-70454-1

Analytical test results meet all requirements of the associated regulatory program listed on the Accreditation/Certification Summary Page unless otherwise noted under the individual analysis. Data qualifiers are applied to indicate exceptions. Noncompliant quality control (QC) is further explained in narrative comments.

- Matrix QC may not be reported if insufficient sample or site-specific QC samples were not submitted. In these situations, to demonstrate precision and accuracy at a batch level, a LCS/LCSD may be performed, unless otherwise specified in the method.
- Surrogate and/or isotope dilution analyte recoveries (if applicable) which are outside of the QC window are confirmed unless attributed to a dilution or otherwise noted in the narrative.

Regulated compliance samples (e.g. SDWA, NPDES) must comply with the associated agency requirements/permits.

Receipt

The sample was received on 3/21/2024 3:21 PM. Unless otherwise noted below, the sample arrived in good condition, and, where required, properly preserved and on ice.

Subcontract Work

Method Surfactants: This method was subcontracted to Envirodyne Laboratories. The subcontract laboratory certification is different from that of the facility issuing the final report. The subcontract report is appended in its entirety.

GC/MS VOA

No additional analytical or quality issues were noted, other than those described above or in the Definitions/ Glossary page.

GC/MS Semi VOA

Method 625.1: Six surrogates are used for this analysis. The laboratory's SOP allows one acid and one base of these surrogates to be outside acceptance criteria without performing re-extraction/re-analysis. The following sample contained an allowable number of surrogate compounds outside limits: Outfall 001 (860-70454-1). These results have been reported and qualified.

Method 625.1: Six surrogates are used for this analysis. The laboratory's SOP allows one acid and one base of these surrogates to be outside acceptance criteria without performing re-extraction/re-analysis. The following sample(s) contained an allowable number of surrogate compounds outside limits. These results have been reported and qualified.

Method 625.1: The laboratory control sample and laboratory control sample duplicate (LCS/LCSD) for preparation batch 860-152370 and analytical batch 860-152604 recovered outside control limits for the following analytes: Benzidine and Pyridine. Benzidine and Pyridine have been identified as poor performing analytes when analyzed using this method; therefore, re-extraction/re-analysis was not performed. Batch precision also exceeded control limits for these analytes. These results have been reported and qualified.

Method 625.1: The laboratory control sample and laboratory control sample duplicate (LCS/LCSD) for preparation batch 860-152370 and analytical batch 860-152604 recovered outside control limits for the following analyte: Di-n-octyl phthalate. This analyte was biased high in the LCS/LCSD and was not detected in the associated samples; therefore, the data have been reported.

Method 625.1: The laboratory control sample and laboratory control sample duplicate (LCS/LCSD) for preparation batch 860-151704 and analytical batch 860-151846 recovered outside control limits for multiple analytes. The associated sample was re-prepared and/or re-analyzed outside holding time. Both sets of data have reported.

Method 625.1: The following sample was re-prepared and re-analyzed outside of preparation holding time due to first analysis LCS/LCSD recoveries outside control limits (low biased): Outfall 001 (860-70454-1).

No additional analytical or quality issues were noted, other than those described above or in the Definitions/ Glossary page.

HPLC/IC

Method 300_ORGFM_28D: The instrument blank for analytical batch 860-151005 contained Chloride greater than the method detection limit (MDL), and were not reanalyzed because results were greater than 10X the value found in the instrument blank/CCB. The data have been qualified and reported.

Eurofins Houston

Case Narrative

Client: Messer LLC
Project: Messer Gas ASU Permit Renewal 3-21-24

Job ID: 860-70454-1

Job ID: 860-70454-1 (Continued)

Eurofins Houston

Method 300_ORGFM_28D: The matrix spike / matrix spike duplicate (MS/MSD) recoveries for analytical batch 860-151005 were outside control limits. Sample matrix interference is suspected because the associated laboratory control sample (LCS) recovery was within acceptance limits.

Method 300_ORGFM_28D: The method blank for analytical batch 860-151005 contained Bromide above the method detection limit. This target analyte concentration was less than the reporting limit (RL) in the method blank; therefore, re-extraction and/or re-analysis of samples was not performed.

Method 300_ORGFMS: The matrix spike / matrix spike duplicate (MS/MSD) recoveries for analytical batch 860-151006 were outside control limits for one or more analytes. See QC Sample Results for detail. Sample matrix interference and/or non-homogeneity are suspected because the associated laboratory control sample (LCS) recovery is within acceptance limits.

No additional analytical or quality issues were noted, other than those described above or in the Definitions/ Glossary page.

Metals

Method 200.8 - Total Recoverable: The following sample was diluted to bring the concentration of target analytes within the calibration range: Outfall 001 (860-70454-1). Elevated reporting limits (RLs) are provided.

No additional analytical or quality issues were noted, other than those described above or in the Definitions/ Glossary page.

General Chemistry

Method 365.1_NP: The matrix spike / matrix spike duplicate (MS/MSD) recoveries for analytical batch 860-152937 were outside control limits for one or more analytes. See QC Sample Results for detail. Sample matrix interference and/or non-homogeneity are suspected because the associated laboratory control sample (LCS) recovery is within acceptance limits.

No additional analytical or quality issues were noted, other than those described above or in the Definitions/ Glossary page.

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Detection Summary

Client: Messer LLC
Project/Site: Messer Gas ASU Permit Renewal 3-21-24

Job ID: 860-70454-1

Client Sample ID: Outfall 001

Lab Sample ID: 860-70454-1

Sample Analysis Not Complete.

Preliminary Data

This Detection Summary does not include radiochemical test results.

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Client Sample Results

Client: Messer LLC
Project/Site: Messer Gas ASU Permit Renewal 3-21-24

Job ID: 860-70454-1

Client Sample ID: Outfall 001

Lab Sample ID: 860-70454-1

Date Collected: 03/21/24 10:00

Matrix: Water

Date Received: 03/21/24 15:21

Method: EPA 624.1 - Volatile Organic Compounds (GC/MS)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Acrolein	0.011	U	0.050	0.011	mg/L			03/22/24 18:03	1
Acrylonitrile	0.014	U	0.050	0.014	mg/L			03/22/24 18:03	1
Benzene	0.00046	U	0.0010	0.00046	mg/L			03/22/24 18:03	1
Carbon tetrachloride	0.00090	U	0.0050	0.00090	mg/L			03/22/24 18:03	1
Chlorobenzene	0.00046	U	0.0010	0.00046	mg/L			03/22/24 18:03	1
1,2,4-Trichlorobenzene	0.0018	U	0.0050	0.0018	mg/L			03/22/24 18:03	1
1,2-Dichloroethane	0.00037	U	0.0010	0.00037	mg/L			03/22/24 18:03	1
1,1,1-Trichloroethane	0.00059	U	0.0050	0.00059	mg/L			03/22/24 18:03	1
1,1-Dichloroethane	0.00064	U	0.0010	0.00064	mg/L			03/22/24 18:03	1
1,1,2-Trichloroethane	0.00041	U	0.0010	0.00041	mg/L			03/22/24 18:03	1
1,2-Dibromoethane	0.0010	U	0.0050	0.0010	mg/L			03/22/24 18:03	1
1,1,2,2-Tetrachloroethane	0.00047	U	0.0010	0.00047	mg/L			03/22/24 18:03	1
Chloroethane	0.0020	U	0.010	0.0020	mg/L			03/22/24 18:03	1
2-Chloroethyl vinyl ether	0.00075	U	0.0050	0.00075	mg/L			03/22/24 18:03	1
Chloroform	0.017		0.0010	0.00046	mg/L			03/22/24 18:03	1
1,2-Dichlorobenzene	0.00043	U	0.0010	0.00043	mg/L			03/22/24 18:03	1
1,3-Dichlorobenzene	0.00041	U	0.0010	0.00041	mg/L			03/22/24 18:03	1
1,4-Dichlorobenzene	0.00045	U	0.0010	0.00045	mg/L			03/22/24 18:03	1
1,1-Dichloroethene	0.00074	U	0.0010	0.00074	mg/L			03/22/24 18:03	1
trans-1,2-Dichloroethene	0.00037	U	0.0010	0.00037	mg/L			03/22/24 18:03	1
1,2-Dichloropropane	0.00056	U	0.0050	0.00056	mg/L			03/22/24 18:03	1
Ethylbenzene	0.00039	U	0.0010	0.00039	mg/L			03/22/24 18:03	1
2-Butanone	0.0083	U	0.050	0.0083	mg/L			03/22/24 18:03	1
Methylene Chloride	0.0017	U	0.0050	0.0017	mg/L			03/22/24 18:03	1
Chloromethane	0.0020	U	0.010	0.0020	mg/L			03/22/24 18:03	1
Bromomethane	0.0014	U	0.0050	0.0014	mg/L			03/22/24 18:03	1
Bromoform	0.00063	U	0.0050	0.00063	mg/L			03/22/24 18:03	1
Bromodichloromethane	0.0018		0.0010	0.00055	mg/L			03/22/24 18:03	1
Chlorodibromomethane	0.00055	U	0.0050	0.00055	mg/L			03/22/24 18:03	1
Hexachlorobutadiene	0.00063	U	0.0050	0.00063	mg/L			03/22/24 18:03	1
Naphthalene	0.0014	U	0.010	0.0014	mg/L			03/22/24 18:03	1
Tetrachloroethene	0.00066	U	0.0010	0.00066	mg/L			03/22/24 18:03	1
Toluene	0.00048	U	0.0010	0.00048	mg/L			03/22/24 18:03	1
Trichloroethene	0.0015	U	0.0050	0.0015	mg/L			03/22/24 18:03	1
Vinyl chloride	0.00043	U	0.0020	0.00043	mg/L			03/22/24 18:03	1
1,3-Dichloropropylene	0.0013	U	0.0050	0.0013	mg/L			03/22/24 18:03	1
cis-1,3-Dichloropropene	0.0011	U	0.0050	0.0011	mg/L			03/22/24 18:03	1
Trihalomethanes, Total	0.019		0.0050	0.00063	mg/L			03/22/24 18:03	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
1,2-Dichloroethane-d4 (Surr)	105		63 - 144		03/22/24 18:03	1
4-Bromofluorobenzene (Surr)	105		74 - 124		03/22/24 18:03	1
Dibromofluoromethane (Surr)	108		75 - 131		03/22/24 18:03	1
Toluene-d8 (Surr)	102		80 - 120		03/22/24 18:03	1

Method: EPA 625.1 - Semivolatile Organic Compounds (GC/MS)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,2,4,5-Tetrachlorobenzene	0.0013	U	0.010	0.0013	mg/L		03/26/24 16:25	03/27/24 19:50	1
1,2-Dichlorobenzene	0.0016	U *	0.010	0.0016	mg/L		03/26/24 16:25	03/27/24 19:50	1
1,3-Dichlorobenzene	0.0014	U *	0.010	0.0014	mg/L		03/26/24 16:25	03/27/24 19:50	1

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Client Sample Results

Client: Messer LLC
Project/Site: Messer Gas ASU Permit Renewal 3-21-24

Job ID: 860-70454-1

Client Sample ID: Outfall 001

Lab Sample ID: 860-70454-1

Date Collected: 03/21/24 10:00

Matrix: Water

Date Received: 03/21/24 15:21

Method: EPA 625.1 - Semivolatile Organic Compounds (GC/MS) (Continued)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,4-Dichlorobenzene	0.0016	U	0.010	0.0016	mg/L		03/26/24 16:25	03/27/24 19:50	1
Acenaphthene	0.0014	U	0.0057	0.0014	mg/L		03/26/24 16:25	03/27/24 19:50	1
Benzidine	0.0048	U *- *1	0.020	0.0048	mg/L		03/26/24 16:25	03/27/24 19:50	1
1,2,4-Trichlorobenzene	0.0016	U *-	0.0050	0.0016	mg/L		03/26/24 16:25	03/27/24 19:50	1
Hexachlorobenzene	0.00031	U	0.0050	0.00031	mg/L		03/26/24 16:25	03/27/24 19:50	1
Hexachloroethane	0.00053	U	0.0048	0.00053	mg/L		03/26/24 16:25	03/27/24 19:50	1
2,4,5-Trichlorophenol	0.0020	U	0.010	0.0020	mg/L		03/26/24 16:25	03/27/24 19:50	1
Bis(2-chloroethyl)ether	0.0022	U	0.010	0.0022	mg/L		03/26/24 16:25	03/27/24 19:50	1
2-Chloronaphthalene	0.00046	U *-	0.0050	0.00046	mg/L		03/26/24 16:25	03/27/24 19:50	1
2,4,6-Trichlorophenol	0.0014	U	0.0050	0.0014	mg/L		03/26/24 16:25	03/27/24 19:50	1
p-Chloro-m-cresol	0.0016	U	0.0050	0.0016	mg/L		03/26/24 16:25	03/27/24 19:50	1
2-Chlorophenol	0.00065	U	0.0050	0.00065	mg/L		03/26/24 16:25	03/27/24 19:50	1
3,3'-Dichlorobenzidine	0.00034	U	0.0050	0.00034	mg/L		03/26/24 16:25	03/27/24 19:50	1
2,4-Dichlorophenol	0.00031	U	0.0050	0.00031	mg/L		03/26/24 16:25	03/27/24 19:50	1
2,4-Dimethylphenol	0.00065	U	0.0050	0.00065	mg/L		03/26/24 16:25	03/27/24 19:50	1
2,4-Dinitrotoluene	0.0013	U	0.010	0.0013	mg/L		03/26/24 16:25	03/27/24 19:50	1
1,2-Diphenylhydrazine	0.0015	U	0.010	0.0015	mg/L		03/26/24 16:25	03/27/24 19:50	1
Fluoranthene	0.0016	U	0.0050	0.0016	mg/L		03/26/24 16:25	03/27/24 19:50	1
4-Bromophenyl phenyl ether	0.00026	U *-	0.0050	0.00026	mg/L		03/26/24 16:25	03/27/24 19:50	1
4-Chlorophenyl phenyl ether	0.0013	U	0.010	0.0013	mg/L		03/26/24 16:25	03/27/24 19:50	1
o-Cresol	0.0016	U	0.010	0.0016	mg/L		03/26/24 16:25	03/27/24 19:50	1
Bis(2-chloroethoxy)methane	0.0018	U	0.010	0.0018	mg/L		03/26/24 16:25	03/27/24 19:50	1
m & p - Cresol	0.0026	U	0.010	0.0026	mg/L		03/26/24 16:25	03/27/24 19:50	1
bis (2-chloroisopropyl) ether	0.0018	U	0.010	0.0018	mg/L		03/26/24 16:25	03/27/24 19:50	1
Hexachlorobutadiene	0.00024	U	0.0010	0.00024	mg/L		03/26/24 16:25	03/27/24 19:50	1
Hexachlorocyclopentadiene	0.0046	U	0.010	0.0046	mg/L		03/26/24 16:25	03/27/24 19:50	1
Isophorone	0.0016	U	0.0050	0.0016	mg/L		03/26/24 16:25	03/27/24 19:50	1
Naphthalene	0.00054	U	0.0025	0.00054	mg/L		03/26/24 16:25	03/27/24 19:50	1
Nitrobenzene	0.0017	U	0.0050	0.0017	mg/L		03/26/24 16:25	03/27/24 19:50	1
4-Nitrophenol	0.0049	U	0.0072	0.0049	mg/L		03/26/24 16:25	03/27/24 19:50	1
2-Nitrophenol	0.0017	U	0.010	0.0017	mg/L		03/26/24 16:25	03/27/24 19:50	1
4,6-Dinitro-o-cresol	0.0014	U	0.010	0.0014	mg/L		03/26/24 16:25	03/27/24 19:50	1
N-Nitrosodimethylamine	0.0020	U	0.010	0.0020	mg/L		03/26/24 16:25	03/27/24 19:50	1
N-Nitrosodiphenylamine	0.0018	U	0.010	0.0018	mg/L		03/26/24 16:25	03/27/24 19:50	1
N-Nitrosodi-n-propylamine	0.0029	U	0.010	0.0029	mg/L		03/26/24 16:25	03/27/24 19:50	1
Pentachlorophenol	0.00023	U	0.010	0.00023	mg/L		03/26/24 16:25	03/27/24 19:50	1
Phenol	0.00042	U	0.0045	0.00042	mg/L		03/26/24 16:25	03/27/24 19:50	1
Bis(2-ethylhexyl) phthalate	0.00028	U	0.0050	0.00028	mg/L		03/26/24 16:25	03/27/24 19:50	1
Butyl benzyl phthalate	0.00034	U	0.0050	0.00034	mg/L		03/26/24 16:25	03/27/24 19:50	1
Di-n-butyl phthalate	0.00025	U	0.0050	0.00025	mg/L		03/26/24 16:25	03/27/24 19:50	1
Di-n-octyl phthalate	0.00037	U	0.0050	0.00037	mg/L		03/26/24 16:25	03/27/24 19:50	1
Diethyl phthalate	0.0016	U	0.0050	0.0016	mg/L		03/26/24 16:25	03/27/24 19:50	1
Dimethyl phthalate	0.00030	U	0.0025	0.00030	mg/L		03/26/24 16:25	03/27/24 19:50	1
Benzo[a]anthracene	0.00017	U	0.0050	0.00017	mg/L		03/26/24 16:25	03/27/24 19:50	1
Benzo[a]pyrene	0.00036	U	0.0050	0.00036	mg/L		03/26/24 16:25	03/27/24 19:50	1
Benzo[b]fluoranthene	0.0020	U	0.010	0.0020	mg/L		03/26/24 16:25	03/27/24 19:50	1
Benzo[k]fluoranthene	0.00038	U	0.0050	0.00038	mg/L		03/26/24 16:25	03/27/24 19:50	1
Chrysene	0.00022	U	0.0050	0.00022	mg/L		03/26/24 16:25	03/27/24 19:50	1
Acenaphthylene	0.0014	U	0.010	0.0014	mg/L		03/26/24 16:25	03/27/24 19:50	1

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Client Sample Results

Client: Messer LLC
Project/Site: Messer Gas ASU Permit Renewal 3-21-24

Job ID: 860-70454-1

Client Sample ID: Outfall 001

Lab Sample ID: 860-70454-1

Date Collected: 03/21/24 10:00

Matrix: Water

Date Received: 03/21/24 15:21

Method: EPA 625.1 - Semivolatile Organic Compounds (GC/MS) (Continued)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Anthracene	0.0015	U	0.0057	0.0015	mg/L		03/26/24 16:25	03/27/24 19:50	1
Benzo[g,h,i]perylene	0.0027	U	0.010	0.0027	mg/L		03/26/24 16:25	03/27/24 19:50	1
Fluorene	0.0016	U *	0.0050	0.0016	mg/L		03/26/24 16:25	03/27/24 19:50	1
Phenanthrene	0.0014	U	0.010	0.0014	mg/L		03/26/24 16:25	03/27/24 19:50	1
Dibenz(a,h)anthracene	0.00025	U	0.0050	0.00025	mg/L		03/26/24 16:25	03/27/24 19:50	1
Indeno[1,2,3-cd]pyrene	0.0023	U	0.010	0.0023	mg/L		03/26/24 16:25	03/27/24 19:50	1
Pyrene	0.00018	U	0.0050	0.00018	mg/L		03/26/24 16:25	03/27/24 19:50	1
2,4-Dinitrophenol	0.0016	U	0.010	0.0016	mg/L		03/26/24 16:25	03/27/24 19:50	1
2,6-Dinitrotoluene	0.0016	U	0.0050	0.0016	mg/L		03/26/24 16:25	03/27/24 19:50	1
N-Nitrosodi-n-butylamine	0.0015	U	0.010	0.0015	mg/L		03/26/24 16:25	03/27/24 19:50	1
N-Nitrosodiethylamine	0.0018	U	0.010	0.0018	mg/L		03/26/24 16:25	03/27/24 19:50	1
Nonylphenol	0.010	U	0.010	0.010	mg/L		03/26/24 16:25	03/27/24 19:50	1
Pentachlorobenzene	0.0011	U	0.010	0.0011	mg/L		03/26/24 16:25	03/27/24 19:50	1
Pyridine	0.0026	U *	0.010	0.0026	mg/L		03/26/24 16:25	03/27/24 19:50	1
Total Cresols	0.0026	U	0.010	0.0026	mg/L		03/26/24 16:25	03/27/24 19:50	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
2,4,6-Tribromophenol (Surr)	40		31 - 132	03/26/24 16:25	03/27/24 19:50	1
2-Fluorobiphenyl (Surr)	35		29 - 112	03/26/24 16:25	03/27/24 19:50	1
2-Fluorophenol (Surr)	17	S1-	28 - 114	03/26/24 16:25	03/27/24 19:50	1
Nitrobenzene-d5 (Surr)	40		15 - 314	03/26/24 16:25	03/27/24 19:50	1
p-Terphenyl-d14 (Surr)	49		20 - 141	03/26/24 16:25	03/27/24 19:50	1
Phenol-d5 (Surr)	12		8 - 424	03/26/24 16:25	03/27/24 19:50	1

Method: EPA 300.0 - Anions, Ion Chromatography

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Bromide	0.23	J	0.50	0.071	mg/L			03/22/24 07:56	1
Nitrate as N	4.4		0.10	0.039	mg/L			03/22/24 07:56	1
Chloride	300		0.50	0.25	mg/L			03/22/24 07:56	1
Nitrite as N	0.029	U F1	0.10	0.029	mg/L			03/22/24 07:56	1
Fluoride	1.2		0.50	0.10	mg/L			03/22/24 07:56	1
Nitrate Nitrite as N	4.4		0.10	0.039	mg/L			03/22/24 07:56	1
Sulfate	330		0.50	0.20	mg/L			03/22/24 07:56	1

Method: EPA 1631E - Mercury, Low Level (CVAFS)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Mercury	16		0.50	0.20	ng/L		03/25/24 13:48	03/26/24 13:32	1

Method: EPA 200.8 - Metals (ICP/MS) - Total Recoverable

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Aluminum	0.21		0.020	0.0030	mg/L		03/28/24 11:30	03/28/24 20:23	1
Antimony	0.0016	J	0.0020	0.0011	mg/L		03/28/24 11:30	03/28/24 20:23	1
Arsenic	0.0044		0.0040	0.00034	mg/L		03/28/24 11:30	03/28/24 20:23	1
Barium	0.16		0.0040	0.00029	mg/L		03/28/24 11:30	03/28/24 20:23	1
Beryllium	0.00015	U	0.0020	0.00015	mg/L		03/28/24 11:30	03/28/24 20:23	1
Boron	0.34		0.020	0.0050	mg/L		03/28/24 11:30	04/02/24 11:57	2
Cadmium	0.00026	U	0.0020	0.00026	mg/L		03/28/24 11:30	03/28/24 20:23	1
Chromium	0.0028	J	0.0040	0.00033	mg/L		03/28/24 11:30	03/28/24 20:23	1
Cobalt	0.00060	J	0.0020	0.00026	mg/L		03/28/24 11:30	03/28/24 20:23	1
Copper	0.036		0.0040	0.00069	mg/L		03/28/24 11:30	03/28/24 20:23	1

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Client Sample Results

Client: Messer LLC
Project/Site: Messer Gas ASU Permit Renewal 3-21-24

Job ID: 860-70454-1

Client Sample ID: Outfall 001

Lab Sample ID: 860-70454-1

Date Collected: 03/21/24 10:00

Matrix: Water

Date Received: 03/21/24 15:21

Method: EPA 200.8 - Metals (ICP/MS) - Total Recoverable (Continued)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Iron	0.79		0.020	0.0020	mg/L		03/28/24 11:30	03/28/24 20:23	1
Lead	0.00040	J	0.0020	0.00014	mg/L		03/28/24 11:30	03/28/24 20:23	1
Magnesium	16		1.0	0.092	mg/L		03/28/24 11:30	03/28/24 20:26	10
Manganese	0.032		0.0020	0.00016	mg/L		03/28/24 11:30	03/28/24 20:23	1
Molybdenum	0.0097		0.0020	0.00016	mg/L		03/28/24 11:30	03/28/24 20:23	1
Nickel	0.015		0.0020	0.00049	mg/L		03/28/24 11:30	03/28/24 20:23	1
Selenium	0.0017	J	0.0020	0.00069	mg/L		03/28/24 11:30	03/28/24 20:23	1
Silver	0.00012	U	0.0020	0.00012	mg/L		03/28/24 11:30	03/28/24 20:23	1
Thallium	0.00022	U	0.0020	0.00022	mg/L		03/28/24 11:30	03/28/24 20:23	1
Tin	0.00065	J	0.0020	0.00033	mg/L		03/28/24 11:30	03/28/24 20:23	1
Titanium	0.0021	J	0.0040	0.00042	mg/L		03/28/24 11:30	03/28/24 20:23	1
Zinc	0.012		0.0040	0.00089	mg/L		03/28/24 11:30	03/28/24 20:23	1

General Chemistry

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
HEM (1664B)	1.6	U	5.0	1.6	mg/L			03/27/24 14:23	1
Ammonia (EPA 350.1)	0.16		0.10	0.051	mg/L			03/27/24 15:00	1
Nitrogen, Kjeldahl (EPA 351.2)	3.4		0.20	0.089	mg/L		03/26/24 20:10	03/28/24 11:16	1
Oxygen, Dissolved (EPA 360.1)	10	HF	1.0	1.0	mg/L			03/25/24 16:54	1
Phosphorus Total (EPA 365.1)	0.83		0.10	0.072	mg/L			04/03/24 00:17	5
Cr (VI) (SW846 7196A)	0.0034	U	0.010	0.0034	mg/L			03/21/24 19:20	1
Cr (III) (SW846 7196A)	0.0034	U	0.010	0.0034	mg/L			04/08/24 14:54	1
Chemical Oxygen Demand (Hach 8000)	75		20	3.4	mg/L			04/01/24 19:18	1
Nitrogen, Organic (EPA Nitrogen,Org)	3.2		0.20	0.061	mg/L			03/29/24 15:58	1
Cyanide, Available (OI CORP OIA-1677)	0.0084		0.0060	0.0050	mg/L			04/02/24 15:55	1
Color, Apparent (SM 2120B)	30		10	10	Color Units			03/22/24 19:15	2
Color, True (SM 2120B)	20		10	10	Color Units			03/22/24 19:15	2
pH (SM 2120B)	8.2		0.10	0.10	S.U.			03/22/24 19:15	2
Alkalinity (SM 2320B)	150		4.0	4.0	mg/L			03/25/24 23:08	1
Bicarbonate Alkalinity as CaCO3 (SM 2320B)	150		4.0	4.0	mg/L			03/25/24 23:08	1
Carbonate Alkalinity as CaCO3 (SM 2320B)	4.0	U	4.0	4.0	mg/L			03/25/24 23:08	1
Hydroxide Alkalinity (SM 2320B)	4.0	U	4.0	4.0	mg/L			03/25/24 23:08	1
Phenolphthalein Alkalinity (SM 2320B)	4.0	U	4.0	4.0	mg/L			03/25/24 23:08	1
Total Dissolved Solids (SM 2540C)	1200		20	20	mg/L			03/26/24 12:59	1
Total Suspended Solids (SM 2540D)	13		4.0	4.0	mg/L			03/26/24 15:02	1
Chlorine, Total Residual (SM 4500 Cl G)	1.1	HF	0.10	0.10	mg/L			03/25/24 14:46	2
Sulfide (SM 4500 S2 D)	0.040	U	0.10	0.040	mg/L			03/22/24 16:04	1
Sulfite (SM 4500 SO3 B)	5.0	U HF	5.0	5.0	mg/L			03/25/24 16:55	1
Biochemical Oxygen Demand (SM 5210B)	12	U	12	12	mg/L		03/22/24 13:00	03/22/24 16:06	1
Total Organic Carbon (SM 5310C)	12		1.0	0.50	mg/L			03/29/24 04:14	1
Carbonaceous Biochemical Oxygen Demand (SM5210B CBOD)	3.0	U	3.0	3.0	mg/L		03/22/24 18:32	03/22/24 19:14	1

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Surrogate Summary

Client: Messer LLC

Job ID: 860-70454-1

Project/Site: Messer Gas ASU Permit Renewal 3-21-24

Method: 624.1 - Volatile Organic Compounds (GC/MS)

Matrix: Water

Prep Type: Total/NA

Percent Surrogate Recovery (Acceptance Limits)

Lab Sample ID	Client Sample ID	DCA (63-144)	BFB (74-124)	DBFM (75-131)	TOL (80-120)
860-70454-1	Outfall 001	105	105	108	102
LCS 860-151135/1011	Lab Control Sample	90	99	94	99
LCSD 860-151135/12	Lab Control Sample Dup	90	98	95	100
MB 860-151135/18	Method Blank	97	99	97	100

Surrogate Legend

DCA = 1,2-Dichloroethane-d4 (Surr)

BFB = 4-Bromofluorobenzene (Surr)

DBFM = Dibromofluoromethane (Surr)

TOL = Toluene-d8 (Surr)

Method: 625.1 - Semivolatile Organic Compounds (GC/MS)

Matrix: Water

Prep Type: Total/NA

Percent Surrogate Recovery (Acceptance Limits)

Lab Sample ID	Client Sample ID	TBP (31-132)	FBP (29-112)	2FP (28-114)	NBZ (15-314)	TPHd14 (20-141)	PHL (8-424)
860-70454-1	Outfall 001	40	35	17 S1-	40	49	12
LCS 860-151704/2-A	Lab Control Sample	61	59	37	70	75	27
LCSD 860-151704/3-A	Lab Control Sample Dup	66	63	40	73	80	30
MB 860-151704/1-A	Method Blank	56	63	36	76	83	26

Surrogate Legend

TBP = 2,4,6-Tribromophenol (Surr)

FBP = 2-Fluorobiphenyl (Surr)

2FP = 2-Fluorophenol (Surr)

NBZ = Nitrobenzene-d5 (Surr)

TPHd14 = p-Terphenyl-d14 (Surr)

PHL = Phenol-d5 (Surr)

QC Sample Results

Client: Messer LLC
Project/Site: Messer Gas ASU Permit Renewal 3-21-24

Job ID: 860-70454-1

Method: 624.1 - Volatile Organic Compounds (GC/MS)

Lab Sample ID: MB 860-151135/18

Matrix: Water

Analysis Batch: 151135

Client Sample ID: Method Blank

Prep Type: Total/NA

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Acrolein	0.011	U	0.050	0.011	mg/L			03/22/24 15:12	1
Acrylonitrile	0.014	U	0.050	0.014	mg/L			03/22/24 15:12	1
Benzene	0.00046	U	0.0010	0.00046	mg/L			03/22/24 15:12	1
Carbon tetrachloride	0.00090	U	0.0050	0.00090	mg/L			03/22/24 15:12	1
Chlorobenzene	0.00046	U	0.0010	0.00046	mg/L			03/22/24 15:12	1
1,2,4-Trichlorobenzene	0.0018	U	0.0050	0.0018	mg/L			03/22/24 15:12	1
1,2-Dichloroethane	0.00037	U	0.0010	0.00037	mg/L			03/22/24 15:12	1
1,1,1-Trichloroethane	0.00059	U	0.0050	0.00059	mg/L			03/22/24 15:12	1
1,1-Dichloroethane	0.00064	U	0.0010	0.00064	mg/L			03/22/24 15:12	1
1,1,2-Trichloroethane	0.00041	U	0.0010	0.00041	mg/L			03/22/24 15:12	1
1,2-Dibromoethane	0.0010	U	0.0050	0.0010	mg/L			03/22/24 15:12	1
1,1,2,2-Tetrachloroethane	0.00047	U	0.0010	0.00047	mg/L			03/22/24 15:12	1
Chloroethane	0.0020	U	0.010	0.0020	mg/L			03/22/24 15:12	1
2-Chloroethyl vinyl ether	0.00075	U	0.0050	0.00075	mg/L			03/22/24 15:12	1
Chloroform	0.00046	U	0.0010	0.00046	mg/L			03/22/24 15:12	1
1,2-Dichlorobenzene	0.00043	U	0.0010	0.00043	mg/L			03/22/24 15:12	1
1,3-Dichlorobenzene	0.00041	U	0.0010	0.00041	mg/L			03/22/24 15:12	1
1,4-Dichlorobenzene	0.00045	U	0.0010	0.00045	mg/L			03/22/24 15:12	1
1,1-Dichloroethene	0.00074	U	0.0010	0.00074	mg/L			03/22/24 15:12	1
trans-1,2-Dichloroethene	0.00037	U	0.0010	0.00037	mg/L			03/22/24 15:12	1
1,2-Dichloropropane	0.00056	U	0.0050	0.00056	mg/L			03/22/24 15:12	1
Ethylbenzene	0.00039	U	0.0010	0.00039	mg/L			03/22/24 15:12	1
2-Butanone	0.0083	U	0.050	0.0083	mg/L			03/22/24 15:12	1
Methylene Chloride	0.0017	U	0.0050	0.0017	mg/L			03/22/24 15:12	1
Chloromethane	0.0020	U	0.010	0.0020	mg/L			03/22/24 15:12	1
Bromomethane	0.0014	U	0.0050	0.0014	mg/L			03/22/24 15:12	1
Bromoform	0.00063	U	0.0050	0.00063	mg/L			03/22/24 15:12	1
Bromodichloromethane	0.00055	U	0.0010	0.00055	mg/L			03/22/24 15:12	1
Chlorodibromomethane	0.00055	U	0.0050	0.00055	mg/L			03/22/24 15:12	1
Hexachlorobutadiene	0.00063	U	0.0050	0.00063	mg/L			03/22/24 15:12	1
Naphthalene	0.0014	U	0.010	0.0014	mg/L			03/22/24 15:12	1
Tetrachloroethene	0.00066	U	0.0010	0.00066	mg/L			03/22/24 15:12	1
Toluene	0.00048	U	0.0010	0.00048	mg/L			03/22/24 15:12	1
Trichloroethene	0.0015	U	0.0050	0.0015	mg/L			03/22/24 15:12	1
Vinyl chloride	0.00043	U	0.0020	0.00043	mg/L			03/22/24 15:12	1
1,3-Dichloropropylene	0.0013	U	0.0050	0.0013	mg/L			03/22/24 15:12	1
cis-1,3-Dichloropropene	0.0011	U	0.0050	0.0011	mg/L			03/22/24 15:12	1
Trihalomethanes, Total	0.00063	U	0.0050	0.00063	mg/L			03/22/24 15:12	1

Surrogate	MB %Recovery	MB Qualifier	Limits	Prepared	Analyzed	Dil Fac
1,2-Dichloroethane-d4 (Surr)	97		63 - 144		03/22/24 15:12	1
4-Bromofluorobenzene (Surr)	99		74 - 124		03/22/24 15:12	1
Dibromofluoromethane (Surr)	97		75 - 131		03/22/24 15:12	1
Toluene-d8 (Surr)	100		80 - 120		03/22/24 15:12	1

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QC Sample Results

Client: Messer LLC
Project/Site: Messer Gas ASU Permit Renewal 3-21-24

Job ID: 860-70454-1

Method: 624.1 - Volatile Organic Compounds (GC/MS) (Continued)

Lab Sample ID: LCS 860-151135/1011

Matrix: Water

Analysis Batch: 151135

Client Sample ID: Lab Control Sample

Prep Type: Total/NA

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits
Acrolein	0.250	0.240		mg/L		96	60 - 140
Acrylonitrile	0.500	0.461		mg/L		92	60 - 140
Benzene	0.0500	0.0491		mg/L		98	75 - 125
Carbon tetrachloride	0.0500	0.0486		mg/L		97	70 - 125
Chlorobenzene	0.0500	0.0505		mg/L		101	82 - 135
1,2,4-Trichlorobenzene	0.0500	0.0559		mg/L		112	75 - 135
1,2-Dichloroethane	0.0500	0.0464		mg/L		93	72 - 130
1,1,1-Trichloroethane	0.0500	0.0496		mg/L		99	70 - 130
1,1-Dichloroethane	0.0500	0.0473		mg/L		95	71 - 130
1,1,2-Trichloroethane	0.0500	0.0488		mg/L		98	75 - 130
1,2-Dibromoethane	0.0500	0.0509		mg/L		102	73 - 125
1,1,2,2-Tetrachloroethane	0.0500	0.0463		mg/L		93	74 - 125
Chloroethane	0.0500	0.0400		mg/L		80	60 - 140
2-Chloroethyl vinyl ether	0.0500	0.0516		mg/L		103	50 - 150
Chloroform	0.0500	0.0481		mg/L		96	70 - 121
1,2-Dichlorobenzene	0.0500	0.0505		mg/L		101	75 - 125
1,3-Dichlorobenzene	0.0500	0.0517		mg/L		103	75 - 125
1,4-Dichlorobenzene	0.0500	0.0498		mg/L		100	75 - 125
1,1-Dichloroethene	0.0500	0.0518		mg/L		104	50 - 150
trans-1,2-Dichloroethene	0.0500	0.0516		mg/L		103	75 - 125
1,2-Dichloropropane	0.0500	0.0494		mg/L		99	74 - 125
Ethylbenzene	0.0500	0.0536		mg/L		107	75 - 125
2-Butanone	0.250	0.232		mg/L		93	60 - 140
Methylene Chloride	0.0500	0.0461		mg/L		92	71 - 125
Chloromethane	0.0500	0.0441		mg/L		88	60 - 140
Bromomethane	0.0500	0.0393		mg/L		79	60 - 140
Bromoform	0.0500	0.0487		mg/L		97	70 - 130
Bromodichloromethane	0.0500	0.0507		mg/L		101	75 - 125
Chlorodibromomethane	0.0500	0.0541		mg/L		108	73 - 125
Hexachlorobutadiene	0.0500	0.0510		mg/L		102	75 - 125
Naphthalene	0.0500	0.0465		mg/L		93	70 - 130
Tetrachloroethene	0.0500	0.0520		mg/L		104	71 - 125
Toluene	0.0500	0.0512		mg/L		102	75 - 130
Trichloroethene	0.0500	0.0528		mg/L		106	75 - 135
Vinyl chloride	0.0500	0.0452		mg/L		90	60 - 140
cis-1,3-Dichloropropene	0.0500	0.0527		mg/L		105	74 - 125

Surrogate	LCS %Recovery	LCS Qualifier	Limits
1,2-Dichloroethane-d4 (Surr)	90		63 - 144
4-Bromofluorobenzene (Surr)	99		74 - 124
Dibromofluoromethane (Surr)	94		75 - 131
Toluene-d8 (Surr)	99		80 - 120

QC Sample Results

Client: Messer LLC
Project/Site: Messer Gas ASU Permit Renewal 3-21-24

Job ID: 860-70454-1

Method: 624.1 - Volatile Organic Compounds (GC/MS) (Continued)

Lab Sample ID: LCSD 860-151135/12

Matrix: Water

Analysis Batch: 151135

Client Sample ID: Lab Control Sample Dup

Prep Type: Total/NA

Analyte	Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec Limits	RPD	RPD Limit
Acrolein	0.250	0.229		mg/L		92	60 - 140	5	25
Acrylonitrile	0.500	0.461		mg/L		92	60 - 140	0	25
Benzene	0.0500	0.0479		mg/L		96	75 - 125	2	25
Carbon tetrachloride	0.0500	0.0458		mg/L		92	70 - 125	6	25
Chlorobenzene	0.0500	0.0504		mg/L		101	82 - 135	0	25
1,2,4-Trichlorobenzene	0.0500	0.0577		mg/L		115	75 - 135	3	25
1,2-Dichloroethane	0.0500	0.0449		mg/L		90	72 - 130	3	25
1,1,1-Trichloroethane	0.0500	0.0492		mg/L		98	70 - 130	1	25
1,1-Dichloroethane	0.0500	0.0483		mg/L		97	71 - 130	2	25
1,1,2-Trichloroethane	0.0500	0.0482		mg/L		96	75 - 130	1	25
1,2-Dibromoethane	0.0500	0.0505		mg/L		101	73 - 125	1	25
1,1,2,2-Tetrachloroethane	0.0500	0.0458		mg/L		92	74 - 125	1	25
Chloroethane	0.0500	0.0400		mg/L		80	60 - 140	0	25
2-Chloroethyl vinyl ether	0.0500	0.0505		mg/L		101	50 - 150	2	25
Chloroform	0.0500	0.0473		mg/L		95	70 - 121	2	25
1,2-Dichlorobenzene	0.0500	0.0505		mg/L		101	75 - 125	0	25
1,3-Dichlorobenzene	0.0500	0.0519		mg/L		104	75 - 125	0	25
1,4-Dichlorobenzene	0.0500	0.0489		mg/L		98	75 - 125	2	25
1,1-Dichloroethene	0.0500	0.0500		mg/L		100	50 - 150	4	25
trans-1,2-Dichloroethene	0.0500	0.0490		mg/L		98	75 - 125	5	25
1,2-Dichloropropane	0.0500	0.0481		mg/L		96	74 - 125	3	25
Ethylbenzene	0.0500	0.0535		mg/L		107	75 - 125	0	25
2-Butanone	0.250	0.226		mg/L		90	60 - 140	2	25
Methylene Chloride	0.0500	0.0462		mg/L		92	71 - 125	0	25
Chloromethane	0.0500	0.0435		mg/L		87	60 - 140	1	25
Bromomethane	0.0500	0.0390		mg/L		78	60 - 140	1	25
Bromoform	0.0500	0.0497		mg/L		99	70 - 130	2	25
Bromodichloromethane	0.0500	0.0503		mg/L		101	75 - 125	1	25
Chlorodibromomethane	0.0500	0.0542		mg/L		108	73 - 125	0	25
Hexachlorobutadiene	0.0500	0.0548		mg/L		110	75 - 125	7	25
Naphthalene	0.0500	0.0505		mg/L		101	70 - 130	8	25
Tetrachloroethene	0.0500	0.0521		mg/L		104	71 - 125	0	25
Toluene	0.0500	0.0510		mg/L		102	75 - 130	1	25
Trichloroethene	0.0500	0.0525		mg/L		105	75 - 135	1	25
Vinyl chloride	0.0500	0.0474		mg/L		95	60 - 140	5	25
cis-1,3-Dichloropropene	0.0500	0.0520		mg/L		104	74 - 125	1	25

Surrogate	LCSD %Recovery	LCSD Qualifier	Limits
1,2-Dichloroethane-d4 (Surr)	90		63 - 144
4-Bromofluorobenzene (Surr)	98		74 - 124
Dibromofluoromethane (Surr)	95		75 - 131
Toluene-d8 (Surr)	100		80 - 120

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QC Sample Results

Client: Messer LLC

Job ID: 860-70454-1

Project/Site: Messer Gas ASU Permit Renewal 3-21-24

Method: 625.1 - Semivolatile Organic Compounds (GC/MS)

Lab Sample ID: MB 860-151704/1-A

Matrix: Water

Analysis Batch: 151846

Client Sample ID: Method Blank

Prep Type: Total/NA

Prep Batch: 151704

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,2,4,5-Tetrachlorobenzene	0.0013	U	0.010	0.0013	mg/L		03/26/24 16:25	03/27/24 14:41	1
1,2-Dichlorobenzene	0.0016	U	0.010	0.0016	mg/L		03/26/24 16:25	03/27/24 14:41	1
1,3-Dichlorobenzene	0.0014	U	0.010	0.0014	mg/L		03/26/24 16:25	03/27/24 14:41	1
1,4-Dichlorobenzene	0.0016	U	0.010	0.0016	mg/L		03/26/24 16:25	03/27/24 14:41	1
Acenaphthene	0.0014	U	0.0057	0.0014	mg/L		03/26/24 16:25	03/27/24 14:41	1
Benzidine	0.0048	U	0.020	0.0048	mg/L		03/26/24 16:25	03/27/24 14:41	1
1,2,4-Trichlorobenzene	0.0016	U	0.0050	0.0016	mg/L		03/26/24 16:25	03/27/24 14:41	1
Hexachlorobenzene	0.00031	U	0.0050	0.00031	mg/L		03/26/24 16:25	03/27/24 14:41	1
Hexachloroethane	0.00053	U	0.0048	0.00053	mg/L		03/26/24 16:25	03/27/24 14:41	1
2,4,5-Trichlorophenol	0.0020	U	0.010	0.0020	mg/L		03/26/24 16:25	03/27/24 14:41	1
Bis(2-chloroethyl)ether	0.0022	U	0.010	0.0022	mg/L		03/26/24 16:25	03/27/24 14:41	1
2-Chloronaphthalene	0.00046	U	0.0050	0.00046	mg/L		03/26/24 16:25	03/27/24 14:41	1
2,4,6-Trichlorophenol	0.0014	U	0.0050	0.0014	mg/L		03/26/24 16:25	03/27/24 14:41	1
p-Chloro-m-cresol	0.0016	U	0.0050	0.0016	mg/L		03/26/24 16:25	03/27/24 14:41	1
2-Chlorophenol	0.00065	U	0.0050	0.00065	mg/L		03/26/24 16:25	03/27/24 14:41	1
3,3'-Dichlorobenzidine	0.00034	U	0.0050	0.00034	mg/L		03/26/24 16:25	03/27/24 14:41	1
2,4-Dichlorophenol	0.00031	U	0.0050	0.00031	mg/L		03/26/24 16:25	03/27/24 14:41	1
2,4-Dimethylphenol	0.00065	U	0.0050	0.00065	mg/L		03/26/24 16:25	03/27/24 14:41	1
2,4-Dinitrotoluene	0.0013	U	0.010	0.0013	mg/L		03/26/24 16:25	03/27/24 14:41	1
1,2-Diphenylhydrazine	0.0015	U	0.010	0.0015	mg/L		03/26/24 16:25	03/27/24 14:41	1
Fluoranthene	0.0016	U	0.0050	0.0016	mg/L		03/26/24 16:25	03/27/24 14:41	1
4-Bromophenyl phenyl ether	0.00026	U	0.0050	0.00026	mg/L		03/26/24 16:25	03/27/24 14:41	1
4-Chlorophenyl phenyl ether	0.0013	U	0.010	0.0013	mg/L		03/26/24 16:25	03/27/24 14:41	1
o-Cresol	0.0016	U	0.010	0.0016	mg/L		03/26/24 16:25	03/27/24 14:41	1
Bis(2-chloroethoxy)methane	0.0018	U	0.010	0.0018	mg/L		03/26/24 16:25	03/27/24 14:41	1
m & p - Cresol	0.0026	U	0.010	0.0026	mg/L		03/26/24 16:25	03/27/24 14:41	1
bis (2-chloroisopropyl) ether	0.0018	U	0.010	0.0018	mg/L		03/26/24 16:25	03/27/24 14:41	1
Hexachlorobutadiene	0.00024	U	0.0010	0.00024	mg/L		03/26/24 16:25	03/27/24 14:41	1
Hexachlorocyclopentadiene	0.0046	U	0.010	0.0046	mg/L		03/26/24 16:25	03/27/24 14:41	1
Isophorone	0.0016	U	0.0050	0.0016	mg/L		03/26/24 16:25	03/27/24 14:41	1
Naphthalene	0.00054	U	0.0025	0.00054	mg/L		03/26/24 16:25	03/27/24 14:41	1
Nitrobenzene	0.0017	U	0.0050	0.0017	mg/L		03/26/24 16:25	03/27/24 14:41	1
4-Nitrophenol	0.0049	U	0.0072	0.0049	mg/L		03/26/24 16:25	03/27/24 14:41	1
2-Nitrophenol	0.0017	U	0.010	0.0017	mg/L		03/26/24 16:25	03/27/24 14:41	1
4,6-Dinitro-o-cresol	0.0014	U	0.010	0.0014	mg/L		03/26/24 16:25	03/27/24 14:41	1
N-Nitrosodimethylamine	0.0020	U	0.010	0.0020	mg/L		03/26/24 16:25	03/27/24 14:41	1
N-Nitrosodiphenylamine	0.0018	U	0.010	0.0018	mg/L		03/26/24 16:25	03/27/24 14:41	1
N-Nitrosodi-n-propylamine	0.0029	U	0.010	0.0029	mg/L		03/26/24 16:25	03/27/24 14:41	1
Pentachlorophenol	0.00023	U	0.010	0.00023	mg/L		03/26/24 16:25	03/27/24 14:41	1
Phenol	0.00042	U	0.0045	0.00042	mg/L		03/26/24 16:25	03/27/24 14:41	1
Bis(2-ethylhexyl) phthalate	0.00028	U	0.0050	0.00028	mg/L		03/26/24 16:25	03/27/24 14:41	1
Butyl benzyl phthalate	0.00034	U	0.0050	0.00034	mg/L		03/26/24 16:25	03/27/24 14:41	1
Di-n-butyl phthalate	0.00025	U	0.0050	0.00025	mg/L		03/26/24 16:25	03/27/24 14:41	1
Di-n-octyl phthalate	0.00037	U	0.0050	0.00037	mg/L		03/26/24 16:25	03/27/24 14:41	1
Diethyl phthalate	0.0016	U	0.0050	0.0016	mg/L		03/26/24 16:25	03/27/24 14:41	1
Dimethyl phthalate	0.00030	U	0.0025	0.00030	mg/L		03/26/24 16:25	03/27/24 14:41	1
Benzo[a]anthracene	0.00017	U	0.0050	0.00017	mg/L		03/26/24 16:25	03/27/24 14:41	1
Benzo[a]pyrene	0.00036	U	0.0050	0.00036	mg/L		03/26/24 16:25	03/27/24 14:41	1

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QC Sample Results

Client: Messer LLC

Job ID: 860-70454-1

Project/Site: Messer Gas ASU Permit Renewal 3-21-24

Method: 625.1 - Semivolatile Organic Compounds (GC/MS) (Continued)

Lab Sample ID: MB 860-151704/1-A

Matrix: Water

Analysis Batch: 151846

Client Sample ID: Method Blank

Prep Type: Total/NA

Prep Batch: 151704

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Benzo[b]fluoranthene	0.0020	U	0.010	0.0020	mg/L		03/26/24 16:25	03/27/24 14:41	1
Benzo[k]fluoranthene	0.00038	U	0.0050	0.00038	mg/L		03/26/24 16:25	03/27/24 14:41	1
Chrysene	0.00022	U	0.0050	0.00022	mg/L		03/26/24 16:25	03/27/24 14:41	1
Acenaphthylene	0.0014	U	0.010	0.0014	mg/L		03/26/24 16:25	03/27/24 14:41	1
Anthracene	0.0015	U	0.0057	0.0015	mg/L		03/26/24 16:25	03/27/24 14:41	1
Benzo[g,h,i]perylene	0.0027	U	0.010	0.0027	mg/L		03/26/24 16:25	03/27/24 14:41	1
Fluorene	0.0016	U	0.0050	0.0016	mg/L		03/26/24 16:25	03/27/24 14:41	1
Phenanthrene	0.0014	U	0.010	0.0014	mg/L		03/26/24 16:25	03/27/24 14:41	1
Dibenz(a,h)anthracene	0.00025	U	0.0050	0.00025	mg/L		03/26/24 16:25	03/27/24 14:41	1
Indeno[1,2,3-cd]pyrene	0.0023	U	0.010	0.0023	mg/L		03/26/24 16:25	03/27/24 14:41	1
Pyrene	0.00018	U	0.0050	0.00018	mg/L		03/26/24 16:25	03/27/24 14:41	1
2,4-Dinitrophenol	0.0016	U	0.010	0.0016	mg/L		03/26/24 16:25	03/27/24 14:41	1
2,6-Dinitrotoluene	0.0016	U	0.0050	0.0016	mg/L		03/26/24 16:25	03/27/24 14:41	1
N-Nitrosodi-n-butylamine	0.0015	U	0.010	0.0015	mg/L		03/26/24 16:25	03/27/24 14:41	1
N-Nitrosodiethylamine	0.0018	U	0.010	0.0018	mg/L		03/26/24 16:25	03/27/24 14:41	1
Nonylphenol	0.010	U	0.010	0.010	mg/L		03/26/24 16:25	03/27/24 14:41	1
Pentachlorobenzene	0.0011	U	0.010	0.0011	mg/L		03/26/24 16:25	03/27/24 14:41	1
Pyridine	0.0026	U	0.010	0.0026	mg/L		03/26/24 16:25	03/27/24 14:41	1
Total Cresols	0.0026	U	0.010	0.0026	mg/L		03/26/24 16:25	03/27/24 14:41	1

Surrogate	MB %Recovery	MB Qualifier	Limits	Prepared	Analyzed	Dil Fac
2,4,6-Tribromophenol (Surr)	56		31 - 132	03/26/24 16:25	03/27/24 14:41	1
2-Fluorobiphenyl (Surr)	63		29 - 112	03/26/24 16:25	03/27/24 14:41	1
2-Fluorophenol (Surr)	36		28 - 114	03/26/24 16:25	03/27/24 14:41	1
Nitrobenzene-d5 (Surr)	76		15 - 314	03/26/24 16:25	03/27/24 14:41	1
p-Terphenyl-d14 (Surr)	83		20 - 141	03/26/24 16:25	03/27/24 14:41	1
Phenol-d5 (Surr)	26		8 - 424	03/26/24 16:25	03/27/24 14:41	1

Lab Sample ID: LCS 860-151704/2-A

Matrix: Water

Analysis Batch: 151846

Client Sample ID: Lab Control Sample

Prep Type: Total/NA

Prep Batch: 151704

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	Limits
1,2,4,5-Tetrachlorobenzene	0.0400	0.0217		mg/L		54	41 - 125
1,2-Dichlorobenzene	0.0400	0.0236	*-	mg/L		59	60 - 140
1,3-Dichlorobenzene	0.0400	0.0229	*-	mg/L		57	60 - 140
1,4-Dichlorobenzene	0.0400	0.0232		mg/L		58	19 - 121
Acenaphthene	0.0400	0.0263		mg/L		66	60 - 132
Benzidine	0.0400	0.00896	J *	mg/L		22	25 - 125
1,2,4-Trichlorobenzene	0.0400	0.0210	*-	mg/L		52	57 - 130
Hexachlorobenzene	0.0400	0.0242		mg/L		60	8 - 142
Hexachloroethane	0.0400	0.0221		mg/L		55	55 - 120
2,4,5-Trichlorophenol	0.0400	0.0248		mg/L		62	35 - 111
Bis(2-chloroethyl)ether	0.0400	0.0292		mg/L		73	43 - 126
2-Chloronaphthalene	0.0400	0.0237	*-	mg/L		59	65 - 120
2,4,6-Trichlorophenol	0.0400	0.0249		mg/L		62	52 - 129
p-Chloro-m-cresol	0.0400	0.0270		mg/L		67	41 - 128
2-Chlorophenol	0.0400	0.0228		mg/L		57	36 - 120

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QC Sample Results

Client: Messer LLC
Project/Site: Messer Gas ASU Permit Renewal 3-21-24

Job ID: 860-70454-1

Method: 625.1 - Semivolatile Organic Compounds (GC/MS) (Continued)

Lab Sample ID: LCS 860-151704/2-A

Matrix: Water

Analysis Batch: 151846

Client Sample ID: Lab Control Sample

Prep Type: Total/NA

Prep Batch: 151704

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits
3,3'-Dichlorobenzidine	0.0400	0.0303		mg/L		76	18 - 213
2,4-Dichlorophenol	0.0400	0.0251		mg/L		63	53 - 122
2,4-Dimethylphenol	0.0400	0.0347		mg/L		87	42 - 120
2,4-Dinitrotoluene	0.0400	0.0311		mg/L		78	48 - 127
1,2-Diphenylhydrazine	0.0400	0.0326		mg/L		82	28 - 136
Fluoranthene	0.0400	0.0327		mg/L		82	43 - 121
4-Bromophenyl phenyl ether	0.0400	0.0245	*	mg/L		61	65 - 120
4-Chlorophenyl phenyl ether	0.0400	0.0252		mg/L		63	38 - 145
o-Cresol	0.0400	0.0203		mg/L		51	14 - 176
Bis(2-chloroethoxy)methane	0.0400	0.0259		mg/L		65	49 - 165
m & p - Cresol	0.0400	0.0213		mg/L		53	14 - 176
bis (2-chloroisopropyl) ether	0.0400	0.0324		mg/L		81	63 - 139
Hexachlorobutadiene	0.0400	0.0196		mg/L		49	38 - 120
Hexachlorocyclopentadiene	0.0400	0.0314		mg/L		79	41 - 125
Isophorone	0.0400	0.0278		mg/L		70	47 - 180
Naphthalene	0.0400	0.0250		mg/L		63	36 - 120
Nitrobenzene	0.0400	0.0279		mg/L		70	54 - 158
4-Nitrophenol	0.0400	0.0129		mg/L		32	13 - 129
2-Nitrophenol	0.0400	0.0253		mg/L		63	45 - 167
4,6-Dinitro-o-cresol	0.0400	0.0334		mg/L		83	53 - 130
N-Nitrosodimethylamine	0.0400	0.0146		mg/L		37	20 - 125
N-Nitrosodiphenylamine	0.0400	0.0290		mg/L		73	2 - 196
N-Nitrosodi-n-propylamine	0.0400	0.0303		mg/L		76	14 - 198
Pentachlorophenol	0.0400	0.0201		mg/L		50	38 - 152
Phenol	0.0400	0.0124		mg/L		31	17 - 120
Bis(2-ethylhexyl) phthalate	0.0400	0.0384		mg/L		96	29 - 137
Butyl benzyl phthalate	0.0400	0.0372		mg/L		93	12 - 140
Di-n-butyl phthalate	0.0400	0.0350		mg/L		87	8 - 120
Di-n-octyl phthalate	0.0400	0.0454		mg/L		114	19 - 132
Diethyl phthalate	0.0400	0.0300		mg/L		75	17 - 120
Dimethyl phthalate	0.0400	0.0273		mg/L		68	25 - 120
Benzo[a]anthracene	0.0400	0.0303		mg/L		76	42 - 133
Benzo[a]pyrene	0.0400	0.0338		mg/L		84	32 - 148
Benzo[b]fluoranthene	0.0400	0.0320		mg/L		80	42 - 140
Benzo[k]fluoranthene	0.0400	0.0324		mg/L		81	25 - 146
Chrysene	0.0400	0.0289		mg/L		72	44 - 140
Acenaphthylene	0.0400	0.0259		mg/L		65	54 - 126
Anthracene	0.0400	0.0311		mg/L		78	43 - 120
Benzo[g,h,i]perylene	0.0400	0.0267		mg/L		67	13 - 195
Fluorene	0.0400	0.0277	*	mg/L		69	70 - 120
Phenanthrene	0.0400	0.0294		mg/L		74	65 - 120
Dibenz(a,h)anthracene	0.0400	0.0277		mg/L		69	16 - 200
Indeno[1,2,3-cd]pyrene	0.0400	0.0282		mg/L		70	13 - 151
Pyrene	0.0400	0.0331		mg/L		83	70 - 120
2,4-Dinitrophenol	0.0400	0.0202		mg/L		51	12 - 173
2,6-Dinitrotoluene	0.0400	0.0279		mg/L		70	68 - 137
N-Nitrosodi-n-butylamine	0.0400	0.0250		mg/L		62	33 - 141
N-Nitrosodiethylamine	0.0400	0.0268		mg/L		67	30 - 160
Pentachlorobenzene	0.0400	0.0216		mg/L		54	25 - 131

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QC Sample Results

Client: Messer LLC

Job ID: 860-70454-1

Project/Site: Messer Gas ASU Permit Renewal 3-21-24

Method: 625.1 - Semivolatile Organic Compounds (GC/MS) (Continued)

Lab Sample ID: LCS 860-151704/2-A

Matrix: Water

Analysis Batch: 151846

Client Sample ID: Lab Control Sample

Prep Type: Total/NA

Prep Batch: 151704

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits
Pyridine	0.0800	0.0137		mg/L		17	5 - 94

Surrogate	LCS %Recovery	LCS Qualifier	Limits
2,4,6-Tribromophenol (Surr)	61		31 - 132
2-Fluorobiphenyl (Surr)	59		29 - 112
2-Fluorophenol (Surr)	37		28 - 114
Nitrobenzene-d5 (Surr)	70		15 - 314
p-Terphenyl-d14 (Surr)	75		20 - 141
Phenol-d5 (Surr)	27		8 - 424

Lab Sample ID: LCSD 860-151704/3-A

Matrix: Water

Analysis Batch: 151846

Client Sample ID: Lab Control Sample Dup

Prep Type: Total/NA

Prep Batch: 151704

Analyte	Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec Limits	RPD	RPD Limit
1,2,4,5-Tetrachlorobenzene	0.0400	0.0240		mg/L		60	41 - 125	10	30
1,2-Dichlorobenzene	0.0400	0.0253		mg/L		63	60 - 140	7	30
1,3-Dichlorobenzene	0.0400	0.0245		mg/L		61	60 - 140	7	30
1,4-Dichlorobenzene	0.0400	0.0246		mg/L		62	19 - 121	6	30
Acenaphthene	0.0400	0.0293		mg/L		73	60 - 132	11	29
Benzidine	0.0400	0.0048	U * - *1	mg/L		0.9	25 - 125	184	30
1,2,4-Trichlorobenzene	0.0400	0.0226	*	mg/L		56	57 - 130	7	30
Hexachlorobenzene	0.0400	0.0270		mg/L		67	8 - 142	11	30
Hexachloroethane	0.0400	0.0236		mg/L		59	55 - 120	7	30
2,4,5-Trichlorophenol	0.0400	0.0280		mg/L		70	35 - 111	12	30
Bis(2-chloroethyl)ether	0.0400	0.0318		mg/L		79	43 - 126	8	30
2-Chloronaphthalene	0.0400	0.0263		mg/L		66	65 - 120	10	15
2,4,6-Trichlorophenol	0.0400	0.0280		mg/L		70	52 - 129	12	30
p-Chloro-m-cresol	0.0400	0.0299		mg/L		75	41 - 128	10	30
2-Chlorophenol	0.0400	0.0252		mg/L		63	36 - 120	10	30
3,3'-Dichlorobenzidine	0.0400	0.0309		mg/L		77	18 - 213	2	30
2,4-Dichlorophenol	0.0400	0.0274		mg/L		69	53 - 122	9	30
2,4-Dimethylphenol	0.0400	0.0385		mg/L		96	42 - 120	10	30
2,4-Dinitrotoluene	0.0400	0.0348		mg/L		87	48 - 127	11	25
1,2-Diphenylhydrazine	0.0400	0.0366		mg/L		92	28 - 136	12	30
Fluoranthene	0.0400	0.0353		mg/L		88	43 - 121	7	30
4-Bromophenyl phenyl ether	0.0400	0.0271		mg/L		68	65 - 120	10	26
4-Chlorophenyl phenyl ether	0.0400	0.0288		mg/L		72	38 - 145	13	30
o-Cresol	0.0400	0.0227		mg/L		57	14 - 176	11	30
Bis(2-chloroethoxy)methane	0.0400	0.0286		mg/L		71	49 - 165	10	30
m & p - Cresol	0.0400	0.0235		mg/L		59	14 - 176	10	30
bis (2-chloroisopropyl) ether	0.0400	0.0357		mg/L		89	63 - 139	10	30
Hexachlorobutadiene	0.0400	0.0208		mg/L		52	38 - 120	6	30
Hexachlorocyclopentadiene	0.0400	0.0367		mg/L		92	41 - 125	16	30
Isophorone	0.0400	0.0308		mg/L		77	47 - 180	10	30
Naphthalene	0.0400	0.0268		mg/L		67	36 - 120	7	30
Nitrobenzene	0.0400	0.0300		mg/L		75	54 - 158	7	30
4-Nitrophenol	0.0400	0.0145		mg/L		36	13 - 129	11	30

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QC Sample Results

Client: Messer LLC
Project/Site: Messer Gas ASU Permit Renewal 3-21-24

Job ID: 860-70454-1

Method: 625.1 - Semivolatile Organic Compounds (GC/MS) (Continued)

Lab Sample ID: LCSD 860-151704/3-A

Matrix: Water

Analysis Batch: 151846

Client Sample ID: Lab Control Sample Dup

Prep Type: Total/NA

Prep Batch: 151704

Analyte	Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec Limits	RPD	RPD Limit
2-Nitrophenol	0.0400	0.0278		mg/L		69	45 - 167	9	30
4,6-Dinitro-o-cresol	0.0400	0.0366		mg/L		91	53 - 130	9	30
N-Nitrosodimethylamine	0.0400	0.0156		mg/L		39	20 - 125	7	30
N-Nitrosodiphenylamine	0.0400	0.0317		mg/L		79	2 - 196	9	30
N-Nitrosodi-n-propylamine	0.0400	0.0330		mg/L		83	14 - 198	9	30
Pentachlorophenol	0.0400	0.0242		mg/L		60	38 - 152	19	30
Phenol	0.0400	0.0141		mg/L		35	17 - 120	13	30
Bis(2-ethylhexyl) phthalate	0.0400	0.0428		mg/L		107	29 - 137	11	30
Butyl benzyl phthalate	0.0400	0.0419		mg/L		105	12 - 140	12	30
Di-n-butyl phthalate	0.0400	0.0390		mg/L		97	8 - 120	11	28
Di-n-octyl phthalate	0.0400	0.0512		mg/L		128	19 - 132	12	30
Diethyl phthalate	0.0400	0.0334		mg/L		84	17 - 120	11	30
Dimethyl phthalate	0.0400	0.0307		mg/L		77	25 - 120	12	30
Benzo[a]anthracene	0.0400	0.0335		mg/L		84	42 - 133	10	30
Benzo[a]pyrene	0.0400	0.0378		mg/L		94	32 - 148	11	30
Benzo[b]fluoranthene	0.0400	0.0361		mg/L		90	42 - 140	12	30
Benzo[k]fluoranthene	0.0400	0.0354		mg/L		89	25 - 146	9	30
Chrysene	0.0400	0.0319		mg/L		80	44 - 140	10	30
Acenaphthylene	0.0400	0.0294		mg/L		74	54 - 126	13	30
Anthracene	0.0400	0.0341		mg/L		85	43 - 120	9	30
Benzo[g,h,i]perylene	0.0400	0.0298		mg/L		75	13 - 195	11	30
Fluorene	0.0400	0.0316		mg/L		79	70 - 120	13	23
Phenanthrene	0.0400	0.0324		mg/L		81	65 - 120	10	30
Dibenz(a,h)anthracene	0.0400	0.0318		mg/L		79	16 - 200	14	30
Indeno[1,2,3-cd]pyrene	0.0400	0.0319		mg/L		80	13 - 151	12	30
Pyrene	0.0400	0.0366		mg/L		91	70 - 120	10	30
2,4-Dinitrophenol	0.0400	0.0235		mg/L		59	12 - 173	15	30
2,6-Dinitrotoluene	0.0400	0.0312		mg/L		78	68 - 137	11	29
N-Nitrosodi-n-butylamine	0.0400	0.0279		mg/L		70	33 - 141	11	30
N-Nitrosodiethylamine	0.0400	0.0291		mg/L		73	30 - 160	8	30
Pentachlorobenzene	0.0400	0.0245		mg/L		61	25 - 131	13	30
Pyridine	0.0800	0.00410	J *1	mg/L		5	5 - 94	108	30

Surrogate	LCSD %Recovery	LCSD Qualifier	Limits
2,4,6-Tribromophenol (Surr)	66		31 - 132
2-Fluorobiphenyl (Surr)	63		29 - 112
2-Fluorophenol (Surr)	40		28 - 114
Nitrobenzene-d5 (Surr)	73		15 - 314
p-Terphenyl-d14 (Surr)	80		20 - 141
Phenol-d5 (Surr)	30		8 - 424

Method: 300.0 - Anions, Ion Chromatography

Lab Sample ID: MB 860-151005/3

Matrix: Water

Analysis Batch: 151005

Client Sample ID: Method Blank

Prep Type: Total/NA

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Bromide	0.121	J	0.50	0.071	mg/L			03/21/24 20:01	1

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QC Sample Results

Client: Messer LLC
Project/Site: Messer Gas ASU Permit Renewal 3-21-24

Job ID: 860-70454-1

Method: 300.0 - Anions, Ion Chromatography (Continued)

Lab Sample ID: MB 860-151005/3

Matrix: Water

Analysis Batch: 151005

Client Sample ID: Method Blank

Prep Type: Total/NA

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	0.25	U	0.50	0.25	mg/L			03/21/24 20:01	1
Fluoride	0.10	U	0.50	0.10	mg/L			03/21/24 20:01	1
Sulfate	0.20	U	0.50	0.20	mg/L			03/21/24 20:01	1

Lab Sample ID: MB 860-151005/60

Matrix: Water

Analysis Batch: 151005

Client Sample ID: Method Blank

Prep Type: Total/NA

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Bromide	0.071	U	0.50	0.071	mg/L			03/22/24 07:21	1
Chloride	0.25	U	0.50	0.25	mg/L			03/22/24 07:21	1
Fluoride	0.10	U	0.50	0.10	mg/L			03/22/24 07:21	1
Sulfate	0.20	U	0.50	0.20	mg/L			03/22/24 07:21	1

Lab Sample ID: LCS 860-151005/61

Matrix: Water

Analysis Batch: 151005

Client Sample ID: Lab Control Sample

Prep Type: Total/NA

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits
Bromide	5.00	4.69		mg/L		94	90 - 110
Chloride	5.00	4.80		mg/L		96	90 - 110
Fluoride	5.00	4.81		mg/L		96	90 - 110
Sulfate	5.00	5.07		mg/L		101	90 - 110

Lab Sample ID: LCSD 860-151005/62

Matrix: Water

Analysis Batch: 151005

Client Sample ID: Lab Control Sample Dup

Prep Type: Total/NA

Analyte	Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec Limits	RPD	RPD Limit
Bromide	5.00	4.81		mg/L		96	90 - 110	2	20
Chloride	5.00	4.86		mg/L		97	90 - 110	1	20
Fluoride	5.00	4.88		mg/L		98	90 - 110	1	20
Sulfate	5.00	5.08		mg/L		102	90 - 110	0	20

Lab Sample ID: LLCS 860-151005/7

Matrix: Water

Analysis Batch: 151005

Client Sample ID: Lab Control Sample

Prep Type: Total/NA

Analyte	Spike Added	LLCS Result	LLCS Qualifier	Unit	D	%Rec	%Rec Limits
Bromide	0.500	0.574		mg/L		115	50 - 150
Chloride	0.500	0.584		mg/L		117	50 - 150
Fluoride	0.500	0.433	J	mg/L		87	50 - 150
Sulfate	0.500	0.325	J	mg/L		65	50 - 150

Lab Sample ID: 860-70454-1 MS

Matrix: Water

Analysis Batch: 151005

Client Sample ID: Outfall 001

Prep Type: Total/NA

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec Limits
Bromide	0.23	J	5.00	5.20		mg/L		100	90 - 110

Eurofins Houston

QC Sample Results

Client: Messer LLC

Job ID: 860-70454-1

Project/Site: Messer Gas ASU Permit Renewal 3-21-24

Method: 300.0 - Anions, Ion Chromatography (Continued)

Lab Sample ID: 860-70454-1 MS

Matrix: Water

Analysis Batch: 151005

Client Sample ID: Outfall 001

Prep Type: Total/NA

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec Limits
Chloride	300		5.00	302	4	mg/L		115	90 - 110
Fluoride	1.2		5.00	6.18		mg/L		100	90 - 110
Sulfate	330		5.00	330	4	mg/L		-17	90 - 110

Lab Sample ID: 860-70454-1 MSD

Matrix: Water

Analysis Batch: 151005

Client Sample ID: Outfall 001

Prep Type: Total/NA

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	%Rec Limits	RPD	RPD Limit
Bromide	0.23	J	5.00	5.17		mg/L		99	90 - 110	1	15
Chloride	300		5.00	302	4	mg/L		123	90 - 110	0	15
Fluoride	1.2		5.00	6.31		mg/L		103	90 - 110	2	15
Sulfate	330		5.00	330	4	mg/L		-21	90 - 110	0	15

Lab Sample ID: MB 860-151006/3

Matrix: Water

Analysis Batch: 151006

Client Sample ID: Method Blank

Prep Type: Total/NA

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Nitrate as N	0.039	U	0.10	0.039	mg/L			03/21/24 20:01	1
Nitrite as N	0.029	U	0.10	0.029	mg/L			03/21/24 20:01	1
Nitrate Nitrite as N	0.039	U	0.10	0.039	mg/L			03/21/24 20:01	1

Lab Sample ID: MB 860-151006/60

Matrix: Water

Analysis Batch: 151006

Client Sample ID: Method Blank

Prep Type: Total/NA

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Nitrate as N	0.039	U	0.10	0.039	mg/L			03/22/24 07:21	1
Nitrite as N	0.029	U	0.10	0.029	mg/L			03/22/24 07:21	1
Nitrate Nitrite as N	0.039	U	0.10	0.039	mg/L			03/22/24 07:21	1

Lab Sample ID: LCS 860-151006/61

Matrix: Water

Analysis Batch: 151006

Client Sample ID: Lab Control Sample

Prep Type: Total/NA

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits
Nitrate as N	5.00	4.79		mg/L		96	80 - 120
Nitrite as N	5.00	4.74		mg/L		95	80 - 120

Lab Sample ID: LCSD 860-151006/62

Matrix: Water

Analysis Batch: 151006

Client Sample ID: Lab Control Sample Dup

Prep Type: Total/NA

Analyte	Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec Limits	RPD	RPD Limit
Nitrate as N	5.00	4.82		mg/L		96	80 - 120	1	20
Nitrite as N	5.00	4.78		mg/L		96	80 - 120	1	20

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QC Sample Results

Client: Messer LLC
Project/Site: Messer Gas ASU Permit Renewal 3-21-24

Job ID: 860-70454-1

Method: 300.0 - Anions, Ion Chromatography (Continued)

Lab Sample ID: LLCS 860-151006/6
Matrix: Water
Analysis Batch: 151006

Client Sample ID: Lab Control Sample
Prep Type: Total/NA

Analyte	Spike Added	LLCS Result	LLCS Qualifier	Unit	D	%Rec	%Rec Limits
Nitrate as N	0.100	0.0619	J	mg/L		62	50 - 150
Nitrite as N	0.100	0.0612	J	mg/L		61	50 - 150

Lab Sample ID: 860-70454-1 MS
Matrix: Water
Analysis Batch: 151006

Client Sample ID: Outfall 001
Prep Type: Total/NA

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec Limits
Nitrate as N	4.4		5.00	9.73		mg/L		106	80 - 120
Nitrite as N	0.029	U F1	1.25	0.889	F1	mg/L		71	80 - 120

Lab Sample ID: 860-70454-1 MSD
Matrix: Water
Analysis Batch: 151006

Client Sample ID: Outfall 001
Prep Type: Total/NA

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	%Rec Limits	RPD	RPD Limit
Nitrate as N	4.4		5.00	9.72		mg/L		106	80 - 120	0	15
Nitrite as N	0.029	U F1	1.25	0.866	F1	mg/L		69	80 - 120	3	15

Method: 1631E - Mercury, Low Level (CVAFS)

Lab Sample ID: MB 400-665799/3-A
Matrix: Water
Analysis Batch: 665859

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 665799

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Mercury	0.20	U	0.50	0.20	ng/L		03/25/24 16:00	03/26/24 09:50	1

Lab Sample ID: LCS 400-665799/4-A
Matrix: Water
Analysis Batch: 665859

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 665799

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits
Mercury	5.00	5.14		ng/L		103	79 - 121

Lab Sample ID: LCSD 400-665799/5-A
Matrix: Water
Analysis Batch: 665859

Client Sample ID: Lab Control Sample Dup
Prep Type: Total/NA
Prep Batch: 665799

Analyte	Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec Limits	RPD	RPD Limit
Mercury	5.00	5.04		ng/L		101	79 - 121	2	20

Method: 200.8 - Metals (ICP/MS)

Lab Sample ID: MB 860-152111/1-A
Matrix: Water
Analysis Batch: 152235

Client Sample ID: Method Blank
Prep Type: Total Recoverable
Prep Batch: 152111

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Aluminum	0.0030	U	0.020	0.0030	mg/L		03/28/24 11:30	03/28/24 19:58	1

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QC Sample Results

Client: Messer LLC
Project/Site: Messer Gas ASU Permit Renewal 3-21-24

Job ID: 860-70454-1

Method: 200.8 - Metals (ICP/MS) (Continued)

Lab Sample ID: MB 860-152111/1-A
Matrix: Water
Analysis Batch: 152235

Client Sample ID: Method Blank
Prep Type: Total Recoverable
Prep Batch: 152111

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Antimony	0.0011	U	0.0020	0.0011	mg/L		03/28/24 11:30	03/28/24 19:58	1
Arsenic	0.00034	U	0.0040	0.00034	mg/L		03/28/24 11:30	03/28/24 19:58	1
Barium	0.00029	U	0.0040	0.00029	mg/L		03/28/24 11:30	03/28/24 19:58	1
Beryllium	0.00015	U	0.0020	0.00015	mg/L		03/28/24 11:30	03/28/24 19:58	1
Cadmium	0.00026	U	0.0020	0.00026	mg/L		03/28/24 11:30	03/28/24 19:58	1
Chromium	0.00033	U	0.0040	0.00033	mg/L		03/28/24 11:30	03/28/24 19:58	1
Cobalt	0.00026	U	0.0020	0.00026	mg/L		03/28/24 11:30	03/28/24 19:58	1
Copper	0.00069	U	0.0040	0.00069	mg/L		03/28/24 11:30	03/28/24 19:58	1
Iron	0.0020	U	0.020	0.0020	mg/L		03/28/24 11:30	03/28/24 19:58	1
Lead	0.00014	U	0.0020	0.00014	mg/L		03/28/24 11:30	03/28/24 19:58	1
Magnesium	0.0092	U	0.10	0.0092	mg/L		03/28/24 11:30	03/28/24 19:58	1
Manganese	0.00016	U	0.0020	0.00016	mg/L		03/28/24 11:30	03/28/24 19:58	1
Molybdenum	0.00016	U	0.0020	0.00016	mg/L		03/28/24 11:30	03/28/24 19:58	1
Nickel	0.00049	U	0.0020	0.00049	mg/L		03/28/24 11:30	03/28/24 19:58	1
Selenium	0.00069	U	0.0020	0.00069	mg/L		03/28/24 11:30	03/28/24 19:58	1
Silver	0.00012	U	0.0020	0.00012	mg/L		03/28/24 11:30	03/28/24 19:58	1
Thallium	0.00022	U	0.0020	0.00022	mg/L		03/28/24 11:30	03/28/24 19:58	1
Tin	0.00033	U	0.0020	0.00033	mg/L		03/28/24 11:30	03/28/24 19:58	1
Titanium	0.00042	U	0.0040	0.00042	mg/L		03/28/24 11:30	03/28/24 19:58	1
Zinc	0.00089	U	0.0040	0.00089	mg/L		03/28/24 11:30	03/28/24 19:58	1

Lab Sample ID: MB 860-152111/1-A
Matrix: Water
Analysis Batch: 152895

Client Sample ID: Method Blank
Prep Type: Total Recoverable
Prep Batch: 152111

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Boron	0.0025	U	0.010	0.0025	mg/L		03/28/24 11:30	04/02/24 11:38	1

Lab Sample ID: LCS 860-152111/2-A
Matrix: Water
Analysis Batch: 152235

Client Sample ID: Lab Control Sample
Prep Type: Total Recoverable
Prep Batch: 152111

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits
Aluminum	0.500	0.498		mg/L		100	85 - 115
Antimony	0.100	0.0980		mg/L		98	85 - 115
Arsenic	0.100	0.0975		mg/L		98	85 - 115
Barium	0.100	0.0971		mg/L		97	85 - 115
Beryllium	0.100	0.0985		mg/L		99	85 - 115
Cadmium	0.100	0.101		mg/L		101	85 - 115
Chromium	0.100	0.0997		mg/L		100	85 - 115
Cobalt	0.100	0.0977		mg/L		98	85 - 115
Copper	0.100	0.0971		mg/L		97	85 - 115
Iron	0.500	0.507		mg/L		101	85 - 115
Lead	0.100	0.0982		mg/L		98	85 - 115
Magnesium	2.50	2.47		mg/L		99	85 - 115
Manganese	0.100	0.100		mg/L		100	85 - 115
Molybdenum	0.100	0.0988		mg/L		99	85 - 115
Nickel	0.100	0.0973		mg/L		97	85 - 115
Selenium	0.100	0.0944		mg/L		94	85 - 115

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QC Sample Results

Client: Messer LLC
Project/Site: Messer Gas ASU Permit Renewal 3-21-24

Job ID: 860-70454-1

Method: 200.8 - Metals (ICP/MS) (Continued)

Lab Sample ID: LCS 860-152111/2-A
Matrix: Water
Analysis Batch: 152235

Client Sample ID: Lab Control Sample
Prep Type: Total Recoverable
Prep Batch: 152111

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits
Silver	0.0500	0.0493		mg/L		99	85 - 115
Thallium	0.100	0.0984		mg/L		98	85 - 115
Tin	0.100	0.0984		mg/L		98	85 - 115
Titanium	0.100	0.0987		mg/L		99	85 - 115
Zinc	0.100	0.0982		mg/L		98	85 - 115

Lab Sample ID: LCS 860-152111/2-A
Matrix: Water
Analysis Batch: 152895

Client Sample ID: Lab Control Sample
Prep Type: Total Recoverable
Prep Batch: 152111

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits
Boron	0.100	0.0913		mg/L		91	85 - 115

Lab Sample ID: LCSD 860-152111/3-A
Matrix: Water
Analysis Batch: 152235

Client Sample ID: Lab Control Sample Dup
Prep Type: Total Recoverable
Prep Batch: 152111

Analyte	Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec Limits	RPD	RPD Limit
Aluminum	0.500	0.498		mg/L		100	85 - 115	0	20
Antimony	0.100	0.0990		mg/L		99	85 - 115	1	20
Arsenic	0.100	0.0982		mg/L		98	85 - 115	1	20
Barium	0.100	0.0973		mg/L		97	85 - 115	0	20
Beryllium	0.100	0.0992		mg/L		99	85 - 115	1	20
Cadmium	0.100	0.100		mg/L		100	85 - 115	1	20
Chromium	0.100	0.0997		mg/L		100	85 - 115	0	20
Cobalt	0.100	0.0974		mg/L		97	85 - 115	0	20
Copper	0.100	0.0970		mg/L		97	85 - 115	0	20
Iron	0.500	0.506		mg/L		101	85 - 115	0	20
Lead	0.100	0.0985		mg/L		98	85 - 115	0	20
Magnesium	2.50	2.47		mg/L		99	85 - 115	0	20
Manganese	0.100	0.101		mg/L		101	85 - 115	0	20
Molybdenum	0.100	0.0985		mg/L		99	85 - 115	0	20
Nickel	0.100	0.0970		mg/L		97	85 - 115	0	20
Selenium	0.100	0.0962		mg/L		96	85 - 115	2	20
Silver	0.0500	0.0498		mg/L		100	85 - 115	1	20
Thallium	0.100	0.0986		mg/L		99	85 - 115	0	20
Tin	0.100	0.0991		mg/L		99	85 - 115	1	20
Titanium	0.100	0.100		mg/L		100	85 - 115	1	20
Zinc	0.100	0.0981		mg/L		98	85 - 115	0	20

Lab Sample ID: LCSD 860-152111/3-A
Matrix: Water
Analysis Batch: 152895

Client Sample ID: Lab Control Sample Dup
Prep Type: Total Recoverable
Prep Batch: 152111

Analyte	Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec Limits	RPD	RPD Limit
Boron	0.100	0.0937		mg/L		94	85 - 115	3	20

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QC Sample Results

Client: Messer LLC
Project/Site: Messer Gas ASU Permit Renewal 3-21-24

Job ID: 860-70454-1

Method: 1664B - HEM and SGT-HEM

Lab Sample ID: MB 860-151920/1

Matrix: Water

Analysis Batch: 151920

Client Sample ID: Method Blank

Prep Type: Total/NA

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
HEM	1.6	U	5.0	1.6	mg/L			03/27/24 14:23	1

Lab Sample ID: LCS 860-151920/2

Matrix: Water

Analysis Batch: 151920

Client Sample ID: Lab Control Sample

Prep Type: Total/NA

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits
HEM	40.0	38.1		mg/L		95	78 - 114

Lab Sample ID: LCSD 860-151920/3

Matrix: Water

Analysis Batch: 151920

Client Sample ID: Lab Control Sample Dup

Prep Type: Total/NA

Analyte	Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec Limits	RPD	RPD Limit
HEM	40.0	38.0		mg/L		95	78 - 114	0	18

Method: 350.1 - Nitrogen, Ammonia

Lab Sample ID: MB 860-152223/66

Matrix: Water

Analysis Batch: 152223

Client Sample ID: Method Blank

Prep Type: Total/NA

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Ammonia	0.051	U	0.10	0.051	mg/L			03/27/24 13:20	1

Lab Sample ID: LCS 860-152223/67

Matrix: Water

Analysis Batch: 152223

Client Sample ID: Lab Control Sample

Prep Type: Total/NA

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits
Ammonia	1.00	1.07		mg/L		107	90 - 110

Lab Sample ID: LCSD 860-152223/68

Matrix: Water

Analysis Batch: 152223

Client Sample ID: Lab Control Sample Dup

Prep Type: Total/NA

Analyte	Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec Limits	RPD	RPD Limit
Ammonia	1.00	1.07		mg/L		107	90 - 110	1	20

Method: 351.2 - Nitrogen, Total Kjeldahl

Lab Sample ID: MB 860-151764/32-A

Matrix: Water

Analysis Batch: 152217

Client Sample ID: Method Blank

Prep Type: Total/NA

Prep Batch: 151764

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Nitrogen, Kjeldahl	0.089	U	0.20	0.089	mg/L		03/26/24 20:10	03/28/24 11:13	1

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QC Sample Results

Client: Messer LLC
Project/Site: Messer Gas ASU Permit Renewal 3-21-24

Job ID: 860-70454-1

Method: 351.2 - Nitrogen, Total Kjeldahl (Continued)

Lab Sample ID: MB 860-151764/4-A
Matrix: Water
Analysis Batch: 152217

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 151764

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Nitrogen, Kjeldahl	0.089	U	0.20	0.089	mg/L		03/26/24 20:10	03/28/24 11:00	1

Lab Sample ID: LCS 860-151764/33-A
Matrix: Water
Analysis Batch: 152217

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 151764

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits
Nitrogen, Kjeldahl	2.00	1.96		mg/L		98	90 - 110

Lab Sample ID: LCSD 860-151764/34-A
Matrix: Water
Analysis Batch: 152217

Client Sample ID: Lab Control Sample Dup
Prep Type: Total/NA
Prep Batch: 151764

Analyte	Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec Limits	RPD	RPD Limit
Nitrogen, Kjeldahl	2.00	1.95		mg/L		98	90 - 110	0	20

Lab Sample ID: LLCSD 860-151764/5-A
Matrix: Water
Analysis Batch: 152217

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 151764

Analyte	Spike Added	LLCS Result	LLCS Qualifier	Unit	D	%Rec	%Rec Limits
Nitrogen, Kjeldahl	0.200	0.193	J	mg/L		97	50 - 150

Method: 365.1 - Phosphorus, Total

Lab Sample ID: MB 860-152937/16
Matrix: Water
Analysis Batch: 152937

Client Sample ID: Method Blank
Prep Type: Total/NA

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Phosphorus Total	0.014	U	0.020	0.014	mg/L			04/02/24 15:06	1

Lab Sample ID: LCS 860-152937/17
Matrix: Water
Analysis Batch: 152937

Client Sample ID: Lab Control Sample
Prep Type: Total/NA

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits
Phosphorus Total	0.250	0.248		mg/L		99	90 - 110

Lab Sample ID: LCSD 860-152937/18
Matrix: Water
Analysis Batch: 152937

Client Sample ID: Lab Control Sample Dup
Prep Type: Total/NA

Analyte	Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec Limits	RPD	RPD Limit
Phosphorus Total	0.250	0.250		mg/L		100	90 - 110	1	20

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QC Sample Results

Client: Messer LLC
Project/Site: Messer Gas ASU Permit Renewal 3-21-24

Job ID: 860-70454-1

Method: 365.1 - Phosphorus, Total (Continued)

Lab Sample ID: 860-70454-1 MS

Matrix: Water

Analysis Batch: 152937

Client Sample ID: Outfall 001

Prep Type: Total/NA

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec Limits
Phosphorus Total	3.0		0.250	3.17	4	mg/L		69	90 - 110

Lab Sample ID: 860-70454-1 MSD

Matrix: Water

Analysis Batch: 152937

Client Sample ID: Outfall 001

Prep Type: Total/NA

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	%Rec Limits	RPD	RPD Limit
Phosphorus Total	3.0		0.250	3.22	4	mg/L		91	90 - 110	2	20

Lab Sample ID: MB 860-153014/46

Matrix: Water

Analysis Batch: 153014

Client Sample ID: Method Blank

Prep Type: Total/NA

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Phosphorus Total	0.014	U	0.020	0.014	mg/L			04/02/24 22:23	1

Lab Sample ID: LCS 860-153014/47

Matrix: Water

Analysis Batch: 153014

Client Sample ID: Lab Control Sample

Prep Type: Total/NA

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits
Phosphorus Total	0.250	0.243		mg/L		97	90 - 110

Lab Sample ID: LCSD 860-153014/48

Matrix: Water

Analysis Batch: 153014

Client Sample ID: Lab Control Sample Dup

Prep Type: Total/NA

Analyte	Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec Limits	RPD	RPD Limit
Phosphorus Total	0.250	0.253		mg/L		101	90 - 110	4	20

Method: 7196A - Chromium, Hexavalent

Lab Sample ID: MB 860-151042/3

Matrix: Water

Analysis Batch: 151042

Client Sample ID: Method Blank

Prep Type: Total/NA

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Cr (VI)	0.0034	U	0.010	0.0034	mg/L			03/21/24 19:20	1

Lab Sample ID: LCS 860-151042/4

Matrix: Water

Analysis Batch: 151042

Client Sample ID: Lab Control Sample

Prep Type: Total/NA

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits
Cr (VI)	0.200	0.193		mg/L		96	85 - 115

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QC Sample Results

Client: Messer LLC
Project/Site: Messer Gas ASU Permit Renewal 3-21-24

Job ID: 860-70454-1

Method: 7196A - Chromium, Hexavalent (Continued)

Lab Sample ID: LCSD 860-151042/5

Matrix: Water

Analysis Batch: 151042

Client Sample ID: Lab Control Sample Dup

Prep Type: Total/NA

Analyte	Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec Limits	RPD	RPD Limit
Cr (VI)	0.200	0.193		mg/L		96	85 - 115	0	20

Lab Sample ID: 860-70454-1 MS

Matrix: Water

Analysis Batch: 151042

Client Sample ID: Outfall 001

Prep Type: Total/NA

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec Limits	RPD	RPD Limit
Cr (VI)	0.0034	U	0.200	0.197		mg/L		98	85 - 115		

Lab Sample ID: 860-70454-1 MSD

Matrix: Water

Analysis Batch: 151042

Client Sample ID: Outfall 001

Prep Type: Total/NA

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	%Rec Limits	RPD	RPD Limit
Cr (VI)	0.0034	U	0.200	0.197		mg/L		98	85 - 115	0	20

Method: 8000 - COD

Lab Sample ID: MB 860-152732/3

Matrix: Water

Analysis Batch: 152732

Client Sample ID: Method Blank

Prep Type: Total/NA

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Chemical Oxygen Demand	3.4	U	20	3.4	mg/L			04/01/24 19:18	1

Lab Sample ID: LCS 860-152732/4

Matrix: Water

Analysis Batch: 152732

Client Sample ID: Lab Control Sample

Prep Type: Total/NA

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits	RPD	RPD Limit
Chemical Oxygen Demand	100	101		mg/L		101	90 - 110		

Method: OIA-1677 - Cyanide, Available (Flow Injection)

Lab Sample ID: MB 410-489850/17

Matrix: Water

Analysis Batch: 489850

Client Sample ID: Method Blank

Prep Type: Total/NA

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Cyanide, Available	0.0050	U	0.0060	0.0050	mg/L			04/02/24 15:45	1

Lab Sample ID: LCS 410-489850/16

Matrix: Water

Analysis Batch: 489850

Client Sample ID: Lab Control Sample

Prep Type: Total/NA

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits	RPD	RPD Limit
Cyanide, Available	0.0500	0.0472		mg/L		94	82 - 132		

Eurofins Houston

QC Sample Results

Client: Messer LLC
Project/Site: Messer Gas ASU Permit Renewal 3-21-24

Job ID: 860-70454-1

Method: SM 2120B - Color, Colorimetric

Lab Sample ID: MB 860-151765/3
Matrix: Water
Analysis Batch: 151765

Client Sample ID: Method Blank
Prep Type: Total/NA

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Color, Apparent	5.0	U	5.0	5.0	Color Units			03/22/24 19:15	1
Color, True	5.0	U	5.0	5.0	Color Units			03/22/24 19:15	1
pH	na		0.10	0.10	S.U.			03/22/24 19:15	1

Method: SM 2320B - Alkalinity

Lab Sample ID: MB 860-151592/34
Matrix: Water
Analysis Batch: 151592

Client Sample ID: Method Blank
Prep Type: Total/NA

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Alkalinity	4.0	U	4.0	4.0	mg/L			03/25/24 22:44	1
Bicarbonate Alkalinity as CaCO3	4.0	U	4.0	4.0	mg/L			03/25/24 22:44	1
Carbonate Alkalinity as CaCO3	4.0	U	4.0	4.0	mg/L			03/25/24 22:44	1
Hydroxide Alkalinity	4.0	U	4.0	4.0	mg/L			03/25/24 22:44	1
Phenolphthalein Alkalinity	4.0	U	4.0	4.0	mg/L			03/25/24 22:44	1

Lab Sample ID: LCS 860-151592/35
Matrix: Water
Analysis Batch: 151592

Client Sample ID: Lab Control Sample
Prep Type: Total/NA

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits
Alkalinity	250	242		mg/L		97	85 - 115

Lab Sample ID: LCSD 860-151592/36
Matrix: Water
Analysis Batch: 151592

Client Sample ID: Lab Control Sample Dup
Prep Type: Total/NA

Analyte	Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec Limits	RPD	RPD Limit
Alkalinity	250	246		mg/L		98	85 - 115	2	20

Lab Sample ID: 860-70454-1 DU
Matrix: Water
Analysis Batch: 151592

Client Sample ID: Outfall 001
Prep Type: Total/NA

Analyte	Sample Result	Sample Qualifier	DU Result	DU Qualifier	Unit	D	RPD	RPD Limit
Alkalinity	150		142		mg/L		9	20
Bicarbonate Alkalinity as CaCO3	150		142		mg/L		9	20
Carbonate Alkalinity as CaCO3	4.0	U	4.0	U	mg/L		NC	20
Hydroxide Alkalinity	4.0	U	4.0	U	mg/L		NC	20
Phenolphthalein Alkalinity	4.0	U	4.0	U	mg/L		NC	20

Method: SM 2540C - Solids, Total Dissolved (TDS)

Lab Sample ID: MB 860-151649/1
Matrix: Water
Analysis Batch: 151649

Client Sample ID: Method Blank
Prep Type: Total/NA

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Total Dissolved Solids	5.0	U	5.0	5.0	mg/L			03/26/24 12:58	1

Eurofins Houston

QC Sample Results

Client: Messer LLC
Project/Site: Messer Gas ASU Permit Renewal 3-21-24

Job ID: 860-70454-1

Method: SM 2540C - Solids, Total Dissolved (TDS) (Continued)

Lab Sample ID: LCS 860-151649/2

Matrix: Water

Analysis Batch: 151649

Client Sample ID: Lab Control Sample

Prep Type: Total/NA

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits
Total Dissolved Solids	1000	1010		mg/L		101	80 - 120

Lab Sample ID: LCSD 860-151649/3

Matrix: Water

Analysis Batch: 151649

Client Sample ID: Lab Control Sample Dup

Prep Type: Total/NA

Analyte	Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec Limits	RPD	RPD Limit
Total Dissolved Solids	1000	1010		mg/L		101	80 - 120	0	10

Lab Sample ID: LLCS 860-151649/4

Matrix: Water

Analysis Batch: 151649

Client Sample ID: Lab Control Sample

Prep Type: Total/NA

Analyte	Spike Added	LLCS Result	LLCS Qualifier	Unit	D	%Rec	%Rec Limits
Total Dissolved Solids	5.00	6.50		mg/L		130	50 - 150

Method: SM 2540D - Solids, Total Suspended (TSS)

Lab Sample ID: MB 860-151677/1

Matrix: Water

Analysis Batch: 151677

Client Sample ID: Method Blank

Prep Type: Total/NA

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Total Suspended Solids	4.0	U	4.0	4.0	mg/L			03/26/24 15:02	1

Lab Sample ID: LCS 860-151677/2

Matrix: Water

Analysis Batch: 151677

Client Sample ID: Lab Control Sample

Prep Type: Total/NA

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits
Total Suspended Solids	100	111		mg/L		111	80 - 120

Lab Sample ID: LCSD 860-151677/3

Matrix: Water

Analysis Batch: 151677

Client Sample ID: Lab Control Sample Dup

Prep Type: Total/NA

Analyte	Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec Limits	RPD	RPD Limit
Total Suspended Solids	100	111		mg/L		111	80 - 120	0	10

Method: SM 4500 Cl G - Chlorine, Residual

Lab Sample ID: MB 860-151472/3

Matrix: Water

Analysis Batch: 151472

Client Sample ID: Method Blank

Prep Type: Total/NA

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Chlorine, Total Residual	0.050	U	0.050	0.050	mg/L			03/25/24 14:46	1

Eurofins Houston

QC Sample Results

Client: Messer LLC
Project/Site: Messer Gas ASU Permit Renewal 3-21-24

Job ID: 860-70454-1

Method: SM 4500 Cl G - Chlorine, Residual (Continued)

Lab Sample ID: LCS 860-151472/4
Matrix: Water
Analysis Batch: 151472

Client Sample ID: Lab Control Sample
Prep Type: Total/NA

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits
Chlorine, Total Residual	0.250	0.270		mg/L		108	85 - 115

Lab Sample ID: LCSD 860-151472/5
Matrix: Water
Analysis Batch: 151472

Client Sample ID: Lab Control Sample Dup
Prep Type: Total/NA

Analyte	Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec Limits	RPD	RPD Limit
Chlorine, Total Residual	0.250	0.257		mg/L		103	85 - 115	5	20

Method: SM 4500 S2 D - Sulfide, Total

Lab Sample ID: MB 860-151211/3
Matrix: Water
Analysis Batch: 151211

Client Sample ID: Method Blank
Prep Type: Total/NA

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Sulfide	0.040	U	0.10	0.040	mg/L			03/22/24 16:04	1

Lab Sample ID: LCS 860-151211/4
Matrix: Water
Analysis Batch: 151211

Client Sample ID: Lab Control Sample
Prep Type: Total/NA

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits
Sulfide	1.00	1.05		mg/L		105	90 - 110

Lab Sample ID: LCSD 860-151211/5
Matrix: Water
Analysis Batch: 151211

Client Sample ID: Lab Control Sample Dup
Prep Type: Total/NA

Analyte	Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec Limits	RPD	RPD Limit
Sulfide	1.00	1.04		mg/L		104	90 - 110	0	20

Method: SM 4500 SO3 B - Sulfite

Lab Sample ID: MB 860-151506/1
Matrix: Water
Analysis Batch: 151506

Client Sample ID: Method Blank
Prep Type: Total/NA

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Sulfite	5.0	U	5.0	5.0	mg/L			03/25/24 16:54	1

Lab Sample ID: LCS 860-151506/2
Matrix: Water
Analysis Batch: 151506

Client Sample ID: Lab Control Sample
Prep Type: Total/NA

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits
Sulfite	10.0	9.00		mg/L		90	80 - 120

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QC Sample Results

Client: Messer LLC
Project/Site: Messer Gas ASU Permit Renewal 3-21-24

Job ID: 860-70454-1

Method: SM 4500 SO3 B - Sulfite (Continued)

Lab Sample ID: LCSD 860-151506/3
Matrix: Water
Analysis Batch: 151506

Client Sample ID: Lab Control Sample Dup
Prep Type: Total/NA

Analyte	Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec Limits	RPD	RPD Limit
Sulfite	10.0	9.00		mg/L		90	80 - 120	0	20

Method: SM 5210B - BOD, 5-Day

Lab Sample ID: SCB 860-152548/2
Matrix: Water
Analysis Batch: 152548

Client Sample ID: Method Blank
Prep Type: Total/NA

Analyte	SCB Result	SCB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Biochemical Oxygen Demand	0.855		0.0000020	0.0000020	mg/L			03/22/24 15:38	1

Lab Sample ID: USB 860-152548/1
Matrix: Water
Analysis Batch: 152548

Client Sample ID: Method Blank
Prep Type: Total/NA

Analyte	USB Result	USB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Biochemical Oxygen Demand	0.0800		0.0000020	0.0000020	mg/L			03/22/24 15:36	1

Lab Sample ID: LCS 860-152548/3
Matrix: Water
Analysis Batch: 152548

Client Sample ID: Lab Control Sample
Prep Type: Total/NA

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits
Biochemical Oxygen Demand	198	183		mg/L		92	85 - 115

Method: SM 5310C - TOC

Lab Sample ID: MB 860-152393/11
Matrix: Water
Analysis Batch: 152393

Client Sample ID: Method Blank
Prep Type: Total/NA

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Total Organic Carbon	0.50	U	1.0	0.50	mg/L			03/29/24 02:59	1

Lab Sample ID: LCS 860-152393/12
Matrix: Water
Analysis Batch: 152393

Client Sample ID: Lab Control Sample
Prep Type: Total/NA

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits
Total Organic Carbon	5.00	5.26		mg/L		105	90 - 110

Lab Sample ID: LCSD 860-152393/13
Matrix: Water
Analysis Batch: 152393

Client Sample ID: Lab Control Sample Dup
Prep Type: Total/NA

Analyte	Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec Limits	RPD	RPD Limit
Total Organic Carbon	5.00	5.32		mg/L		106	90 - 110	1	15

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QC Sample Results

Client: Messer LLC
Project/Site: Messer Gas ASU Permit Renewal 3-21-24

Job ID: 860-70454-1

Method: SM 5310C - TOC (Continued)

Lab Sample ID: LLCS 860-152393/14
Matrix: Water
Analysis Batch: 152393

Client Sample ID: Lab Control Sample
Prep Type: Total/NA

Analyte	Spike Added	LLCS Result	LLCS Qualifier	Unit	D	%Rec	%Rec Limits
Total Organic Carbon	1.00	0.997	J	mg/L		100	50 - 150

Method: SM5210B CBOD - Carbonaceous BOD, 5 Day

Lab Sample ID: SCB 860-151940/2
Matrix: Water
Analysis Batch: 151940

Client Sample ID: Method Blank
Prep Type: Total/NA

Analyte	SCB Result	SCB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Carbonaceous Biochemical Oxygen Demand	0.900		0.0000020	0.0000020	mg/L			03/22/24 18:36	1

Lab Sample ID: USB 860-151940/1
Matrix: Water
Analysis Batch: 151940

Client Sample ID: Method Blank
Prep Type: Total/NA

Analyte	USB Result	USB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Carbonaceous Biochemical Oxygen Demand	0.0000020	U	0.0000020	0.0000020	mg/L			03/22/24 18:33	1

Lab Sample ID: LCS 860-151940/3
Matrix: Water
Analysis Batch: 151940

Client Sample ID: Lab Control Sample
Prep Type: Total/NA

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits
Carbonaceous Biochemical Oxygen Demand	198	174		mg/L		88	85 - 115

QC Association Summary

Client: Messer LLC
Project/Site: Messer Gas ASU Permit Renewal 3-21-24

Job ID: 860-70454-1

GC/MS VOA

Analysis Batch: 151135

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
860-70454-1	Outfall 001	Total/NA	Water	624.1	
MB 860-151135/18	Method Blank	Total/NA	Water	624.1	
LCS 860-151135/1011	Lab Control Sample	Total/NA	Water	624.1	
LCSD 860-151135/12	Lab Control Sample Dup	Total/NA	Water	624.1	

GC/MS Semi VOA

Prep Batch: 151704

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
860-70454-1	Outfall 001	Total/NA	Water	625	
MB 860-151704/1-A	Method Blank	Total/NA	Water	625	
LCS 860-151704/2-A	Lab Control Sample	Total/NA	Water	625	
LCSD 860-151704/3-A	Lab Control Sample Dup	Total/NA	Water	625	

Analysis Batch: 151846

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
860-70454-1	Outfall 001	Total/NA	Water	625.1	151704
MB 860-151704/1-A	Method Blank	Total/NA	Water	625.1	151704
LCS 860-151704/2-A	Lab Control Sample	Total/NA	Water	625.1	151704
LCSD 860-151704/3-A	Lab Control Sample Dup	Total/NA	Water	625.1	151704

Prep Batch: 152370

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
860-70454-1 - RE	Outfall 001	Total/NA	Water	625	
MB 860-152370/1-A	Method Blank	Total/NA	Water	625	
LCS 860-152370/2-A	Lab Control Sample	Total/NA	Water	625	
LCSD 860-152370/3-A	Lab Control Sample Dup	Total/NA	Water	625	

Analysis Batch: 152604

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
MB 860-152370/1-A	Method Blank	Total/NA	Water	625.1	152370
LCS 860-152370/2-A	Lab Control Sample	Total/NA	Water	625.1	152370
LCSD 860-152370/3-A	Lab Control Sample Dup	Total/NA	Water	625.1	152370

Analysis Batch: 152789

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
860-70454-1 - RE	Outfall 001	Total/NA	Water	625.1	152370

HPLC/IC

Analysis Batch: 151005

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
860-70454-1	Outfall 001	Total/NA	Water	300.0	
MB 860-151005/3	Method Blank	Total/NA	Water	300.0	
MB 860-151005/60	Method Blank	Total/NA	Water	300.0	
LCS 860-151005/61	Lab Control Sample	Total/NA	Water	300.0	
LCSD 860-151005/62	Lab Control Sample Dup	Total/NA	Water	300.0	
LLCS 860-151005/7	Lab Control Sample	Total/NA	Water	300.0	
860-70454-1 MS	Outfall 001	Total/NA	Water	300.0	
860-70454-1 MSD	Outfall 001	Total/NA	Water	300.0	

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QC Association Summary

Client: Messer LLC
Project/Site: Messer Gas ASU Permit Renewal 3-21-24

Job ID: 860-70454-1

HPLC/IC

Analysis Batch: 151006

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
860-70454-1	Outfall 001	Total/NA	Water	300.0	
MB 860-151006/3	Method Blank	Total/NA	Water	300.0	
MB 860-151006/60	Method Blank	Total/NA	Water	300.0	
LCS 860-151006/61	Lab Control Sample	Total/NA	Water	300.0	
LCSD 860-151006/62	Lab Control Sample Dup	Total/NA	Water	300.0	
LLCS 860-151006/6	Lab Control Sample	Total/NA	Water	300.0	
860-70454-1 MS	Outfall 001	Total/NA	Water	300.0	
860-70454-1 MSD	Outfall 001	Total/NA	Water	300.0	

Metals

Prep Batch: 152111

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
860-70454-1	Outfall 001	Total Recoverable	Water	200.8	
MB 860-152111/1-A	Method Blank	Total Recoverable	Water	200.8	
LCS 860-152111/2-A	Lab Control Sample	Total Recoverable	Water	200.8	
LCSD 860-152111/3-A	Lab Control Sample Dup	Total Recoverable	Water	200.8	

Analysis Batch: 152235

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
860-70454-1	Outfall 001	Total Recoverable	Water	200.8	152111
860-70454-1	Outfall 001	Total Recoverable	Water	200.8	152111
MB 860-152111/1-A	Method Blank	Total Recoverable	Water	200.8	152111
LCS 860-152111/2-A	Lab Control Sample	Total Recoverable	Water	200.8	152111
LCSD 860-152111/3-A	Lab Control Sample Dup	Total Recoverable	Water	200.8	152111

Analysis Batch: 152895

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
860-70454-1	Outfall 001	Total Recoverable	Water	200.8	152111
MB 860-152111/1-A	Method Blank	Total Recoverable	Water	200.8	152111
LCS 860-152111/2-A	Lab Control Sample	Total Recoverable	Water	200.8	152111
LCSD 860-152111/3-A	Lab Control Sample Dup	Total Recoverable	Water	200.8	152111

Prep Batch: 665799

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
860-70454-1	Outfall 001	Total/NA	Water	1631E	
MB 400-665799/3-A	Method Blank	Total/NA	Water	1631E	
LCS 400-665799/4-A	Lab Control Sample	Total/NA	Water	1631E	
LCSD 400-665799/5-A	Lab Control Sample Dup	Total/NA	Water	1631E	

Analysis Batch: 665859

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
860-70454-1	Outfall 001	Total/NA	Water	1631E	665799
MB 400-665799/3-A	Method Blank	Total/NA	Water	1631E	665799
LCS 400-665799/4-A	Lab Control Sample	Total/NA	Water	1631E	665799
LCSD 400-665799/5-A	Lab Control Sample Dup	Total/NA	Water	1631E	665799

General Chemistry

Analysis Batch: 151042

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
860-70454-1	Outfall 001	Total/NA	Water	7196A	

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QC Association Summary

Client: Messer LLC
Project/Site: Messer Gas ASU Permit Renewal 3-21-24

Job ID: 860-70454-1

General Chemistry (Continued)

Analysis Batch: 151042 (Continued)

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
MB 860-151042/3	Method Blank	Total/NA	Water	7196A	
LCS 860-151042/4	Lab Control Sample	Total/NA	Water	7196A	
LCSD 860-151042/5	Lab Control Sample Dup	Total/NA	Water	7196A	
860-70454-1 MS	Outfall 001	Total/NA	Water	7196A	
860-70454-1 MSD	Outfall 001	Total/NA	Water	7196A	

Analysis Batch: 151044

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
860-70454-1	Outfall 001	Total/NA	Water	Nitrogen,Org	

Analysis Batch: 151048

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
860-70454-1	Outfall 001	Total/NA	Water	7196A	

Analysis Batch: 151211

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
860-70454-1	Outfall 001	Total/NA	Water	SM 4500 S2 D	
MB 860-151211/3	Method Blank	Total/NA	Water	SM 4500 S2 D	
LCS 860-151211/4	Lab Control Sample	Total/NA	Water	SM 4500 S2 D	
LCSD 860-151211/5	Lab Control Sample Dup	Total/NA	Water	SM 4500 S2 D	

Prep Batch: 151213

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
860-70454-1	Outfall 001	Total/NA	Water	BOD Prep	

Prep Batch: 151247

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
860-70454-1	Outfall 001	Total/NA	Water	BOD Prep	

Analysis Batch: 151472

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
860-70454-1	Outfall 001	Total/NA	Water	SM 4500 Cl G	
MB 860-151472/3	Method Blank	Total/NA	Water	SM 4500 Cl G	
LCS 860-151472/4	Lab Control Sample	Total/NA	Water	SM 4500 Cl G	
LCSD 860-151472/5	Lab Control Sample Dup	Total/NA	Water	SM 4500 Cl G	

Analysis Batch: 151505

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
860-70454-1	Outfall 001	Total/NA	Water	360.1	

Analysis Batch: 151506

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
860-70454-1	Outfall 001	Total/NA	Water	SM 4500 SO3 B	
MB 860-151506/1	Method Blank	Total/NA	Water	SM 4500 SO3 B	
LCS 860-151506/2	Lab Control Sample	Total/NA	Water	SM 4500 SO3 B	
LCSD 860-151506/3	Lab Control Sample Dup	Total/NA	Water	SM 4500 SO3 B	

Analysis Batch: 151592

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
860-70454-1	Outfall 001	Total/NA	Water	SM 2320B	
MB 860-151592/34	Method Blank	Total/NA	Water	SM 2320B	

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QC Association Summary

Client: Messer LLC
Project/Site: Messer Gas ASU Permit Renewal 3-21-24

Job ID: 860-70454-1

General Chemistry (Continued)

Analysis Batch: 151592 (Continued)

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
LCS 860-151592/35	Lab Control Sample	Total/NA	Water	SM 2320B	
LCSD 860-151592/36	Lab Control Sample Dup	Total/NA	Water	SM 2320B	
860-70454-1 DU	Outfall 001	Total/NA	Water	SM 2320B	

Analysis Batch: 151649

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
860-70454-1	Outfall 001	Total/NA	Water	SM 2540C	
MB 860-151649/1	Method Blank	Total/NA	Water	SM 2540C	
LCS 860-151649/2	Lab Control Sample	Total/NA	Water	SM 2540C	
LCSD 860-151649/3	Lab Control Sample Dup	Total/NA	Water	SM 2540C	
LLCS 860-151649/4	Lab Control Sample	Total/NA	Water	SM 2540C	

Analysis Batch: 151677

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
860-70454-1	Outfall 001	Total/NA	Water	SM 2540D	
MB 860-151677/1	Method Blank	Total/NA	Water	SM 2540D	
LCS 860-151677/2	Lab Control Sample	Total/NA	Water	SM 2540D	
LCSD 860-151677/3	Lab Control Sample Dup	Total/NA	Water	SM 2540D	

Prep Batch: 151764

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
860-70454-1	Outfall 001	Total/NA	Water	351.2	
MB 860-151764/32-A	Method Blank	Total/NA	Water	351.2	
MB 860-151764/4-A	Method Blank	Total/NA	Water	351.2	
LCS 860-151764/33-A	Lab Control Sample	Total/NA	Water	351.2	
LCSD 860-151764/34-A	Lab Control Sample Dup	Total/NA	Water	351.2	
LLCS 860-151764/5-A	Lab Control Sample	Total/NA	Water	351.2	

Analysis Batch: 151765

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
860-70454-1	Outfall 001	Total/NA	Water	SM 2120B	
MB 860-151765/3	Method Blank	Total/NA	Water	SM 2120B	
LCS 860-151765/4	Lab Control Sample	Total/NA	Water	SM 2120B	
LCSD 860-151765/5	Lab Control Sample Dup	Total/NA	Water	SM 2120B	

Analysis Batch: 151920

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
860-70454-1	Outfall 001	Total/NA	Water	1664B	
MB 860-151920/1	Method Blank	Total/NA	Water	1664B	
LCS 860-151920/2	Lab Control Sample	Total/NA	Water	1664B	
LCSD 860-151920/3	Lab Control Sample Dup	Total/NA	Water	1664B	

Analysis Batch: 151940

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
860-70454-1	Outfall 001	Total/NA	Water	SM5210B CBOD	151247
SCB 860-151940/2	Method Blank	Total/NA	Water	SM5210B CBOD	
USB 860-151940/1	Method Blank	Total/NA	Water	SM5210B CBOD	
LCS 860-151940/3	Lab Control Sample	Total/NA	Water	SM5210B CBOD	

Eurofins Houston

QC Association Summary

Client: Messer LLC

Job ID: 860-70454-1

Project/Site: Messer Gas ASU Permit Renewal 3-21-24

General Chemistry

Analysis Batch: 152217

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
860-70454-1	Outfall 001	Total/NA	Water	351.2	151764
MB 860-151764/32-A	Method Blank	Total/NA	Water	351.2	151764
MB 860-151764/4-A	Method Blank	Total/NA	Water	351.2	151764
LCS 860-151764/33-A	Lab Control Sample	Total/NA	Water	351.2	151764
LCSD 860-151764/34-A	Lab Control Sample Dup	Total/NA	Water	351.2	151764
LLCS 860-151764/5-A	Lab Control Sample	Total/NA	Water	351.2	151764

Analysis Batch: 152223

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
860-70454-1	Outfall 001	Total/NA	Water	350.1	
MB 860-152223/66	Method Blank	Total/NA	Water	350.1	
LCS 860-152223/67	Lab Control Sample	Total/NA	Water	350.1	
LCSD 860-152223/68	Lab Control Sample Dup	Total/NA	Water	350.1	

Analysis Batch: 152393

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
860-70454-1	Outfall 001	Total/NA	Water	SM 5310C	
MB 860-152393/11	Method Blank	Total/NA	Water	SM 5310C	
LCS 860-152393/12	Lab Control Sample	Total/NA	Water	SM 5310C	
LCSD 860-152393/13	Lab Control Sample Dup	Total/NA	Water	SM 5310C	
LLCS 860-152393/14	Lab Control Sample	Total/NA	Water	SM 5310C	

Analysis Batch: 152548

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
860-70454-1	Outfall 001	Total/NA	Water	SM 5210B	151213
SCB 860-152548/2	Method Blank	Total/NA	Water	SM 5210B	
USB 860-152548/1	Method Blank	Total/NA	Water	SM 5210B	
LCS 860-152548/3	Lab Control Sample	Total/NA	Water	SM 5210B	

Analysis Batch: 152732

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
860-70454-1	Outfall 001	Total/NA	Water	8000	
MB 860-152732/3	Method Blank	Total/NA	Water	8000	
LCS 860-152732/4	Lab Control Sample	Total/NA	Water	8000	

Analysis Batch: 152937

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
MB 860-152937/16	Method Blank	Total/NA	Water	365.1	
LCS 860-152937/17	Lab Control Sample	Total/NA	Water	365.1	
LCSD 860-152937/18	Lab Control Sample Dup	Total/NA	Water	365.1	
860-70454-1 MS	Outfall 001	Total/NA	Water	365.1	
860-70454-1 MSD	Outfall 001	Total/NA	Water	365.1	

Analysis Batch: 153014

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
860-70454-1	Outfall 001	Total/NA	Water	365.1	
MB 860-153014/46	Method Blank	Total/NA	Water	365.1	
LCS 860-153014/47	Lab Control Sample	Total/NA	Water	365.1	
LCSD 860-153014/48	Lab Control Sample Dup	Total/NA	Water	365.1	

Eurofins Houston

QC Association Summary

Client: Messer LLC
Project/Site: Messer Gas ASU Permit Renewal 3-21-24

Job ID: 860-70454-1

General Chemistry

Analysis Batch: 489850

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
860-70454-1	Outfall 001	Total/NA	Water	OIA-1677	
MB 410-489850/17	Method Blank	Total/NA	Water	OIA-1677	
LCS 410-489850/16	Lab Control Sample	Total/NA	Water	OIA-1677	

Preliminary Data

Lab Chronicle

Client: Messer LLC

Job ID: 860-70454-1

Project/Site: Messer Gas ASU Permit Renewal 3-21-24

Client Sample ID: Outfall 001

Lab Sample ID: 860-70454-1

Date Collected: 03/21/24 10:00

Matrix: Water

Date Received: 03/21/24 15:21

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	624.1		1	5 mL	5 mL	151135	03/22/24 18:03	AN	EET HOU
Total/NA	Prep	625			1000 mL	1.00 mL	151704	03/26/24 16:25	DR	EET HOU
Total/NA	Analysis	625.1		1	1 mL	1 mL	151846	03/27/24 19:50	PXS	EET HOU
Total/NA	Prep	625	RE		1000 mL	1.00 mL	152370	03/29/24 12:29	DR	EET HOU
Total/NA	Analysis	625.1	RE	1	1 mL	1 mL	152789	04/02/24 16:20	PXS	EET HOU
Total/NA	Analysis	300.0		1			151005	03/22/24 07:56	A1S	EET HOU
Total/NA	Analysis	300.0		1			151006	03/22/24 07:56	A1S	EET HOU
Total/NA	Prep	1631E			40 mL	40 mL	665799	03/25/24 13:48	VLC	EET PEN
							Completed:	03/26/24 08:50 ¹		
Total/NA	Analysis	1631E		1			665859	03/26/24 13:32	VLC	EET PEN
Total Recoverable	Prep	200.8			50 mL	50 mL	152111	03/28/24 11:30	MD	EET HOU
Total Recoverable	Analysis	200.8		2			152895	04/02/24 11:57	DP	EET HOU
Total Recoverable	Prep	200.8			50 mL	50 mL	152111	03/28/24 11:30	MD	EET HOU
Total Recoverable	Analysis	200.8		1			152235	03/28/24 20:23	DP	EET HOU
Total Recoverable	Prep	200.8			50 mL	50 mL	152111	03/28/24 11:30	MD	EET HOU
Total Recoverable	Analysis	200.8		10			152235	03/28/24 20:26	DP	EET HOU
Total/NA	Analysis	1664B		1	1000 mL	1000 mL	151920	03/27/24 14:23	TB	EET HOU
Total/NA	Analysis	350.1		1	10 mL	10 mL	152223	03/27/24 15:00	ADL	EET HOU
Total/NA	Prep	351.2			20 mL	20 mL	151764	03/26/24 20:10	SA	EET HOU
Total/NA	Analysis	351.2		1			152217	03/28/24 11:16	LD	EET HOU
Total/NA	Analysis	360.1		1			151505	03/25/24 16:54	HN	EET HOU
Total/NA	Analysis	365.1		5	10 mL	10 mL	153014	04/03/24 00:17	HN	EET HOU
Total/NA	Analysis	7196A		1	25 mL	25 mL	151042	03/21/24 19:20	SCI	EET HOU
Total/NA	Analysis	7196A		1			151048	04/08/24 14:54	SC	EET HOU
Total/NA	Analysis	8000		1	2 mL	2 mL	152732	04/01/24 19:18	HN	EET HOU
Total/NA	Analysis	Nitrogen,Org		1			151044	03/29/24 15:58	SC	EET HOU
Total/NA	Analysis	OIA-1677		1			489850	04/02/24 15:55	UJE2	ELLE
Total/NA	Analysis	SM 2120B		2	50 mL	50 mL	151765	03/22/24 19:15	YG	EET HOU
Total/NA	Analysis	SM 2320B		1			151592	03/25/24 23:08	SC	EET HOU
Total/NA	Analysis	SM 2540C		1	50 mL	200 mL	151649	03/26/24 12:59	SA	EET HOU
Total/NA	Analysis	SM 2540D		1	1000 mL	1000 mL	151677	03/26/24 15:02	FN	EET HOU
Total/NA	Analysis	SM 4500 CI G		2	10 mL	10 mL	151472	03/25/24 14:46	SCI	EET HOU
Total/NA	Analysis	SM 4500 S2 D		1	7.5 mL	7.5 mL	151211	03/22/24 16:04	SCI	EET HOU
Total/NA	Analysis	SM 4500 SO3 B		1	50 mL	50 mL	151506	03/25/24 16:55	SCI	EET HOU
Total/NA	Prep	BOD Prep					151213	03/22/24 13:00	ALL	EET HOU
Total/NA	Analysis	SM 5210B		1	50 mL	300 mL	152548	03/22/24 16:06	HN	EET HOU
Total/NA	Analysis	SM 5310C		1	40 mL	40 mL	152393	03/29/24 04:14	YG	EET HOU
Total/NA	Prep	BOD Prep					151247	03/22/24 18:32	ALL	EET HOU
Total/NA	Analysis	SM5210B CBOD		1	200 mL	300 mL	151940	03/22/24 19:14	HN	EET HOU

¹ This procedure uses a method stipulated length of time for the process. Both start and end times are displayed.

Eurofins Houston

Lab Chronicle

Client: Messer LLC
Project/Site: Messer Gas ASU Permit Renewal 3-21-24

Job ID: 860-70454-1

Laboratory References:
EET HOU = Eurofins Houston, 4145 Greenbriar Dr, Stafford, TX 77477, TEL (281)240-4200
EET PEN = Eurofins Pensacola, 3355 McLemore Drive, Pensacola, FL 32514, TEL (850)474-1001
ELLE = Eurofins Lancaster Laboratories Environment Testing, LLC, 2425 New Holland Pike, Lancaster, PA 17601, TEL (717)656-2300

Preliminary Data

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Accreditation/Certification Summary

Client: Messer LLC

Job ID: 860-70454-1

Project/Site: Messer Gas ASU Permit Renewal 3-21-24

Laboratory: Eurofins Houston

All accreditations/certifications held by this laboratory are listed. Not all accreditations/certifications are applicable to this report.

Authority	Program	Identification Number	Expiration Date
Arkansas DEQ	State	88-00759	08-03-24
Florida	NELAP	E871002	06-30-24
Louisiana (All)	NELAP	03054	06-30-24
Oklahoma	NELAP	1306	08-31-24
Oklahoma	State	2023-139	08-31-24
Texas	NELAP	T104704215	06-30-24
Texas	TCEQ Water Supply	T104704215	12-28-25
USDA	US Federal Programs	525-23-79-79507	03-20-26

Laboratory: Eurofins Lancaster Laboratories Environment Testing, LLC

All accreditations/certifications held by this laboratory are listed. Not all accreditations/certifications are applicable to this report.

Authority	Program	Identification Number	Expiration Date
A2LA	Dept. of Defense ELAP	0001.01	11-30-24
A2LA	ISO/IEC 17025	0001.01	11-30-24
Alabama	State	43200	01-31-25
Alaska	State	PA00009	06-30-24
Alaska (UST)	State	17-027	02-28-25
Arizona	State	AZ0780	03-12-25
Arkansas DEQ	State	88-00660	08-09-24
California	State	2792	11-30-24
Colorado	State	PA00009	06-30-24
Connecticut	State	PH-0746	06-30-25
DE Haz. Subst. Cleanup Act (HSCA)	State	019-006 (PA cert)	01-31-25
Delaware (DW)	State	N/A	01-31-25
Florida	NELAP	E87997	06-30-25
Georgia (DW)	State	C048	01-31-25
Hawaii	State	N/A	01-31-25
Illinois	NELAP	200027	01-31-25
Iowa	State	361	03-01-24 *
Kansas	NELAP	E-10151	10-31-24
Kentucky (DW)	State	KY90088	12-31-24
Kentucky (UST)	State	0001.01	11-30-24
Kentucky (WW)	State	KY90088	12-31-23 *
Louisiana (All)	NELAP	02055	06-30-24
Maine	State	2019012	03-12-25
Maryland	State	100	06-30-24
Massachusetts	State	M-PA009	06-30-24
Michigan	State	9930	01-31-25
Minnesota	NELAP	042-999-487	12-31-24
Mississippi	State	023	01-31-25
Missouri	State	450	01-31-25
Montana (DW)	State	0098	01-01-25
Nebraska	State	NE-OS-32-17	01-31-25
New Hampshire	NELAP	2730	01-10-25
New Jersey	NELAP	PA011	06-30-24
New York	NELAP	10670	04-01-25
North Carolina (DW)	State	42705	07-31-24
North Carolina (WW/SW)	State	521	12-31-24
Oklahoma	NELAP	9804	08-31-24

* Accreditation/Certification renewal pending - accreditation/certification considered valid.

Eurofins Houston

Accreditation/Certification Summary

Client: Messer LLC

Job ID: 860-70454-1

Project/Site: Messer Gas ASU Permit Renewal 3-21-24

Laboratory: Eurofins Lancaster Laboratories Environment Testing, LLC (Continued)

All accreditations/certifications held by this laboratory are listed. Not all accreditations/certifications are applicable to this report.

Authority	Program	Identification Number	Expiration Date
Oregon	NELAP	PA200001	09-11-24
Pennsylvania	NELAP	36-00037	04-07-24
Quebec Ministry of Environment and Fight against Climate Change	PALA	507	09-16-24
Rhode Island	State	LAO00338	12-30-24
South Carolina	State	89002	01-31-24 *
Tennessee	State	02838	01-31-25
Texas	NELAP	T104704194-23-46	08-31-24
USDA	US Federal Programs	525-22-298-19481	10-25-25
Vermont	State	VT - 36037	10-28-24
Virginia	NELAP	460182	06-14-25
Washington	State	C457	04-11-24
West Virginia (DW)	State	9906 C	01-31-25
West Virginia DEP	State	055	07-31-24
Wyoming	State	8TMS-L	01-31-25
Wyoming (UST)	A2LA	0001.01	11-30-24

Laboratory: Eurofins Pensacola

All accreditations/certifications held by this laboratory are listed. Not all accreditations/certifications are applicable to this report.

Authority	Program	Identification Number	Expiration Date
Alabama	State	40150	06-30-24
ANAB	ISO/IEC 17025	L2471	02-22-26
Arkansas DEQ	State	88-00689	08-01-24
California	State	2510	06-30-24
Florida	NELAP	E81010	06-30-24
Georgia	State	E81010(FL)	06-30-24
Illinois	NELAP	200041	10-09-24
Kansas	NELAP	E-10253	10-31-24
Kentucky (UST)	State	53	06-30-24
Louisiana (All)	NELAP	30976	06-30-24
Louisiana (DW)	State	LA017	12-31-24
North Carolina (WW/SW)	State	314	12-31-24
Oklahoma	NELAP	9810	08-31-24
Pennsylvania	NELAP	68-00467	01-31-25
South Carolina	State	96026	06-30-24
Tennessee	State	TN02907	06-30-24
Texas	NELAP	T104704286	09-30-24
US Fish & Wildlife	US Federal Programs	A22340	06-30-24
USDA	US Federal Programs	FLGNV23001	01-08-26
USDA	US Federal Programs	P330-21-00056	05-17-24
Virginia	NELAP	460166	06-14-24
West Virginia DEP	State	136	03-31-24

* Accreditation/Certification renewal pending - accreditation/certification considered valid.

Eurofins Houston

Method Summary

Client: Messer LLC

Job ID: 860-70454-1

Project/Site: Messer Gas ASU Permit Renewal 3-21-24

Method	Method Description	Protocol	Laboratory
624.1	Volatile Organic Compounds (GC/MS)	EPA	EET HOU
625.1	Semivolatile Organic Compounds (GC/MS)	EPA	EET HOU
300.0	Anions, Ion Chromatography	EPA	EET HOU
1631E	Mercury, Low Level (CVAFS)	EPA	EET PEN
200.8	Metals (ICP/MS)	EPA	EET HOU
1664B	HEM and SGT-HEM	1664B	EET HOU
350.1	Nitrogen, Ammonia	EPA	EET HOU
351.2	Nitrogen, Total Kjeldahl	EPA	EET HOU
360.1	Oxygen, Dissolved	EPA	EET HOU
365.1	Phosphorus, Total	EPA	EET HOU
7196A	Chromium, Hexavalent	SW846	EET HOU
7196A	Chromium, Trivalent (Colorimetric)	SW846	EET HOU
8000	COD	Hach	EET HOU
Nitrogen,Org	Nitrogen, Organic	EPA	EET HOU
OIA-1677	Cyanide, Available (Flow Injection)	OI CORP	ELLE
SM 2120B	Color, Colorimetric	SM	EET HOU
SM 2320B	Alkalinity	SM	EET HOU
SM 2540C	Solids, Total Dissolved (TDS)	SM	EET HOU
SM 2540D	Solids, Total Suspended (TSS)	SM	EET HOU
SM 4500 Cl G	Chlorine, Residual	SM	EET HOU
SM 4500 S2 D	Sulfide, Total	SM	EET HOU
SM 4500 SO3 B	Sulfite	SM	EET HOU
SM 5210B	BOD, 5-Day	SM	EET HOU
SM 5310C	TOC	SM	EET HOU
SM5210B CBOD	Carbonaceous BOD, 5 Day	SM	EET HOU
1631E	Preparation, Mercury, Low Level	EPA	EET PEN
200.8	Preparation, Total Recoverable Metals	EPA	EET HOU
351.2	Nitrogen, Total Kjeldahl	EPA	EET HOU
625	Liquid-Liquid Extraction	EPA	EET HOU
BOD Prep	Preparation, BOD	SM	EET HOU

Protocol References:

1664B = EPA-821-98-002

EPA = US Environmental Protection Agency

Hach = Hach Company

OI CORP = OI Corporation Instrument Manual.

SM = "Standard Methods For The Examination Of Water And Wastewater"

SW846 = "Test Methods For Evaluating Solid Waste, Physical/Chemical Methods", Third Edition, November 1986 And Its Updates.

Laboratory References:

EET HOU = Eurofins Houston, 4145 Greenbriar Dr, Stafford, TX 77477, TEL (281)240-4200

EET PEN = Eurofins Pensacola, 3355 McLemore Drive, Pensacola, FL 32514, TEL (850)474-1001

ELLE = Eurofins Lancaster Laboratories Environment Testing, LLC, 2425 New Holland Pike, Lancaster, PA 17601, TEL (717)656-2300

Eurofins Houston

Sample Summary

Client: Messer LLC
Project/Site: Messer Gas ASU Permit Renewal 3-21-24

Job ID: 860-70454-1

Lab Sample ID	Client Sample ID	Matrix	Collected	Received
860-70454-1	Outfall 001	Water	03/21/24 10:00	03/21/24 15:21

Preliminary Data

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Chain of Custody Record

urofins

Figure 6

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Client Information (Sub Contract Lab)		Lab PM: Tigrett, Lance		Carrier Tracking No(s): 860-107405.1	
Client Contact: Shipping/Receiving		E-Mail: Lance.Tigrett@et.eurofinsus.com		Page: Page 1 of 1	
Company: Eurofins Environment Testing Southeast,		Phone:		Job #: 860-70454-1	
Address: 33355 McLemore Drive,		Accreditations Required (See note): NELAP - Texas		Preservation Codes: A - HCL B - NaOH C - Zn Acetate D - Nitric Acid E - NaHSO4 F - MeOH G - Amchlor H - Ascorbic Acid I - Ice J - DI Water K - EDTA L - EDA M - Hexane N - None O - AsNaO2 P - Na2O4S Q - Na2SO3 R - Na2SO3 S - H2SO4 T - TSP Dodecahydrate U - Acetone V - MCAA W - pH 4-5 Y - Trizma Z - other (specify) Other:	
City: Pensacola		Due Date Requested: 3/28/2024		Analysis Requested	
State, Zip: FL, 32514		TAT Requested (days):		Total Number of Containers	
Phone: 850-474-1001(Tel) 850-478-2671(Fax)		PO #:		Field Filtered Sample (Yes or No)	
Email: 850-474-1001(Tel) 850-478-2671(Fax)		WO #:		Perform MS/MSD (Yes or No)	
Project Name: Messer Gas ASU Permit Renewal 2024		Project #: 86006711		1631E/1631E Prep Mercury, Low Level (CVAFS)	
Site: Outfall 001 (860-70454-1)		SSOW#:		1631E/1631E Prep Mercury, Low Level (CVAFS)	
Sample Identification - Client ID (Lab ID)		Sample Date		Sample Time	
Outfall 001 (860-70454-1)		3/21/24		10:00 Central	
Sample Type (C=comp, G=grab)		Matrix (W=water, S=solid, O=water/soil)		Preservation Code	
Water		Water		Water	
Special Instructions/Note:		Total Number of Containers		Special Instructions/Note:	
2		2		2	
Sample Disposal (A fee may be assessed if samples are retained longer than 1 month)		Return To Client		Disposal By Lab	
Unconfirmed		Special Instructions/QC Requirements:		Months	
Deliverable Requested: I, II, III, IV, Other (specify)		Primary Deliverable Rank: 2		Special Instructions/QC Requirements:	
Empty Kit Relinquished by:		Date:		Method of Shipment:	
Relinquished by:		Date/Time:		Company	
Relinquished by:		Date/Time:		Company	
Relinquished by:		Date/Time:		Company	
Custody Seal No.:		Custody Seal No.:		Cooler Temperature(s) °C and Other Remarks:	
A Yes A No		A Yes A No		4.6°C	

Chain of Custody Record

[illegible]

Login Sample Receipt Checklist

Client: Messer LLC

Job Number: 860-70454-1

Login Number: 70454

List Number: 1

Creator: Torres, Sandra

List Source: Eurofins Houston

Question	Answer	Comment
Radioactivity wasn't checked or is \leq background as measured by a survey meter.	True	
The cooler's custody seal, if present, is intact.	True	
Sample custody seals, if present, are intact.	True	
The cooler or samples do not appear to have been compromised or tampered with.	True	
Samples were received on ice.	True	
Cooler Temperature is acceptable.	True	
Cooler Temperature is recorded.	True	5.0
COC is present.	True	
COC is filled out in ink and legible.	True	
COC is filled out with all pertinent information.	True	
Is the Field Sampler's name present on COC?	True	
There are no discrepancies between the containers received and the COC.	True	
Samples are received within Holding Time (excluding tests with immediate HTs)	True	
Sample containers have legible labels.	True	
Containers are not broken or leaking.	True	
Sample collection date/times are provided.	True	
Appropriate sample containers are used.	True	
Sample bottles are completely filled.	True	
Sample Preservation Verified.	True	
There is sufficient vol. for all requested analyses, incl. any requested MS/MSDs	True	
Containers requiring zero headspace have no headspace or bubble is $<6\text{mm}$ (1/4").	True	
Multiphasic samples are not present.	True	
Samples do not require splitting or compositing.	True	
Residual Chlorine Checked.	True	

Login Sample Receipt Checklist

Client: Messer LLC

Job Number: 860-70454-1

Login Number: 70454

List Source: Eurofins Lancaster Laboratories Environment Testing, LLC

List Number: 2

List Creation: 03/23/24 10:05 AM

Creator: Santiago, Nathaniel

Question	Answer	Comment
The cooler's custody seal is intact.	True	
The cooler or samples do not appear to have been compromised or tampered with.	True	
Samples were received on ice.	True	
Cooler Temperature acceptable, where thermal pres is required ($\leq 6^{\circ}\text{C}$, not frozen).	True	
Cooler Temperature is recorded.	True	
WV: Container Temp acceptable, where thermal pres is required ($\leq 6^{\circ}\text{C}$, not frozen).	N/A	
WV: Container Temperature is recorded.	N/A	
COC is present.	True	
COC is filled out in ink and legible.	True	
COC is filled out with all pertinent information.	True	
There are no discrepancies between the containers received and the COC.	True	
Sample containers have legible labels.	True	
Containers are not broken or leaking.	True	
Sample collection date/times are provided.	True	
Appropriate sample containers are used.	True	
Sample bottles are completely filled.	True	
There is sufficient vol. for all requested analyses.	True	
Is the Field Sampler's name present on COC?	False	Received project as a subcontract.
Sample custody seals are intact.	N/A	
VOA sample vials do not have headspace $> 6\text{mm}$ in diameter (none, if from WV)?	N/A	

Login Sample Receipt Checklist

Client: Messer LLC

Job Number: 860-70454-1

Login Number: 70454

List Number: 3

Creator: Roberts, Alexis J

List Source: Eurofins Pensacola

List Creation: 03/23/24 11:45 AM

Question	Answer	Comment
Radioactivity wasn't checked or is \leq background as measured by a survey meter.	N/A	
The cooler's custody seal, if present, is intact.	N/A	
Sample custody seals, if present, are intact.	N/A	
The cooler or samples do not appear to have been compromised or tampered with.	True	
Samples were received on ice.	True	
Cooler Temperature is acceptable.	True	
Cooler Temperature is recorded.	True	4.6°C IR8
COC is present.	True	
COC is filled out in ink and legible.	True	
COC is filled out with all pertinent information.	True	
Is the Field Sampler's name present on COC?	True	
There are no discrepancies between the containers received and the COC.	True	
Samples are received within Holding Time (excluding tests with immediate HTs)	True	
Sample containers have legible labels.	True	
Containers are not broken or leaking.	True	
Sample collection date/times are provided.	True	
Appropriate sample containers are used.	True	
Sample bottles are completely filled.	True	
Sample Preservation Verified.	N/A	
There is sufficient vol. for all requested analyses, incl. any requested MS/MSDs	True	
Containers requiring zero headspace have no headspace or bubble is $<6\text{mm}$ (1/4").	N/A	
Multiphasic samples are not present.	True	
Samples do not require splitting or compositing.	True	
Residual Chlorine Checked.	N/A	

ANALYTICAL REPORT

PREPARED FOR

Attn: Rami Qafisheh
Messer LLC

11605 Strang Rd.
La Porte, Texas 77571

Generated 4/19/2024 5:40:29 PM

JOB DESCRIPTION

Messer Gas ASU Permit Renewal 3-27-24

JOB NUMBER

860-70887-1

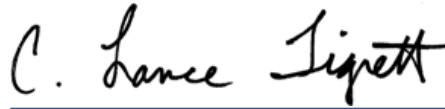
Eurofins Houston

Job Notes

This report may not be reproduced except in full, and with written approval from the laboratory. The results relate only to the samples tested. For questions please contact the Project Manager at the e-mail address or telephone number listed on this page.

Analytical test results meet all requirements of the associated regulatory program (i.e., NELAC (TNI), DoD, and ISO 17025) unless otherwise noted under the individual analysis.

Authorization



Generated
4/19/2024 5:40:29 PM

Authorized for release by
Lance Tigrett, Project Manager II
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Definitions/Glossary

Client: Messer LLC
Project/Site: Messer Gas ASU Permit Renewal 3-27-24

Job ID: 860-70887-1

Qualifiers

GC/MS VOA

Qualifier	Qualifier Description
J	Result is less than the RL but greater than or equal to the MDL and the concentration is an approximate value.
U	Indicates the analyte was analyzed for but not detected.

GC/MS Semi VOA

Qualifier	Qualifier Description
*-	LCS and/or LCSD is outside acceptance limits, low biased.
*+	LCS and/or LCSD is outside acceptance limits, high biased.
J	Result is less than the RL but greater than or equal to the MDL and the concentration is an approximate value.
S1-	Surrogate recovery exceeds control limits, low biased.
U	Indicates the analyte was analyzed for but not detected.

GC Semi VOA

Qualifier	Qualifier Description
U	Indicates the analyte was analyzed for but not detected.

HPLC/IC

Qualifier	Qualifier Description
H	Sample was prepped or analyzed beyond the specified holding time. This does not meet regulatory requirements.
J	Result is less than the RL but greater than or equal to the MDL and the concentration is an approximate value.
U	Indicates the analyte was analyzed for but not detected.

Metals

Qualifier	Qualifier Description
J	Result is less than the RL but greater than or equal to the MDL and the concentration is an approximate value.
U	Indicates the analyte was analyzed for but not detected.

General Chemistry

Qualifier	Qualifier Description
HF	Parameter with a holding time of 15 minutes. Test performed by laboratory at client's request. Sample was analyzed outside of hold time.
J	Result is less than the RL but greater than or equal to the MDL and the concentration is an approximate value.
U	Indicates the analyte was analyzed for but not detected.

Glossary

Abbreviation	These commonly used abbreviations may or may not be present in this report.
α	Listed under the "D" column to designate that the result is reported on a dry weight basis
%R	Percent Recovery
CFL	Contains Free Liquid
CFU	Colony Forming Unit
CNF	Contains No Free Liquid
DER	Duplicate Error Ratio (normalized absolute difference)
Dil Fac	Dilution Factor
DL	Detection Limit (DoD/DOE)
DL, RA, RE, IN	Indicates a Dilution, Re-analysis, Re-extraction, or additional Initial metals/anion analysis of the sample
DLC	Decision Level Concentration (Radiochemistry)
EDL	Estimated Detection Limit (Dioxin)
LOD	Limit of Detection (DoD/DOE)
LOQ	Limit of Quantitation (DoD/DOE)
MCL	EPA recommended "Maximum Contaminant Level"
MDA	Minimum Detectable Activity (Radiochemistry)
MDC	Minimum Detectable Concentration (Radiochemistry)
MDL	Method Detection Limit
ML	Minimum Level (Dioxin)
MPN	Most Probable Number
MQL	Method Quantitation Limit
NC	Not Calculated
ND	Not Detected at the reporting limit (or MDL or EDL if shown)

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Definitions/Glossary

Client: Messer LLC

Job ID: 860-70887-1

Project/Site: Messer Gas ASU Permit Renewal 3-27-24

Glossary (Continued)

Abbreviation	These commonly used abbreviations may or may not be present in this report.
NEG	Negative / Absent
POS	Positive / Present
PQL	Practical Quantitation Limit
PRES	Presumptive
QC	Quality Control
RER	Relative Error Ratio (Radiochemistry)
RL	Reporting Limit or Requested Limit (Radiochemistry)
RPD	Relative Percent Difference, a measure of the relative difference between two points
TEF	Toxicity Equivalent Factor (Dioxin)
TEQ	Toxicity Equivalent Quotient (Dioxin)
TNTC	Too Numerous To Count

Case Narrative

Client: Messer LLC
Project: Messer Gas ASU Permit Renewal 3-27-24

Job ID: 860-70887-1

Job ID: 860-70887-1

Eurofins Houston

Job Narrative 860-70887-1

Receipt

The sample was received on 3/27/2024 2:30 PM. Unless otherwise noted below, the sample arrived in good condition, and where required, properly preserved and on ice. The temperature of the cooler at receipt was 3.1° C.

GC/MS VOA

No analytical or quality issues were noted, other than those described in the Definitions/Glossary page.

GC/MS Semi VOA

Method 625.1: Six surrogates are used for this analysis. The laboratory's SOP allows one acid and one base of these surrogates to be outside acceptance criteria without performing re-extraction/re-analysis. The following sample(s) contained an allowable number of surrogate compounds outside limits. These results have been reported and qualified.

Method 625.1: The laboratory control sample and the laboratory control sample duplicate (LCS/LCSD) for preparation batch 860-152882 and analytical batch 860-153021 recovered outside control limits for the following analyte: Benzidine. Benzidine has been identified as a poor performing analyte when analyzed using this method; therefore, re-extraction/re-analysis was not performed. These results have been reported and qualified.

Method 625.1: The laboratory control sample duplicate (LCSD) for preparation batch 860-152882 and analytical batch 860-153021 recovered outside control limits for the following analyte: Di-n-octyl phthalate. This analyte was biased high in the LCSD and was not detected in the associated samples; therefore, the data have been reported.

No additional analytical or quality issues were noted, other than those described above or in the Definitions/Glossary page.

GC Semi VOA

No analytical or quality issues were noted, other than those described in the Definitions/Glossary page.

Metals

No analytical or quality issues were noted, other than those described in the Definitions/Glossary page.

General Chemistry

Method 300.0: The instrument blank for analytical batch 860-152429 contained Chloride greater than the method detection limit (MDL), and were not reanalyzed because results were greater than 10X the value found in the instrument blank/CCB. The data have been qualified and reported.

Method 300.0: The matrix spike / matrix spike duplicate (MS/MSD) recoveries for analytical batch 860-152429 were outside control limits for one or more analytes. See QC Sample Results for detail. Sample matrix interference and/or non-homogeneity are suspected because the associated laboratory control sample (LCS) recovery is within acceptance limits.

Method 300.0: The matrix spike / matrix spike duplicate (MS/MSD) recoveries for analytical batch 860-152429 were outside control limits. Sample matrix interference is suspected because the associated laboratory control sample (LCS) recovery was within acceptance limits.

Method 300.0: The matrix spike / matrix spike duplicate (MS/MSD) recoveries for analytical batch 860-152430 were outside control limits for one or more analytes. See QC Sample Results for detail. Sample matrix interference and/or non-homogeneity are suspected because the associated laboratory control sample (LCS) recovery is within acceptance limits.

Method SM 4500 Cl G: The matrix spike / matrix spike duplicate (MS/MSD) recoveries for analytical batch 860-152922 were outside control limits for one or more analytes. See QC Sample Results for detail. Sample matrix interference and/or non-homogeneity are suspected because the associated laboratory control sample (LCS) recovery is within acceptance limits.

Method SM 4500 S2 D: The matrix spike / matrix spike duplicate (MS/MSD) recoveries for analytical batch 860-153135 were outside control limits for one or more analytes. See QC Sample Results for detail. Sample matrix interference and/or non-homogeneity are suspected because the associated laboratory control sample (LCS) recovery is within acceptance limits.

Method 351.2: The matrix spike / matrix spike duplicate (MS/MSD) recoveries for preparation batch 860-152741 and analytical batch 860-153251 were outside control limits. Sample matrix interference is suspected because the associated laboratory control sample (LCS) recovery was within acceptance limits.

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Case Narrative

Client: Messer LLC
Project: Messer Gas ASU Permit Renewal 3-27-24

Job ID: 860-70887-1

Job ID: 860-70887-1 (Continued)

Eurofins Houston

Method 300.0: Reanalysis of the following sample was performed outside of the analytical holding time due to failure of the quality control parameters in the initial analysis : Outfall 001 (860-70887-1).

Method SM 5310C: The matrix spike / matrix spike duplicate (MS/MSD) recoveries for analytical batch 860-153498 were outside control limits for one or more analytes. See QC Sample Results for detail. Sample matrix interference and/or non-homogeneity are suspected because the associated laboratory control sample (LCS) recovery is within acceptance limits.

Method SM 5310C: The matrix spike / matrix spike duplicate (MS/MSD) recoveries for analytical batch 860-153920 were outside control limits for one or more analytes. See QC Sample Results for detail. Sample matrix interference and/or non-homogeneity are suspected because the associated laboratory control sample (LCS) recovery is within acceptance limits.

No additional analytical or quality issues were noted, other than those described above or in the Definitions/Glossary page.

Subcontract non-Sister

See attached subcontract report.

Organic Prep

No analytical or quality issues were noted, other than those described in the Definitions/Glossary page.

VOA Prep

No analytical or quality issues were noted, other than those described in the Definitions/Glossary page.

Subcontract Work

Method Surfactants: This method was subcontracted to Envirodyne Laboratories. The subcontract laboratory certification is different from that of the facility issuing the final report. The subcontract report is appended in its entirety.

Eurofins Houston

Detection Summary

Client: Messer LLC

Job ID: 860-70887-1

Project/Site: Messer Gas ASU Permit Renewal 3-27-24

Client Sample ID: Outfall 001

Lab Sample ID: 860-70887-1

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Ethylbenzene	0.00059	J	0.0010	0.00039	mg/L	1		624.1	Total/NA
Di-n-butyl phthalate	0.013		0.0050	0.00025	mg/L	1		625.1	Total/NA
Nitrate as N	0.94	H	0.10	0.039	mg/L	1		300.0	Total/NA
Chloride	41		0.50	0.25	mg/L	1		300.0	Total/NA
Nitrite as N	0.44	H	0.10	0.029	mg/L	1		300.0	Total/NA
Fluoride	0.24	J	0.50	0.10	mg/L	1		300.0	Total/NA
Nitrate Nitrite as N	1.4	H	0.10	0.039	mg/L	1		300.0	Total/NA
Sulfate	48		0.50	0.20	mg/L	1		300.0	Total/NA
Mercury	4.3		0.50	0.20	ng/L	1		1631E	Total/NA
Aluminum	0.47		0.020	0.0030	mg/L	1		200.8	Total Recoverable
Arsenic	0.0029	J	0.0040	0.00034	mg/L	1		200.8	Total Recoverable
Barium	0.080		0.0040	0.00029	mg/L	1		200.8	Total Recoverable
Boron	0.098		0.010	0.0025	mg/L	1		200.8	Total Recoverable
Chromium	0.0066		0.0040	0.00033	mg/L	1		200.8	Total Recoverable
Cobalt	0.00069	J	0.0020	0.00026	mg/L	1		200.8	Total Recoverable
Copper	0.054		0.0040	0.00069	mg/L	1		200.8	Total Recoverable
Iron	0.91		0.020	0.0020	mg/L	1		200.8	Total Recoverable
Lead	0.0043		0.0020	0.00014	mg/L	1		200.8	Total Recoverable
Magnesium	7.8		0.10	0.0092	mg/L	1		200.8	Total Recoverable
Manganese	0.074		0.0020	0.00016	mg/L	1		200.8	Total Recoverable
Molybdenum	0.015		0.0020	0.00016	mg/L	1		200.8	Total Recoverable
Nickel	0.0094		0.0020	0.00049	mg/L	1		200.8	Total Recoverable
Tin	0.00069	J	0.0020	0.00033	mg/L	1		200.8	Total Recoverable
Titanium	0.018		0.0040	0.00042	mg/L	1		200.8	Total Recoverable
Zinc	0.13		0.0040	0.00089	mg/L	1		200.8	Total Recoverable
Ammonia	0.37		0.10	0.051	mg/L	1		350.1	Total/NA
Nitrogen, Kjeldahl	1.4		0.20	0.089	mg/L	1		351.2	Total/NA
Oxygen, Dissolved	11	HF	1.0	1.0	mg/L	1		360.1	Total/NA
Phosphorus Total	0.088		0.040	0.029	mg/L	2		365.1	Total/NA
Cr (VI)	0.0054	J	0.010	0.0034	mg/L	1		7196A	Total/NA
Nitrogen, Organic	1.0		0.20	0.061	mg/L	1		Nitrogen,Org	Total/NA
Color, Apparent	15		5.0	5.0	Color Units	1		SM 2120B	Total/NA
Color, True	10		5.0	5.0	Color Units	1		SM 2120B	Total/NA
pH	8.1		0.10	0.10	S.U.	1		SM 2120B	Total/NA
Alkalinity	100		4.0	4.0	mg/L	1		SM 2320B	Total/NA
Bicarbonate Alkalinity as CaCO3	100		4.0	4.0	mg/L	1		SM 2320B	Total/NA
Total Dissolved Solids	340		10	10	mg/L	1		SM 2540C	Total/NA
Total Suspended Solids	27		4.0	4.0	mg/L	1		SM 2540D	Total/NA
Total Organic Carbon	5.1		1.0	0.50	mg/L	1		SM 5310C	Total/NA

This Detection Summary does not include radiochemical test results.

Eurofins Houston

Client Sample Results

Client: Messer LLC
Project/Site: Messer Gas ASU Permit Renewal 3-27-24

Job ID: 860-70887-1

Client Sample ID: Outfall 001

Lab Sample ID: 860-70887-1

Date Collected: 03/27/24 08:30

Matrix: Water

Date Received: 03/27/24 14:30

Method: EPA 624.1 - Volatile Organic Compounds (GC/MS)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Acrolein	0.011	U	0.050	0.011	mg/L			03/28/24 11:14	1
Acrylonitrile	0.014	U	0.050	0.014	mg/L			03/28/24 11:14	1
Benzene	0.00046	U	0.0010	0.00046	mg/L			03/28/24 11:14	1
Carbon tetrachloride	0.00090	U	0.0050	0.00090	mg/L			03/28/24 11:14	1
Chlorobenzene	0.00046	U	0.0010	0.00046	mg/L			03/28/24 11:14	1
1,2,4-Trichlorobenzene	0.0018	U	0.0050	0.0018	mg/L			03/28/24 11:14	1
1,2-Dichloroethane	0.00037	U	0.0010	0.00037	mg/L			03/28/24 11:14	1
1,1,1-Trichloroethane	0.00059	U	0.0050	0.00059	mg/L			03/28/24 11:14	1
1,1-Dichloroethane	0.00064	U	0.0010	0.00064	mg/L			03/28/24 11:14	1
1,1,2-Trichloroethane	0.00041	U	0.0010	0.00041	mg/L			03/28/24 11:14	1
1,2-Dibromoethane	0.0010	U	0.0050	0.0010	mg/L			03/28/24 11:14	1
1,1,2,2-Tetrachloroethane	0.00047	U	0.0010	0.00047	mg/L			03/28/24 11:14	1
Chloroethane	0.0020	U	0.010	0.0020	mg/L			03/28/24 11:14	1
2-Chloroethyl vinyl ether	0.00075	U	0.0050	0.00075	mg/L			03/28/24 11:14	1
Chloroform	0.00046	U	0.0010	0.00046	mg/L			03/28/24 11:14	1
1,2-Dichlorobenzene	0.00043	U	0.0010	0.00043	mg/L			03/28/24 11:14	1
1,3-Dichlorobenzene	0.00041	U	0.0010	0.00041	mg/L			03/28/24 11:14	1
1,4-Dichlorobenzene	0.00045	U	0.0010	0.00045	mg/L			03/28/24 11:14	1
1,1-Dichloroethene	0.00074	U	0.0010	0.00074	mg/L			03/28/24 11:14	1
trans-1,2-Dichloroethene	0.00037	U	0.0010	0.00037	mg/L			03/28/24 11:14	1
1,2-Dichloropropane	0.00056	U	0.0050	0.00056	mg/L			03/28/24 11:14	1
Ethylbenzene	0.00059	J	0.0010	0.00039	mg/L			03/28/24 11:14	1
2-Butanone	0.0083	U	0.050	0.0083	mg/L			03/28/24 11:14	1
Methylene Chloride	0.0017	U	0.0050	0.0017	mg/L			03/28/24 11:14	1
Chloromethane	0.0020	U	0.010	0.0020	mg/L			03/28/24 11:14	1
Bromomethane	0.0014	U	0.0050	0.0014	mg/L			03/28/24 11:14	1
Bromoform	0.00063	U	0.0050	0.00063	mg/L			03/28/24 11:14	1
Bromodichloromethane	0.00055	U	0.0010	0.00055	mg/L			03/28/24 11:14	1
Chlorodibromomethane	0.00055	U	0.0050	0.00055	mg/L			03/28/24 11:14	1
Hexachlorobutadiene	0.00063	U	0.0050	0.00063	mg/L			03/28/24 11:14	1
Naphthalene	0.0014	U	0.010	0.0014	mg/L			03/28/24 11:14	1
Tetrachloroethene	0.00066	U	0.0010	0.00066	mg/L			03/28/24 11:14	1
Toluene	0.00048	U	0.0010	0.00048	mg/L			03/28/24 11:14	1
Trichloroethene	0.0015	U	0.0050	0.0015	mg/L			03/28/24 11:14	1
Vinyl chloride	0.00043	U	0.0020	0.00043	mg/L			03/28/24 11:14	1
1,3-Dichloropropylene	0.0013	U	0.0050	0.0013	mg/L			03/28/24 11:14	1
cis-1,3-Dichloropropene	0.0011	U	0.0050	0.0011	mg/L			03/28/24 11:14	1
Trihalomethanes, Total	0.00063	U	0.0050	0.00063	mg/L			03/28/24 11:14	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
1,2-Dichloroethane-d4 (Surr)	106		63 - 144		03/28/24 11:14	1
4-Bromofluorobenzene (Surr)	102		74 - 124		03/28/24 11:14	1
Dibromofluoromethane (Surr)	109		75 - 131		03/28/24 11:14	1
Toluene-d8 (Surr)	103		80 - 120		03/28/24 11:14	1

Method: EPA 625.1 - Semivolatile Organic Compounds (GC/MS)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,2,4,5-Tetrachlorobenzene	0.0013	U	0.010	0.0013	mg/L		04/02/24 15:31	04/03/24 22:32	1
1,2-Dichlorobenzene	0.0016	U	0.010	0.0016	mg/L		04/02/24 15:31	04/03/24 22:32	1
1,3-Dichlorobenzene	0.0014	U	0.010	0.0014	mg/L		04/02/24 15:31	04/03/24 22:32	1

Eurofins Houston

Client Sample Results

Client: Messer LLC
Project/Site: Messer Gas ASU Permit Renewal 3-27-24

Job ID: 860-70887-1

Client Sample ID: Outfall 001

Lab Sample ID: 860-70887-1

Date Collected: 03/27/24 08:30

Matrix: Water

Date Received: 03/27/24 14:30

Method: EPA 625.1 - Semivolatile Organic Compounds (GC/MS) (Continued)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,4-Dichlorobenzene	0.0016	U	0.010	0.0016	mg/L		04/02/24 15:31	04/03/24 22:32	1
Acenaphthene	0.0014	U	0.0057	0.0014	mg/L		04/02/24 15:31	04/03/24 22:32	1
Benzidine	0.0048	U *	0.020	0.0048	mg/L		04/02/24 15:31	04/03/24 22:32	1
1,2,4-Trichlorobenzene	0.0016	U	0.0050	0.0016	mg/L		04/02/24 15:31	04/03/24 22:32	1
Hexachlorobenzene	0.00031	U	0.0050	0.00031	mg/L		04/02/24 15:31	04/03/24 22:32	1
Hexachloroethane	0.00053	U	0.0048	0.00053	mg/L		04/02/24 15:31	04/03/24 22:32	1
2,4,5-Trichlorophenol	0.0020	U	0.010	0.0020	mg/L		04/02/24 15:31	04/03/24 22:32	1
Bis(2-chloroethyl)ether	0.0022	U	0.010	0.0022	mg/L		04/02/24 15:31	04/03/24 22:32	1
2-Chloronaphthalene	0.00046	U	0.0050	0.00046	mg/L		04/02/24 15:31	04/03/24 22:32	1
2,4,6-Trichlorophenol	0.0014	U	0.0050	0.0014	mg/L		04/02/24 15:31	04/03/24 22:32	1
p-Chloro-m-cresol	0.0016	U	0.0050	0.0016	mg/L		04/02/24 15:31	04/03/24 22:32	1
2-Chlorophenol	0.00065	U	0.0050	0.00065	mg/L		04/02/24 15:31	04/03/24 22:32	1
3,3'-Dichlorobenzidine	0.00034	U	0.0050	0.00034	mg/L		04/02/24 15:31	04/03/24 22:32	1
2,4-Dichlorophenol	0.00031	U	0.0050	0.00031	mg/L		04/02/24 15:31	04/03/24 22:32	1
2,4-Dimethylphenol	0.00065	U	0.0050	0.00065	mg/L		04/02/24 15:31	04/03/24 22:32	1
2,4-Dinitrotoluene	0.0013	U	0.010	0.0013	mg/L		04/02/24 15:31	04/03/24 22:32	1
1,2-Diphenylhydrazine	0.0015	U	0.010	0.0015	mg/L		04/02/24 15:31	04/03/24 22:32	1
Fluoranthene	0.0016	U	0.0050	0.0016	mg/L		04/02/24 15:31	04/03/24 22:32	1
4-Bromophenyl phenyl ether	0.00026	U	0.0050	0.00026	mg/L		04/02/24 15:31	04/03/24 22:32	1
4-Chlorophenyl phenyl ether	0.0013	U	0.010	0.0013	mg/L		04/02/24 15:31	04/03/24 22:32	1
o-Cresol	0.0016	U	0.010	0.0016	mg/L		04/02/24 15:31	04/03/24 22:32	1
Bis(2-chloroethoxy)methane	0.0018	U	0.010	0.0018	mg/L		04/02/24 15:31	04/03/24 22:32	1
m & p - Cresol	0.0026	U	0.010	0.0026	mg/L		04/02/24 15:31	04/03/24 22:32	1
bis (2-chloroisopropyl) ether	0.0018	U	0.010	0.0018	mg/L		04/02/24 15:31	04/03/24 22:32	1
Hexachlorobutadiene	0.00024	U	0.0010	0.00024	mg/L		04/02/24 15:31	04/03/24 22:32	1
Hexachlorocyclopentadiene	0.0046	U	0.010	0.0046	mg/L		04/02/24 15:31	04/03/24 22:32	1
Isophorone	0.0016	U	0.0050	0.0016	mg/L		04/02/24 15:31	04/03/24 22:32	1
Naphthalene	0.00054	U	0.0025	0.00054	mg/L		04/02/24 15:31	04/03/24 22:32	1
Nitrobenzene	0.0017	U	0.0050	0.0017	mg/L		04/02/24 15:31	04/03/24 22:32	1
4-Nitrophenol	0.0049	U	0.0072	0.0049	mg/L		04/02/24 15:31	04/03/24 22:32	1
2-Nitrophenol	0.0017	U	0.010	0.0017	mg/L		04/02/24 15:31	04/03/24 22:32	1
4,6-Dinitro-o-cresol	0.0014	U	0.010	0.0014	mg/L		04/02/24 15:31	04/03/24 22:32	1
N-Nitrosodimethylamine	0.0020	U	0.010	0.0020	mg/L		04/02/24 15:31	04/03/24 22:32	1
N-Nitrosodiphenylamine	0.0018	U	0.010	0.0018	mg/L		04/02/24 15:31	04/03/24 22:32	1
N-Nitrosodi-n-propylamine	0.0029	U	0.010	0.0029	mg/L		04/02/24 15:31	04/03/24 22:32	1
Pentachlorophenol	0.00023	U	0.010	0.00023	mg/L		04/02/24 15:31	04/03/24 22:32	1
Phenol	0.00042	U	0.0045	0.00042	mg/L		04/02/24 15:31	04/03/24 22:32	1
Bis(2-ethylhexyl) phthalate	0.00028	U	0.0050	0.00028	mg/L		04/02/24 15:31	04/03/24 22:32	1
Butyl benzyl phthalate	0.00034	U	0.0050	0.00034	mg/L		04/02/24 15:31	04/03/24 22:32	1
Di-n-butyl phthalate	0.013		0.0050	0.00025	mg/L		04/02/24 15:31	04/03/24 22:32	1
Di-n-octyl phthalate	0.00037	U **	0.0050	0.00037	mg/L		04/02/24 15:31	04/03/24 22:32	1
Diethyl phthalate	0.0016	U	0.0050	0.0016	mg/L		04/02/24 15:31	04/03/24 22:32	1
Dimethyl phthalate	0.00030	U	0.0025	0.00030	mg/L		04/02/24 15:31	04/03/24 22:32	1
Benzo[a]anthracene	0.00017	U	0.0050	0.00017	mg/L		04/02/24 15:31	04/03/24 22:32	1
Benzo[a]pyrene	0.00036	U	0.0050	0.00036	mg/L		04/02/24 15:31	04/03/24 22:32	1
Benzo[b]fluoranthene	0.0020	U	0.010	0.0020	mg/L		04/02/24 15:31	04/03/24 22:32	1
Benzo[k]fluoranthene	0.00038	U	0.0050	0.00038	mg/L		04/02/24 15:31	04/03/24 22:32	1
Chrysene	0.00022	U	0.0050	0.00022	mg/L		04/02/24 15:31	04/03/24 22:32	1
Acenaphthylene	0.0014	U	0.010	0.0014	mg/L		04/02/24 15:31	04/03/24 22:32	1

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Client Sample Results

Client: Messer LLC
Project/Site: Messer Gas ASU Permit Renewal 3-27-24

Job ID: 860-70887-1

Client Sample ID: Outfall 001

Lab Sample ID: 860-70887-1

Date Collected: 03/27/24 08:30

Matrix: Water

Date Received: 03/27/24 14:30

Method: EPA 625.1 - Semivolatile Organic Compounds (GC/MS) (Continued)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Anthracene	0.0015	U	0.0057	0.0015	mg/L		04/02/24 15:31	04/03/24 22:32	1
Benzo[g,h,i]perylene	0.0027	U	0.010	0.0027	mg/L		04/02/24 15:31	04/03/24 22:32	1
Fluorene	0.0016	U	0.0050	0.0016	mg/L		04/02/24 15:31	04/03/24 22:32	1
Phenanthrene	0.0014	U	0.010	0.0014	mg/L		04/02/24 15:31	04/03/24 22:32	1
Dibenz(a,h)anthracene	0.00025	U	0.0050	0.00025	mg/L		04/02/24 15:31	04/03/24 22:32	1
Indeno[1,2,3-cd]pyrene	0.0023	U	0.010	0.0023	mg/L		04/02/24 15:31	04/03/24 22:32	1
Pyrene	0.00018	U	0.0050	0.00018	mg/L		04/02/24 15:31	04/03/24 22:32	1
2,4-Dinitrophenol	0.0016	U	0.010	0.0016	mg/L		04/02/24 15:31	04/03/24 22:32	1
2,6-Dinitrotoluene	0.0016	U	0.0050	0.0016	mg/L		04/02/24 15:31	04/03/24 22:32	1
N-Nitrosodi-n-butylamine	0.0015	U	0.010	0.0015	mg/L		04/02/24 15:31	04/03/24 22:32	1
N-Nitrosodiethylamine	0.0018	U	0.010	0.0018	mg/L		04/02/24 15:31	04/03/24 22:32	1
Nonylphenol	0.010	U	0.010	0.010	mg/L		04/02/24 15:31	04/03/24 22:32	1
Pentachlorobenzene	0.0011	U	0.010	0.0011	mg/L		04/02/24 15:31	04/03/24 22:32	1
Pyridine	0.0026	U	0.010	0.0026	mg/L		04/02/24 15:31	04/03/24 22:32	1
Total Cresols	0.0026	U	0.010	0.0026	mg/L		04/02/24 15:31	04/03/24 22:32	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
2,4,6-Tribromophenol (Surr)	67		31 - 132	04/02/24 15:31	04/03/24 22:32	1
2-Fluorobiphenyl (Surr)	64		29 - 112	04/02/24 15:31	04/03/24 22:32	1
2-Fluorophenol (Surr)	24	S1-	28 - 114	04/02/24 15:31	04/03/24 22:32	1
Nitrobenzene-d5 (Surr)	69		15 - 314	04/02/24 15:31	04/03/24 22:32	1
p-Terphenyl-d14 (Surr)	88		20 - 141	04/02/24 15:31	04/03/24 22:32	1
Phenol-d5 (Surr)	17		8 - 424	04/02/24 15:31	04/03/24 22:32	1

Method: EPA 608.3 - Polychlorinated Biphenyls (PCBs) (GC)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
PCB-1016	0.000013	U	0.00010	0.000013	mg/L		04/13/24 06:30	04/15/24 11:50	1
PCB-1221	0.000013	U	0.00010	0.000013	mg/L		04/13/24 06:30	04/15/24 11:50	1
PCB-1232	0.000013	U	0.00010	0.000013	mg/L		04/13/24 06:30	04/15/24 11:50	1
PCB-1242	0.000013	U	0.00010	0.000013	mg/L		04/13/24 06:30	04/15/24 11:50	1
PCB-1248	0.000013	U	0.00010	0.000013	mg/L		04/13/24 06:30	04/15/24 11:50	1
PCB-1254	0.0000078	U	0.00010	0.0000078	mg/L		04/13/24 06:30	04/15/24 11:50	1
PCB-1260	0.0000078	U	0.00010	0.0000078	mg/L		04/13/24 06:30	04/15/24 11:50	1
Polychlorinated biphenyls, Total	0.00010	U	0.00010	0.00010	mg/L		04/13/24 06:30	04/15/24 11:50	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
Tetrachloro-m-xylene (Surr)	76		18 - 126	04/13/24 06:30	04/15/24 11:50	1
DCB Decachlorobiphenyl (Surr)	119		15 - 136	04/13/24 06:30	04/15/24 11:50	1

Method: EPA 300.0 - Anions, Ion Chromatography

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Bromide	0.071	U	0.50	0.071	mg/L			03/31/24 19:26	1
Nitrate as N	0.94	H	0.10	0.039	mg/L			03/31/24 19:26	1
Chloride	41		0.50	0.25	mg/L			03/31/24 19:26	1
Nitrite as N	0.44	H	0.10	0.029	mg/L			03/31/24 19:26	1
Fluoride	0.24	J	0.50	0.10	mg/L			03/31/24 19:26	1
Nitrate Nitrite as N	1.4	H	0.10	0.039	mg/L			03/31/24 19:26	1
Sulfate	48		0.50	0.20	mg/L			03/31/24 19:26	1

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Client Sample Results

Client: Messer LLC
Project/Site: Messer Gas ASU Permit Renewal 3-27-24

Job ID: 860-70887-1

Client Sample ID: Outfall 001

Lab Sample ID: 860-70887-1

Date Collected: 03/27/24 08:30

Matrix: Water

Date Received: 03/27/24 14:30

Method: EPA 1631E - Mercury, Low Level (CVAFS)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Mercury	4.3		0.50	0.20	ng/L		04/01/24 15:00	04/02/24 12:15	1

Method: EPA 200.8 - Metals (ICP/MS) - Total Recoverable

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Aluminum	0.47		0.020	0.0030	mg/L		04/02/24 18:00	04/03/24 20:14	1
Antimony	0.0011	U	0.0020	0.0011	mg/L		04/02/24 18:00	04/03/24 20:14	1
Arsenic	0.0029	J	0.0040	0.00034	mg/L		04/02/24 18:00	04/03/24 20:14	1
Barium	0.080		0.0040	0.00029	mg/L		04/02/24 18:00	04/03/24 20:14	1
Beryllium	0.00015	U	0.0020	0.00015	mg/L		04/02/24 18:00	04/03/24 20:14	1
Boron	0.098		0.010	0.0025	mg/L		04/02/24 18:00	04/04/24 18:09	1
Cadmium	0.00026	U	0.0020	0.00026	mg/L		04/02/24 18:00	04/03/24 20:14	1
Chromium	0.0066		0.0040	0.00033	mg/L		04/02/24 18:00	04/03/24 20:14	1
Cobalt	0.00069	J	0.0020	0.00026	mg/L		04/02/24 18:00	04/03/24 20:14	1
Copper	0.054		0.0040	0.00069	mg/L		04/02/24 18:00	04/03/24 20:14	1
Iron	0.91		0.020	0.0020	mg/L		04/02/24 18:00	04/03/24 20:14	1
Lead	0.0043		0.0020	0.00014	mg/L		04/02/24 18:00	04/03/24 20:14	1
Magnesium	7.8		0.10	0.0092	mg/L		04/02/24 18:00	04/03/24 20:14	1
Manganese	0.074		0.0020	0.00016	mg/L		04/02/24 18:00	04/03/24 20:14	1
Molybdenum	0.015		0.0020	0.00016	mg/L		04/02/24 18:00	04/03/24 20:14	1
Nickel	0.0094		0.0020	0.00049	mg/L		04/02/24 18:00	04/03/24 20:14	1
Selenium	0.00069	U	0.0020	0.00069	mg/L		04/02/24 18:00	04/03/24 20:14	1
Silver	0.00012	U	0.0020	0.00012	mg/L		04/02/24 18:00	04/04/24 13:15	1
Thallium	0.00022	U	0.0020	0.00022	mg/L		04/02/24 18:00	04/03/24 20:14	1
Tin	0.00069	J	0.0020	0.00033	mg/L		04/02/24 18:00	04/03/24 20:14	1
Titanium	0.018		0.0040	0.00042	mg/L		04/02/24 18:00	04/03/24 20:14	1
Zinc	0.13		0.0040	0.00089	mg/L		04/02/24 18:00	04/03/24 20:14	1

General Chemistry

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
HEM (1664B)	1.7	U	5.3	1.7	mg/L			04/08/24 11:12	1
Ammonia (EPA 350.1)	0.37		0.10	0.051	mg/L			04/03/24 23:28	1
Nitrogen, Kjeldahl (EPA 351.2)	1.4		0.20	0.089	mg/L		04/01/24 20:31	04/03/24 12:02	1
Oxygen, Dissolved (EPA 360.1)	11	HF	1.0	1.0	mg/L			03/31/24 14:09	1
Phosphorus Total (EPA 365.1)	0.088		0.040	0.029	mg/L			04/09/24 19:34	2
Cr (VI) (SW846 7196A)	0.0054	J	0.010	0.0034	mg/L			03/27/24 19:03	1
Cr (III) (SW846 7196A)	0.0034	U	0.010	0.0034	mg/L			04/08/24 19:28	1
Chemical Oxygen Demand (Hach 8000)	3.4	U	20	3.4	mg/L			04/09/24 20:17	1
Nitrogen, Organic (EPA Nitrogen,Org)	1.0		0.20	0.061	mg/L			04/05/24 18:57	1
Cyanide, Available (OI CORP OIA-1677)	0.0050	U	0.0060	0.0050	mg/L			04/02/24 16:02	1
Color, Apparent (SM 2120B)	15		5.0	5.0	Color Units			03/28/24 17:00	1
Color, True (SM 2120B)	10		5.0	5.0	Color Units			03/28/24 17:00	1
pH (SM 2120B)	8.1		0.10	0.10	S.U.			03/28/24 17:00	1
Alkalinity (SM 2320B)	100		4.0	4.0	mg/L			03/29/24 18:25	1
Bicarbonate Alkalinity as CaCO3 (SM 2320B)	100		4.0	4.0	mg/L			03/29/24 18:25	1
Carbonate Alkalinity as CaCO3 (SM 2320B)	4.0	U	4.0	4.0	mg/L			03/29/24 18:25	1
Hydroxide Alkalinity (SM 2320B)	4.0	U	4.0	4.0	mg/L			03/29/24 18:25	1

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Client Sample Results

Client: Messer LLC

Job ID: 860-70887-1

Project/Site: Messer Gas ASU Permit Renewal 3-27-24

Client Sample ID: Outfall 001

Lab Sample ID: 860-70887-1

Date Collected: 03/27/24 08:30

Matrix: Water

Date Received: 03/27/24 14:30

General Chemistry (Continued)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Phenolphthalein Alkalinity (SM 2320B)	4.0	U	4.0	4.0	mg/L			03/29/24 18:25	1
Total Dissolved Solids (SM 2540C)	340		10	10	mg/L			04/02/24 12:40	1
Total Suspended Solids (SM 2540D)	27		4.0	4.0	mg/L			04/02/24 18:33	1
Chlorine, Total Residual (SM 4500 Cl G)	0.050	U HF	0.050	0.050	mg/L			04/02/24 18:16	1
Sulfide (SM 4500 S2 D)	0.040	U	0.10	0.040	mg/L			04/03/24 18:05	1
Sulfite (SM 4500 SO3 B)	5.0	U HF	5.0	5.0	mg/L			04/04/24 17:40	1
Biochemical Oxygen Demand (SM 5210B)	3.0	U	3.0	3.0	mg/L		03/28/24 10:11	03/28/24 12:46	1
Total Organic Carbon (SM 5310C)	5.1		1.0	0.50	mg/L			04/09/24 06:59	1
Carbonaceous Biochemical Oxygen Demand (SM5210B CBOD)	3.0	U	3.0	3.0	mg/L		03/28/24 12:52	03/28/24 15:34	1

Surrogate Summary

Client: Messer LLC

Job ID: 860-70887-1

Project/Site: Messer Gas ASU Permit Renewal 3-27-24

Method: 624.1 - Volatile Organic Compounds (GC/MS)

Matrix: Water

Prep Type: Total/NA

Percent Surrogate Recovery (Acceptance Limits)

Lab Sample ID	Client Sample ID	DCA (63-144)	BFB (74-124)	DBFM (75-131)	TOL (80-120)
860-70887-1	Outfall 001	106	102	109	103
860-70887-1 MS	Outfall 001	98	105	100	100
LCS 860-152033/3	Lab Control Sample	99	103	100	100
LCSD 860-152033/4	Lab Control Sample Dup	97	102	99	100
MB 860-152033/9	Method Blank	103	106	107	103

Surrogate Legend

DCA = 1,2-Dichloroethane-d4 (Surr)

BFB = 4-Bromofluorobenzene (Surr)

DBFM = Dibromofluoromethane (Surr)

TOL = Toluene-d8 (Surr)

Method: 625.1 - Semivolatile Organic Compounds (GC/MS)

Matrix: Water

Prep Type: Total/NA

Percent Surrogate Recovery (Acceptance Limits)

Lab Sample ID	Client Sample ID	TBP (31-132)	FBP (29-112)	2FP (28-114)	NBZ (15-314)	TPHd14 (20-141)	PHL (8-424)
860-70887-1	Outfall 001	67	64	24 S1-	69	88	17
LCS 860-152882/2-A	Lab Control Sample	74	69	36	77	88	25
LCSD 860-152882/3-A	Lab Control Sample Dup	83	72	38	78	98	28
MB 860-152882/1-A	Method Blank	75	81	41	90	104	29

Surrogate Legend

TBP = 2,4,6-Tribromophenol (Surr)

FBP = 2-Fluorobiphenyl (Surr)

2FP = 2-Fluorophenol (Surr)

NBZ = Nitrobenzene-d5 (Surr)

TPHd14 = p-Terphenyl-d14 (Surr)

PHL = Phenol-d5 (Surr)

Method: 608.3 - Polychlorinated Biphenyls (PCBs) (GC)

Matrix: Water

Prep Type: Total/NA

Percent Surrogate Recovery (Acceptance Limits)

Lab Sample ID	Client Sample ID	TCX1 (18-126)	DCB1 (15-136)
860-70887-1	Outfall 001	76	119
LCS 860-154669/4-A	Lab Control Sample	95	136
LCSD 860-154669/5-A	Lab Control Sample Dup	83	132
MB 860-154669/1-A	Method Blank	87	128

Surrogate Legend

TCX = Tetrachloro-m-xylene (Surr)

DCB = DCB Decachlorobiphenyl (Surr)

QC Sample Results

Client: Messer LLC
Project/Site: Messer Gas ASU Permit Renewal 3-27-24

Job ID: 860-70887-1

Method: 624.1 - Volatile Organic Compounds (GC/MS)

Lab Sample ID: MB 860-152033/9

Matrix: Water

Analysis Batch: 152033

Client Sample ID: Method Blank

Prep Type: Total/NA

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Acrolein	0.011	U	0.050	0.011	mg/L			03/28/24 10:55	1
Acrylonitrile	0.014	U	0.050	0.014	mg/L			03/28/24 10:55	1
Benzene	0.00046	U	0.0010	0.00046	mg/L			03/28/24 10:55	1
Carbon tetrachloride	0.00090	U	0.0050	0.00090	mg/L			03/28/24 10:55	1
Chlorobenzene	0.00046	U	0.0010	0.00046	mg/L			03/28/24 10:55	1
1,2,4-Trichlorobenzene	0.0018	U	0.0050	0.0018	mg/L			03/28/24 10:55	1
1,2-Dichloroethane	0.00037	U	0.0010	0.00037	mg/L			03/28/24 10:55	1
1,1,1-Trichloroethane	0.00059	U	0.0050	0.00059	mg/L			03/28/24 10:55	1
1,1-Dichloroethane	0.00064	U	0.0010	0.00064	mg/L			03/28/24 10:55	1
1,1,2-Trichloroethane	0.00041	U	0.0010	0.00041	mg/L			03/28/24 10:55	1
1,2-Dibromoethane	0.0010	U	0.0050	0.0010	mg/L			03/28/24 10:55	1
1,1,2,2-Tetrachloroethane	0.00047	U	0.0010	0.00047	mg/L			03/28/24 10:55	1
Chloroethane	0.0020	U	0.010	0.0020	mg/L			03/28/24 10:55	1
2-Chloroethyl vinyl ether	0.00075	U	0.0050	0.00075	mg/L			03/28/24 10:55	1
Chloroform	0.00046	U	0.0010	0.00046	mg/L			03/28/24 10:55	1
1,2-Dichlorobenzene	0.00043	U	0.0010	0.00043	mg/L			03/28/24 10:55	1
1,3-Dichlorobenzene	0.00041	U	0.0010	0.00041	mg/L			03/28/24 10:55	1
1,4-Dichlorobenzene	0.00045	U	0.0010	0.00045	mg/L			03/28/24 10:55	1
1,1-Dichloroethene	0.00074	U	0.0010	0.00074	mg/L			03/28/24 10:55	1
trans-1,2-Dichloroethene	0.00037	U	0.0010	0.00037	mg/L			03/28/24 10:55	1
1,2-Dichloropropane	0.00056	U	0.0050	0.00056	mg/L			03/28/24 10:55	1
Ethylbenzene	0.00039	U	0.0010	0.00039	mg/L			03/28/24 10:55	1
2-Butanone	0.0083	U	0.050	0.0083	mg/L			03/28/24 10:55	1
Methylene Chloride	0.0017	U	0.0050	0.0017	mg/L			03/28/24 10:55	1
Chloromethane	0.0020	U	0.010	0.0020	mg/L			03/28/24 10:55	1
Bromomethane	0.0014	U	0.0050	0.0014	mg/L			03/28/24 10:55	1
Bromoform	0.00063	U	0.0050	0.00063	mg/L			03/28/24 10:55	1
Bromodichloromethane	0.00055	U	0.0010	0.00055	mg/L			03/28/24 10:55	1
Chlorodibromomethane	0.00055	U	0.0050	0.00055	mg/L			03/28/24 10:55	1
Hexachlorobutadiene	0.00063	U	0.0050	0.00063	mg/L			03/28/24 10:55	1
Naphthalene	0.0014	U	0.010	0.0014	mg/L			03/28/24 10:55	1
Tetrachloroethene	0.00066	U	0.0010	0.00066	mg/L			03/28/24 10:55	1
Toluene	0.00048	U	0.0010	0.00048	mg/L			03/28/24 10:55	1
Trichloroethene	0.0015	U	0.0050	0.0015	mg/L			03/28/24 10:55	1
Vinyl chloride	0.00043	U	0.0020	0.00043	mg/L			03/28/24 10:55	1
1,3-Dichloropropylene	0.0013	U	0.0050	0.0013	mg/L			03/28/24 10:55	1
cis-1,3-Dichloropropene	0.0011	U	0.0050	0.0011	mg/L			03/28/24 10:55	1
Trihalomethanes, Total	0.00063	U	0.0050	0.00063	mg/L			03/28/24 10:55	1

Surrogate	MB %Recovery	MB Qualifier	Limits	Prepared	Analyzed	Dil Fac
1,2-Dichloroethane-d4 (Surr)	103		63 - 144		03/28/24 10:55	1
4-Bromofluorobenzene (Surr)	106		74 - 124		03/28/24 10:55	1
Dibromofluoromethane (Surr)	107		75 - 131		03/28/24 10:55	1
Toluene-d8 (Surr)	103		80 - 120		03/28/24 10:55	1

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QC Sample Results

Client: Messer LLC
Project/Site: Messer Gas ASU Permit Renewal 3-27-24

Job ID: 860-70887-1

Method: 624.1 - Volatile Organic Compounds (GC/MS) (Continued)

Lab Sample ID: LCS 860-152033/3

Matrix: Water

Analysis Batch: 152033

Client Sample ID: Lab Control Sample

Prep Type: Total/NA

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits
Acrolein	0.250	0.284		mg/L		114	60 - 140
Acrylonitrile	0.500	0.528		mg/L		106	60 - 140
Benzene	0.0500	0.0480		mg/L		96	75 - 125
Carbon tetrachloride	0.0500	0.0497		mg/L		99	70 - 125
Chlorobenzene	0.0500	0.0490		mg/L		98	82 - 135
1,2,4-Trichlorobenzene	0.0500	0.0624		mg/L		125	75 - 135
1,2-Dichloroethane	0.0500	0.0473		mg/L		95	72 - 130
1,1,1-Trichloroethane	0.0500	0.0509		mg/L		102	70 - 130
1,1-Dichloroethane	0.0500	0.0509		mg/L		102	71 - 130
1,1,2-Trichloroethane	0.0500	0.0493		mg/L		99	75 - 130
1,2-Dibromoethane	0.0500	0.0509		mg/L		102	73 - 125
1,1,2,2-Tetrachloroethane	0.0500	0.0515		mg/L		103	74 - 125
Chloroethane	0.0500	0.0576		mg/L		115	60 - 140
2-Chloroethyl vinyl ether	0.0500	0.0536		mg/L		107	50 - 150
Chloroform	0.0500	0.0506		mg/L		101	70 - 121
1,2-Dichlorobenzene	0.0500	0.0507		mg/L		101	75 - 125
1,3-Dichlorobenzene	0.0500	0.0522		mg/L		104	75 - 125
1,4-Dichlorobenzene	0.0500	0.0500		mg/L		100	75 - 125
1,1-Dichloroethene	0.0500	0.0541		mg/L		108	50 - 150
trans-1,2-Dichloroethene	0.0500	0.0526		mg/L		105	75 - 125
1,2-Dichloropropane	0.0500	0.0489		mg/L		98	74 - 125
Ethylbenzene	0.0500	0.0533		mg/L		107	75 - 125
2-Butanone	0.250	0.264		mg/L		106	60 - 140
Methylene Chloride	0.0500	0.0464		mg/L		93	71 - 125
Chloromethane	0.0500	0.0435		mg/L		87	60 - 140
Bromomethane	0.0500	0.0437		mg/L		87	60 - 140
Bromoform	0.0500	0.0507		mg/L		101	70 - 130
Bromodichloromethane	0.0500	0.0512		mg/L		102	75 - 125
Chlorodibromomethane	0.0500	0.0553		mg/L		111	73 - 125
Hexachlorobutadiene	0.0500	0.0554		mg/L		111	75 - 125
Naphthalene	0.0500	0.0566		mg/L		113	70 - 130
Tetrachloroethene	0.0500	0.0501		mg/L		100	71 - 125
Toluene	0.0500	0.0496		mg/L		99	75 - 130
Trichloroethene	0.0500	0.0491		mg/L		98	75 - 135
Vinyl chloride	0.0500	0.0563		mg/L		113	60 - 140
cis-1,3-Dichloropropene	0.0500	0.0526		mg/L		105	74 - 125

Surrogate	LCS %Recovery	LCS Qualifier	Limits
1,2-Dichloroethane-d4 (Surr)	99		63 - 144
4-Bromofluorobenzene (Surr)	103		74 - 124
Dibromofluoromethane (Surr)	100		75 - 131
Toluene-d8 (Surr)	100		80 - 120

Eurofins Houston

QC Sample Results

Client: Messer LLC
Project/Site: Messer Gas ASU Permit Renewal 3-27-24

Job ID: 860-70887-1

Method: 624.1 - Volatile Organic Compounds (GC/MS) (Continued)

Lab Sample ID: LCSD 860-152033/4

Matrix: Water

Analysis Batch: 152033

Client Sample ID: Lab Control Sample Dup

Prep Type: Total/NA

Analyte	Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec Limits	RPD	RPD Limit
Acrolein	0.250	0.269		mg/L		108	60 - 140	6	25
Acrylonitrile	0.500	0.483		mg/L		97	60 - 140	9	25
Benzene	0.0500	0.0459		mg/L		92	75 - 125	5	25
Carbon tetrachloride	0.0500	0.0467		mg/L		93	70 - 125	6	25
Chlorobenzene	0.0500	0.0470		mg/L		94	82 - 135	4	25
1,2,4-Trichlorobenzene	0.0500	0.0563		mg/L		113	75 - 135	10	25
1,2-Dichloroethane	0.0500	0.0451		mg/L		90	72 - 130	5	25
1,1,1-Trichloroethane	0.0500	0.0470		mg/L		94	70 - 130	8	25
1,1-Dichloroethane	0.0500	0.0477		mg/L		95	71 - 130	7	25
1,1,2-Trichloroethane	0.0500	0.0476		mg/L		95	75 - 130	4	25
1,2-Dibromoethane	0.0500	0.0491		mg/L		98	73 - 125	3	25
1,1,2,2-Tetrachloroethane	0.0500	0.0475		mg/L		95	74 - 125	8	25
Chloroethane	0.0500	0.0582		mg/L		116	60 - 140	1	25
2-Chloroethyl vinyl ether	0.0500	0.0513		mg/L		103	50 - 150	4	25
Chloroform	0.0500	0.0478		mg/L		96	70 - 121	6	25
1,2-Dichlorobenzene	0.0500	0.0480		mg/L		96	75 - 125	5	25
1,3-Dichlorobenzene	0.0500	0.0488		mg/L		98	75 - 125	7	25
1,4-Dichlorobenzene	0.0500	0.0470		mg/L		94	75 - 125	6	25
1,1-Dichloroethene	0.0500	0.0495		mg/L		99	50 - 150	9	25
trans-1,2-Dichloroethene	0.0500	0.0493		mg/L		99	75 - 125	6	25
1,2-Dichloropropane	0.0500	0.0473		mg/L		95	74 - 125	3	25
Ethylbenzene	0.0500	0.0504		mg/L		101	75 - 125	6	25
2-Butanone	0.250	0.238		mg/L		95	60 - 140	11	25
Methylene Chloride	0.0500	0.0446		mg/L		89	71 - 125	4	25
Chloromethane	0.0500	0.0418		mg/L		84	60 - 140	4	25
Bromomethane	0.0500	0.0455		mg/L		91	60 - 140	4	25
Bromoform	0.0500	0.0486		mg/L		97	70 - 130	4	25
Bromodichloromethane	0.0500	0.0500		mg/L		100	75 - 125	2	25
Chlorodibromomethane	0.0500	0.0537		mg/L		107	73 - 125	3	25
Hexachlorobutadiene	0.0500	0.0496		mg/L		99	75 - 125	11	25
Naphthalene	0.0500	0.0498		mg/L		100	70 - 130	13	25
Tetrachloroethene	0.0500	0.0476		mg/L		95	71 - 125	5	25
Toluene	0.0500	0.0477		mg/L		95	75 - 130	4	25
Trichloroethene	0.0500	0.0478		mg/L		96	75 - 135	3	25
Vinyl chloride	0.0500	0.0530		mg/L		106	60 - 140	6	25
cis-1,3-Dichloropropene	0.0500	0.0513		mg/L		103	74 - 125	2	25

Surrogate	LCSD %Recovery	LCSD Qualifier	Limits
1,2-Dichloroethane-d4 (Surr)	97		63 - 144
4-Bromofluorobenzene (Surr)	102		74 - 124
Dibromofluoromethane (Surr)	99		75 - 131
Toluene-d8 (Surr)	100		80 - 120

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QC Sample Results

Client: Messer LLC
Project/Site: Messer Gas ASU Permit Renewal 3-27-24

Job ID: 860-70887-1

Method: 624.1 - Volatile Organic Compounds (GC/MS) (Continued)

Lab Sample ID: 860-70887-1 MS

Matrix: Water

Analysis Batch: 152033

Client Sample ID: Outfall 001

Prep Type: Total/NA

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec Limits
Acrolein	0.011	U	0.250	0.237		mg/L		95	50 - 150
Acrylonitrile	0.014	U	0.500	0.465		mg/L		93	50 - 150
Benzene	0.00046	U	0.0500	0.0465		mg/L		93	66 - 142
Carbon tetrachloride	0.00090	U	0.0500	0.0484		mg/L		97	62 - 125
Chlorobenzene	0.00046	U	0.0500	0.0480		mg/L		96	60 - 133
1,2,4-Trichlorobenzene	0.0018	U	0.0500	0.0625		mg/L		125	75 - 135
1,2-Dichloroethane	0.00037	U	0.0500	0.0447		mg/L		89	68 - 127
1,1,1-Trichloroethane	0.00059	U	0.0500	0.0494		mg/L		99	75 - 125
1,1-Dichloroethane	0.00064	U	0.0500	0.0485		mg/L		97	72 - 125
1,1,2-Trichloroethane	0.00041	U	0.0500	0.0473		mg/L		95	75 - 127
1,2-Dibromoethane	0.0010	U	0.0500	0.0490		mg/L		98	73 - 125
1,1,2,2-Tetrachloroethane	0.00047	U	0.0500	0.0489		mg/L		98	74 - 125
Chloroethane	0.0020	U	0.0500	0.0466		mg/L		93	60 - 140
2-Chloroethyl vinyl ether	0.00075	U	0.0500	0.0487		mg/L		97	50 - 150
Chloroform	0.00046	U	0.0500	0.0487		mg/L		97	70 - 130
1,2-Dichlorobenzene	0.00043	U	0.0500	0.0507		mg/L		101	75 - 125
1,3-Dichlorobenzene	0.00041	U	0.0500	0.0527		mg/L		105	75 - 125
1,4-Dichlorobenzene	0.00045	U	0.0500	0.0497		mg/L		99	75 - 125
1,1-Dichloroethene	0.00074	U	0.0500	0.0515		mg/L		103	59 - 172
trans-1,2-Dichloroethene	0.00037	U	0.0500	0.0503		mg/L		101	75 - 125
1,2-Dichloropropane	0.00056	U	0.0500	0.0472		mg/L		94	74 - 125
Ethylbenzene	0.00059	J	0.0500	0.0532		mg/L		105	75 - 125
2-Butanone	0.0083	U	0.250	0.230		mg/L		92	60 - 140
Methylene Chloride	0.0017	U	0.0500	0.0440		mg/L		88	75 - 125
Chloromethane	0.0020	U	0.0500	0.0377		mg/L		75	60 - 140
Bromomethane	0.0014	U	0.0500	0.0360		mg/L		72	60 - 140
Bromoform	0.00063	U	0.0500	0.0490		mg/L		98	75 - 125
Bromodichloromethane	0.00055	U	0.0500	0.0501		mg/L		100	75 - 125
Chlorodibromomethane	0.00055	U	0.0500	0.0543		mg/L		109	73 - 125
Hexachlorobutadiene	0.00063	U	0.0500	0.0626		mg/L		125	75 - 125
Naphthalene	0.0014	U	0.0500	0.0555		mg/L		111	70 - 130
Tetrachloroethene	0.00066	U	0.0500	0.0500		mg/L		100	71 - 125
Toluene	0.00048	U	0.0500	0.0497		mg/L		99	59 - 139
Trichloroethene	0.0015	U	0.0500	0.0485		mg/L		97	62 - 137
Vinyl chloride	0.00043	U	0.0500	0.0495		mg/L		99	60 - 140
cis-1,3-Dichloropropene	0.0011	U	0.0500	0.0515		mg/L		103	74 - 125

Surrogate	MS %Recovery	MS Qualifier	Limits
1,2-Dichloroethane-d4 (Surr)	98		63 - 144
4-Bromofluorobenzene (Surr)	105		74 - 124
Dibromofluoromethane (Surr)	100		75 - 131
Toluene-d8 (Surr)	100		80 - 120

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QC Sample Results

Client: Messer LLC

Job ID: 860-70887-1

Project/Site: Messer Gas ASU Permit Renewal 3-27-24

Method: 625.1 - Semivolatile Organic Compounds (GC/MS)

Lab Sample ID: MB 860-152882/1-A

Matrix: Water

Analysis Batch: 153021

Client Sample ID: Method Blank

Prep Type: Total/NA

Prep Batch: 152882

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,2,4,5-Tetrachlorobenzene	0.0013	U	0.010	0.0013	mg/L		04/02/24 15:31	04/03/24 15:49	1
1,2-Dichlorobenzene	0.0016	U	0.010	0.0016	mg/L		04/02/24 15:31	04/03/24 15:49	1
1,3-Dichlorobenzene	0.0014	U	0.010	0.0014	mg/L		04/02/24 15:31	04/03/24 15:49	1
1,4-Dichlorobenzene	0.0016	U	0.010	0.0016	mg/L		04/02/24 15:31	04/03/24 15:49	1
Acenaphthene	0.0014	U	0.0057	0.0014	mg/L		04/02/24 15:31	04/03/24 15:49	1
Benzidine	0.0048	U	0.020	0.0048	mg/L		04/02/24 15:31	04/03/24 15:49	1
1,2,4-Trichlorobenzene	0.0016	U	0.0050	0.0016	mg/L		04/02/24 15:31	04/03/24 15:49	1
Hexachlorobenzene	0.00031	U	0.0050	0.00031	mg/L		04/02/24 15:31	04/03/24 15:49	1
Hexachloroethane	0.00053	U	0.0048	0.00053	mg/L		04/02/24 15:31	04/03/24 15:49	1
2,4,5-Trichlorophenol	0.0020	U	0.010	0.0020	mg/L		04/02/24 15:31	04/03/24 15:49	1
Bis(2-chloroethyl)ether	0.0022	U	0.010	0.0022	mg/L		04/02/24 15:31	04/03/24 15:49	1
2-Chloronaphthalene	0.00046	U	0.0050	0.00046	mg/L		04/02/24 15:31	04/03/24 15:49	1
2,4,6-Trichlorophenol	0.0014	U	0.0050	0.0014	mg/L		04/02/24 15:31	04/03/24 15:49	1
p-Chloro-m-cresol	0.0016	U	0.0050	0.0016	mg/L		04/02/24 15:31	04/03/24 15:49	1
2-Chlorophenol	0.00065	U	0.0050	0.00065	mg/L		04/02/24 15:31	04/03/24 15:49	1
3,3'-Dichlorobenzidine	0.00034	U	0.0050	0.00034	mg/L		04/02/24 15:31	04/03/24 15:49	1
2,4-Dichlorophenol	0.00031	U	0.0050	0.00031	mg/L		04/02/24 15:31	04/03/24 15:49	1
2,4-Dimethylphenol	0.00065	U	0.0050	0.00065	mg/L		04/02/24 15:31	04/03/24 15:49	1
2,4-Dinitrotoluene	0.0013	U	0.010	0.0013	mg/L		04/02/24 15:31	04/03/24 15:49	1
1,2-Diphenylhydrazine	0.0015	U	0.010	0.0015	mg/L		04/02/24 15:31	04/03/24 15:49	1
Fluoranthene	0.0016	U	0.0050	0.0016	mg/L		04/02/24 15:31	04/03/24 15:49	1
4-Bromophenyl phenyl ether	0.00026	U	0.0050	0.00026	mg/L		04/02/24 15:31	04/03/24 15:49	1
4-Chlorophenyl phenyl ether	0.0013	U	0.010	0.0013	mg/L		04/02/24 15:31	04/03/24 15:49	1
o-Cresol	0.0016	U	0.010	0.0016	mg/L		04/02/24 15:31	04/03/24 15:49	1
Bis(2-chloroethoxy)methane	0.0018	U	0.010	0.0018	mg/L		04/02/24 15:31	04/03/24 15:49	1
m & p - Cresol	0.0026	U	0.010	0.0026	mg/L		04/02/24 15:31	04/03/24 15:49	1
bis (2-chloroisopropyl) ether	0.0018	U	0.010	0.0018	mg/L		04/02/24 15:31	04/03/24 15:49	1
Hexachlorobutadiene	0.00024	U	0.0010	0.00024	mg/L		04/02/24 15:31	04/03/24 15:49	1
Hexachlorocyclopentadiene	0.0046	U	0.010	0.0046	mg/L		04/02/24 15:31	04/03/24 15:49	1
Isophorone	0.0016	U	0.0050	0.0016	mg/L		04/02/24 15:31	04/03/24 15:49	1
Naphthalene	0.00054	U	0.0025	0.00054	mg/L		04/02/24 15:31	04/03/24 15:49	1
Nitrobenzene	0.0017	U	0.0050	0.0017	mg/L		04/02/24 15:31	04/03/24 15:49	1
4-Nitrophenol	0.0049	U	0.0072	0.0049	mg/L		04/02/24 15:31	04/03/24 15:49	1
2-Nitrophenol	0.0017	U	0.010	0.0017	mg/L		04/02/24 15:31	04/03/24 15:49	1
4,6-Dinitro-o-cresol	0.0014	U	0.010	0.0014	mg/L		04/02/24 15:31	04/03/24 15:49	1
N-Nitrosodimethylamine	0.0020	U	0.010	0.0020	mg/L		04/02/24 15:31	04/03/24 15:49	1
N-Nitrosodiphenylamine	0.0018	U	0.010	0.0018	mg/L		04/02/24 15:31	04/03/24 15:49	1
N-Nitrosodi-n-propylamine	0.0029	U	0.010	0.0029	mg/L		04/02/24 15:31	04/03/24 15:49	1
Pentachlorophenol	0.00023	U	0.010	0.00023	mg/L		04/02/24 15:31	04/03/24 15:49	1
Phenol	0.00042	U	0.0045	0.00042	mg/L		04/02/24 15:31	04/03/24 15:49	1
Bis(2-ethylhexyl) phthalate	0.00028	U	0.0050	0.00028	mg/L		04/02/24 15:31	04/03/24 15:49	1
Butyl benzyl phthalate	0.00034	U	0.0050	0.00034	mg/L		04/02/24 15:31	04/03/24 15:49	1
Di-n-butyl phthalate	0.00025	U	0.0050	0.00025	mg/L		04/02/24 15:31	04/03/24 15:49	1
Di-n-octyl phthalate	0.00037	U	0.0050	0.00037	mg/L		04/02/24 15:31	04/03/24 15:49	1
Diethyl phthalate	0.0016	U	0.0050	0.0016	mg/L		04/02/24 15:31	04/03/24 15:49	1
Dimethyl phthalate	0.00030	U	0.0025	0.00030	mg/L		04/02/24 15:31	04/03/24 15:49	1
Benzo[a]anthracene	0.00017	U	0.0050	0.00017	mg/L		04/02/24 15:31	04/03/24 15:49	1
Benzo[a]pyrene	0.00036	U	0.0050	0.00036	mg/L		04/02/24 15:31	04/03/24 15:49	1

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QC Sample Results

Client: Messer LLC

Job ID: 860-70887-1

Project/Site: Messer Gas ASU Permit Renewal 3-27-24

Method: 625.1 - Semivolatile Organic Compounds (GC/MS) (Continued)

Lab Sample ID: MB 860-152882/1-A

Matrix: Water

Analysis Batch: 153021

Client Sample ID: Method Blank

Prep Type: Total/NA

Prep Batch: 152882

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Benzo[b]fluoranthene	0.0020	U	0.010	0.0020	mg/L		04/02/24 15:31	04/03/24 15:49	1
Benzo[k]fluoranthene	0.00038	U	0.0050	0.00038	mg/L		04/02/24 15:31	04/03/24 15:49	1
Chrysene	0.00022	U	0.0050	0.00022	mg/L		04/02/24 15:31	04/03/24 15:49	1
Acenaphthylene	0.0014	U	0.010	0.0014	mg/L		04/02/24 15:31	04/03/24 15:49	1
Anthracene	0.0015	U	0.0057	0.0015	mg/L		04/02/24 15:31	04/03/24 15:49	1
Benzo[g,h,i]perylene	0.0027	U	0.010	0.0027	mg/L		04/02/24 15:31	04/03/24 15:49	1
Fluorene	0.0016	U	0.0050	0.0016	mg/L		04/02/24 15:31	04/03/24 15:49	1
Phenanthrene	0.0014	U	0.010	0.0014	mg/L		04/02/24 15:31	04/03/24 15:49	1
Dibenz(a,h)anthracene	0.00025	U	0.0050	0.00025	mg/L		04/02/24 15:31	04/03/24 15:49	1
Indeno[1,2,3-cd]pyrene	0.0023	U	0.010	0.0023	mg/L		04/02/24 15:31	04/03/24 15:49	1
Pyrene	0.00018	U	0.0050	0.00018	mg/L		04/02/24 15:31	04/03/24 15:49	1
2,4-Dinitrophenol	0.0016	U	0.010	0.0016	mg/L		04/02/24 15:31	04/03/24 15:49	1
2,6-Dinitrotoluene	0.0016	U	0.0050	0.0016	mg/L		04/02/24 15:31	04/03/24 15:49	1
N-Nitrosodi-n-butylamine	0.0015	U	0.010	0.0015	mg/L		04/02/24 15:31	04/03/24 15:49	1
N-Nitrosodiethylamine	0.0018	U	0.010	0.0018	mg/L		04/02/24 15:31	04/03/24 15:49	1
Nonylphenol	0.010	U	0.010	0.010	mg/L		04/02/24 15:31	04/03/24 15:49	1
Pentachlorobenzene	0.0011	U	0.010	0.0011	mg/L		04/02/24 15:31	04/03/24 15:49	1
Pyridine	0.0026	U	0.010	0.0026	mg/L		04/02/24 15:31	04/03/24 15:49	1
Total Cresols	0.0026	U	0.010	0.0026	mg/L		04/02/24 15:31	04/03/24 15:49	1

Surrogate	MB %Recovery	MB Qualifier	Limits	Prepared	Analyzed	Dil Fac
2,4,6-Tribromophenol (Surr)	75		31 - 132	04/02/24 15:31	04/03/24 15:49	1
2-Fluorobiphenyl (Surr)	81		29 - 112	04/02/24 15:31	04/03/24 15:49	1
2-Fluorophenol (Surr)	41		28 - 114	04/02/24 15:31	04/03/24 15:49	1
Nitrobenzene-d5 (Surr)	90		15 - 314	04/02/24 15:31	04/03/24 15:49	1
p-Terphenyl-d14 (Surr)	104		20 - 141	04/02/24 15:31	04/03/24 15:49	1
Phenol-d5 (Surr)	29		8 - 424	04/02/24 15:31	04/03/24 15:49	1

Lab Sample ID: LCS 860-152882/2-A

Matrix: Water

Analysis Batch: 153021

Client Sample ID: Lab Control Sample

Prep Type: Total/NA

Prep Batch: 152882

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	Limits
1,2,4,5-Tetrachlorobenzene	0.0400	0.0256		mg/L		64	41 - 125
1,2-Dichlorobenzene	0.0400	0.0264		mg/L		66	60 - 140
1,3-Dichlorobenzene	0.0400	0.0257		mg/L		64	60 - 140
1,4-Dichlorobenzene	0.0400	0.0262		mg/L		66	19 - 121
Acenaphthene	0.0400	0.0308		mg/L		77	60 - 132
Benzidine	0.0400	0.0048	U *-	mg/L		8	25 - 125
1,2,4-Trichlorobenzene	0.0400	0.0252		mg/L		63	57 - 130
Hexachlorobenzene	0.0400	0.0303		mg/L		76	8 - 142
Hexachloroethane	0.0400	0.0247		mg/L		62	55 - 120
2,4,5-Trichlorophenol	0.0400	0.0290		mg/L		73	35 - 111
Bis(2-chloroethyl)ether	0.0400	0.0306		mg/L		76	43 - 126
2-Chloronaphthalene	0.0400	0.0282		mg/L		70	65 - 120
2,4,6-Trichlorophenol	0.0400	0.0295		mg/L		74	52 - 129
p-Chloro-m-cresol	0.0400	0.0285		mg/L		71	41 - 128
2-Chlorophenol	0.0400	0.0249		mg/L		62	36 - 120

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QC Sample Results

Client: Messer LLC

Job ID: 860-70887-1

Project/Site: Messer Gas ASU Permit Renewal 3-27-24

Method: 625.1 - Semivolatile Organic Compounds (GC/MS) (Continued)

Lab Sample ID: LCS 860-152882/2-A

Matrix: Water

Analysis Batch: 153021

Client Sample ID: Lab Control Sample

Prep Type: Total/NA

Prep Batch: 152882

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits
3,3'-Dichlorobenzidine	0.0400	0.0351		mg/L		88	18 - 213
2,4-Dichlorophenol	0.0400	0.0281		mg/L		70	53 - 122
2,4-Dimethylphenol	0.0400	0.0381		mg/L		95	42 - 120
2,4-Dinitrotoluene	0.0400	0.0363		mg/L		91	48 - 127
1,2-Diphenylhydrazine	0.0400	0.0384		mg/L		96	28 - 136
Fluoranthene	0.0400	0.0389		mg/L		97	43 - 121
4-Bromophenyl phenyl ether	0.0400	0.0304		mg/L		76	65 - 120
4-Chlorophenyl phenyl ether	0.0400	0.0302		mg/L		76	38 - 145
o-Cresol	0.0400	0.0216		mg/L		54	14 - 176
Bis(2-chloroethoxy)methane	0.0400	0.0298		mg/L		75	49 - 165
m & p - Cresol	0.0400	0.0225		mg/L		56	14 - 176
bis (2-chloroisopropyl) ether	0.0400	0.0369		mg/L		92	63 - 139
Hexachlorobutadiene	0.0400	0.0237		mg/L		59	38 - 120
Hexachlorocyclopentadiene	0.0400	0.0293		mg/L		73	41 - 125
Isophorone	0.0400	0.0315		mg/L		79	47 - 180
Naphthalene	0.0400	0.0294		mg/L		73	36 - 120
Nitrobenzene	0.0400	0.0317		mg/L		79	54 - 158
4-Nitrophenol	0.0400	0.0140		mg/L		35	13 - 129
2-Nitrophenol	0.0400	0.0290		mg/L		72	45 - 167
4,6-Dinitro-o-cresol	0.0400	0.0382		mg/L		96	53 - 130
N-Nitrosodimethylamine	0.0400	0.0147		mg/L		37	20 - 125
N-Nitrosodiphenylamine	0.0400	0.0353		mg/L		88	2 - 196
N-Nitrosodi-n-propylamine	0.0400	0.0335		mg/L		84	14 - 198
Pentachlorophenol	0.0400	0.0266		mg/L		67	38 - 152
Phenol	0.0400	0.0116		mg/L		29	17 - 120
Bis(2-ethylhexyl) phthalate	0.0400	0.0444		mg/L		111	29 - 137
Butyl benzyl phthalate	0.0400	0.0428		mg/L		107	12 - 140
Di-n-butyl phthalate	0.0400	0.0417		mg/L		104	8 - 120
Di-n-octyl phthalate	0.0400	0.0516		mg/L		129	19 - 132
Diethyl phthalate	0.0400	0.0341		mg/L		85	17 - 120
Dimethyl phthalate	0.0400	0.0317		mg/L		79	25 - 120
Benzo[a]anthracene	0.0400	0.0365		mg/L		91	42 - 133
Benzo[a]pyrene	0.0400	0.0433		mg/L		108	32 - 148
Benzo[b]fluoranthene	0.0400	0.0403		mg/L		101	42 - 140
Benzo[k]fluoranthene	0.0400	0.0402		mg/L		100	25 - 146
Chrysene	0.0400	0.0349		mg/L		87	44 - 140
Acenaphthylene	0.0400	0.0307		mg/L		77	54 - 126
Anthracene	0.0400	0.0377		mg/L		94	43 - 120
Benzo[g,h,i]perylene	0.0400	0.0389		mg/L		97	13 - 195
Fluorene	0.0400	0.0324		mg/L		81	70 - 120
Phenanthrene	0.0400	0.0360		mg/L		90	65 - 120
Dibenz(a,h)anthracene	0.0400	0.0422		mg/L		105	16 - 200
Indeno[1,2,3-cd]pyrene	0.0400	0.0417		mg/L		104	13 - 151
Pyrene	0.0400	0.0404		mg/L		101	70 - 120
2,4-Dinitrophenol	0.0400	0.0227		mg/L		57	12 - 173
2,6-Dinitrotoluene	0.0400	0.0321		mg/L		80	68 - 137
N-Nitrosodi-n-butylamine	0.0400	0.0277		mg/L		69	33 - 141
N-Nitrosodiethylamine	0.0400	0.0291		mg/L		73	30 - 160
Pentachlorobenzene	0.0400	0.0259		mg/L		65	25 - 131

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QC Sample Results

Client: Messer LLC

Job ID: 860-70887-1

Project/Site: Messer Gas ASU Permit Renewal 3-27-24

Method: 625.1 - Semivolatile Organic Compounds (GC/MS) (Continued)

Lab Sample ID: LCS 860-152882/2-A

Matrix: Water

Analysis Batch: 153021

Client Sample ID: Lab Control Sample

Prep Type: Total/NA

Prep Batch: 152882

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits
Pyridine	0.0800	0.00708	J	mg/L		9	5 - 94

Surrogate	LCS %Recovery	LCS Qualifier	Limits
2,4,6-Tribromophenol (Surr)	74		31 - 132
2-Fluorobiphenyl (Surr)	69		29 - 112
2-Fluorophenol (Surr)	36		28 - 114
Nitrobenzene-d5 (Surr)	77		15 - 314
p-Terphenyl-d14 (Surr)	88		20 - 141
Phenol-d5 (Surr)	25		8 - 424

Lab Sample ID: LCSD 860-152882/3-A

Matrix: Water

Analysis Batch: 153021

Client Sample ID: Lab Control Sample Dup

Prep Type: Total/NA

Prep Batch: 152882

Analyte	Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec Limits	RPD	Limit
1,2,4,5-Tetrachlorobenzene	0.0400	0.0262		mg/L		66	41 - 125	2	30
1,2-Dichlorobenzene	0.0400	0.0259		mg/L		65	60 - 140	2	30
1,3-Dichlorobenzene	0.0400	0.0254		mg/L		63	60 - 140	1	30
1,4-Dichlorobenzene	0.0400	0.0261		mg/L		65	19 - 121	1	30
Acenaphthene	0.0400	0.0317		mg/L		79	60 - 132	3	29
Benzidine	0.0400	0.0048	U *	mg/L		10	25 - 125	20	30
1,2,4-Trichlorobenzene	0.0400	0.0242		mg/L		60	57 - 130	4	30
Hexachlorobenzene	0.0400	0.0321		mg/L		80	8 - 142	6	30
Hexachloroethane	0.0400	0.0242		mg/L		60	55 - 120	2	30
2,4,5-Trichlorophenol	0.0400	0.0300		mg/L		75	35 - 111	3	30
Bis(2-chloroethyl)ether	0.0400	0.0320		mg/L		80	43 - 126	5	30
2-Chloronaphthalene	0.0400	0.0286		mg/L		71	65 - 120	1	15
2,4,6-Trichlorophenol	0.0400	0.0302		mg/L		76	52 - 129	2	30
p-Chloro-m-cresol	0.0400	0.0286		mg/L		71	41 - 128	0	30
2-Chlorophenol	0.0400	0.0254		mg/L		64	36 - 120	2	30
3,3'-Dichlorobenzidine	0.0400	0.0380		mg/L		95	18 - 213	8	30
2,4-Dichlorophenol	0.0400	0.0282		mg/L		70	53 - 122	0	30
2,4-Dimethylphenol	0.0400	0.0378		mg/L		95	42 - 120	1	30
2,4-Dinitrotoluene	0.0400	0.0384		mg/L		96	48 - 127	6	25
1,2-Diphenylhydrazine	0.0400	0.0398		mg/L		100	28 - 136	4	30
Fluoranthene	0.0400	0.0415		mg/L		104	43 - 121	6	30
4-Bromophenyl phenyl ether	0.0400	0.0317		mg/L		79	65 - 120	4	26
4-Chlorophenyl phenyl ether	0.0400	0.0306		mg/L		77	38 - 145	1	30
o-Cresol	0.0400	0.0221		mg/L		55	14 - 176	2	30
Bis(2-chloroethoxy)methane	0.0400	0.0295		mg/L		74	49 - 165	1	30
m & p - Cresol	0.0400	0.0234		mg/L		59	14 - 176	4	30
bis (2-chloroisopropyl) ether	0.0400	0.0369		mg/L		92	63 - 139	0	30
Hexachlorobutadiene	0.0400	0.0233		mg/L		58	38 - 120	1	30
Hexachlorocyclopentadiene	0.0400	0.0299		mg/L		75	41 - 125	2	30
Isophorone	0.0400	0.0315		mg/L		79	47 - 180	0	30
Naphthalene	0.0400	0.0287		mg/L		72	36 - 120	3	30
Nitrobenzene	0.0400	0.0311		mg/L		78	54 - 158	2	30
4-Nitrophenol	0.0400	0.0159		mg/L		40	13 - 129	13	30

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QC Sample Results

Client: Messer LLC
Project/Site: Messer Gas ASU Permit Renewal 3-27-24

Job ID: 860-70887-1

Method: 625.1 - Semivolatile Organic Compounds (GC/MS) (Continued)

Lab Sample ID: LCSD 860-152882/3-A

Matrix: Water

Analysis Batch: 153021

Client Sample ID: Lab Control Sample Dup

Prep Type: Total/NA

Prep Batch: 152882

Analyte	Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec Limits	RPD	RPD Limit
2-Nitrophenol	0.0400	0.0288		mg/L		72	45 - 167	1	30
4,6-Dinitro-o-cresol	0.0400	0.0423		mg/L		106	53 - 130	10	30
N-Nitrosodimethylamine	0.0400	0.0149		mg/L		37	20 - 125	1	30
N-Nitrosodiphenylamine	0.0400	0.0379		mg/L		95	2 - 196	7	30
N-Nitrosodi-n-propylamine	0.0400	0.0336		mg/L		84	14 - 198	0	30
Pentachlorophenol	0.0400	0.0279		mg/L		70	38 - 152	5	30
Phenol	0.0400	0.0121		mg/L		30	17 - 120	4	30
Bis(2-ethylhexyl) phthalate	0.0400	0.0474		mg/L		119	29 - 137	7	30
Butyl benzyl phthalate	0.0400	0.0457		mg/L		114	12 - 140	7	30
Di-n-butyl phthalate	0.0400	0.0442		mg/L		110	8 - 120	6	28
Di-n-octyl phthalate	0.0400	0.0551	+	mg/L		138	19 - 132	7	30
Diethyl phthalate	0.0400	0.0356		mg/L		89	17 - 120	4	30
Dimethyl phthalate	0.0400	0.0324		mg/L		81	25 - 120	2	30
Benzo[a]anthracene	0.0400	0.0391		mg/L		98	42 - 133	7	30
Benzo[a]pyrene	0.0400	0.0458		mg/L		115	32 - 148	6	30
Benzo[b]fluoranthene	0.0400	0.0426		mg/L		107	42 - 140	6	30
Benzo[k]fluoranthene	0.0400	0.0436		mg/L		109	25 - 146	8	30
Chrysene	0.0400	0.0380		mg/L		95	44 - 140	9	30
Acenaphthylene	0.0400	0.0309		mg/L		77	54 - 126	1	30
Anthracene	0.0400	0.0398		mg/L		100	43 - 120	5	30
Benzo[g,h,i]perylene	0.0400	0.0409		mg/L		102	13 - 195	5	30
Fluorene	0.0400	0.0330		mg/L		82	70 - 120	2	23
Phenanthrene	0.0400	0.0377		mg/L		94	65 - 120	5	30
Dibenz(a,h)anthracene	0.0400	0.0449		mg/L		112	16 - 200	6	30
Indeno[1,2,3-cd]pyrene	0.0400	0.0439		mg/L		110	13 - 151	5	30
Pyrene	0.0400	0.0430		mg/L		107	70 - 120	6	30
2,4-Dinitrophenol	0.0400	0.0238		mg/L		59	12 - 173	5	30
2,6-Dinitrotoluene	0.0400	0.0334		mg/L		83	68 - 137	4	29
N-Nitrosodi-n-butylamine	0.0400	0.0275		mg/L		69	33 - 141	1	30
N-Nitrosodiethylamine	0.0400	0.0291		mg/L		73	30 - 160	0	30
Pentachlorobenzene	0.0400	0.0265		mg/L		66	25 - 131	2	30
Pyridine	0.0800	0.00794	J	mg/L		10	5 - 94	11	30

Surrogate	LCSD %Recovery	LCSD Qualifier	Limits
2,4,6-Tribromophenol (Surr)	83		31 - 132
2-Fluorobiphenyl (Surr)	72		29 - 112
2-Fluorophenol (Surr)	38		28 - 114
Nitrobenzene-d5 (Surr)	78		15 - 314
p-Terphenyl-d14 (Surr)	98		20 - 141
Phenol-d5 (Surr)	28		8 - 424

Method: 608.3 - Polychlorinated Biphenyls (PCBs) (GC)

Lab Sample ID: MB 860-154669/1-A

Matrix: Water

Analysis Batch: 154783

Client Sample ID: Method Blank

Prep Type: Total/NA

Prep Batch: 154669

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
PCB-1016	0.000013	U	0.00010	0.000013	mg/L		04/13/24 06:30	04/15/24 09:59	1

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QC Sample Results

Client: Messer LLC
Project/Site: Messer Gas ASU Permit Renewal 3-27-24

Job ID: 860-70887-1

Method: 608.3 - Polychlorinated Biphenyls (PCBs) (GC) (Continued)

Lab Sample ID: MB 860-154669/1-A
Matrix: Water
Analysis Batch: 154783

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 154669

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
PCB-1221	0.000013	U	0.00010	0.000013	mg/L		04/13/24 06:30	04/15/24 09:59	1
PCB-1232	0.000013	U	0.00010	0.000013	mg/L		04/13/24 06:30	04/15/24 09:59	1
PCB-1242	0.000013	U	0.00010	0.000013	mg/L		04/13/24 06:30	04/15/24 09:59	1
PCB-1248	0.000013	U	0.00010	0.000013	mg/L		04/13/24 06:30	04/15/24 09:59	1
PCB-1254	0.0000078	U	0.00010	0.0000078	mg/L		04/13/24 06:30	04/15/24 09:59	1
PCB-1260	0.0000078	U	0.00010	0.0000078	mg/L		04/13/24 06:30	04/15/24 09:59	1
Polychlorinated biphenyls, Total	0.00010	U	0.00010	0.00010	mg/L		04/13/24 06:30	04/15/24 09:59	1

Surrogate	MB %Recovery	MB Qualifier	Limits	Prepared	Analyzed	Dil Fac
Tetrachloro-m-xylene (Surr)	87		18 - 126	04/13/24 06:30	04/15/24 09:59	1
DCB Decachlorobiphenyl (Surr)	128		15 - 136	04/13/24 06:30	04/15/24 09:59	1

Lab Sample ID: LCS 860-154669/4-A
Matrix: Water
Analysis Batch: 154783

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 154669

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits
PCB-1016	0.00100	0.000951		mg/L		95	61 - 103
PCB-1260	0.00100	0.00112		mg/L		112	37 - 130

Surrogate	LCS %Recovery	LCS Qualifier	Limits
Tetrachloro-m-xylene (Surr)	95		18 - 126
DCB Decachlorobiphenyl (Surr)	136		15 - 136

Lab Sample ID: LCSD 860-154669/5-A
Matrix: Water
Analysis Batch: 154783

Client Sample ID: Lab Control Sample Dup
Prep Type: Total/NA
Prep Batch: 154669

Analyte	Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec Limits	RPD	RPD Limit
PCB-1016	0.00100	0.000849		mg/L		85	61 - 103	11	24
PCB-1260	0.00100	0.00110		mg/L		110	37 - 130	1	28

Surrogate	LCSD %Recovery	LCSD Qualifier	Limits
Tetrachloro-m-xylene (Surr)	83		18 - 126
DCB Decachlorobiphenyl (Surr)	132		15 - 136

Method: 300.0 - Anions, Ion Chromatography

Lab Sample ID: MB 860-152429/23
Matrix: Water
Analysis Batch: 152429

Client Sample ID: Method Blank
Prep Type: Total/NA

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Bromide	0.071	U	0.50	0.071	mg/L			03/31/24 11:58	1
Chloride	0.25	U	0.50	0.25	mg/L			03/31/24 11:58	1
Fluoride	0.10	U	0.50	0.10	mg/L			03/31/24 11:58	1
Sulfate	0.20	U	0.50	0.20	mg/L			03/31/24 11:58	1

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QC Sample Results

Client: Messer LLC
Project/Site: Messer Gas ASU Permit Renewal 3-27-24

Job ID: 860-70887-1

Method: 300.0 - Anions, Ion Chromatography (Continued)

Lab Sample ID: LCS 860-152429/24

Matrix: Water

Analysis Batch: 152429

Client Sample ID: Lab Control Sample

Prep Type: Total/NA

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits
Bromide	10.0	10.3		mg/L		103	90 - 110
Chloride	10.0	9.39		mg/L		94	90 - 110
Fluoride	10.0	10.8		mg/L		108	90 - 110
Sulfate	10.0	10.1		mg/L		101	90 - 110

Lab Sample ID: LCSD 860-152429/25

Matrix: Water

Analysis Batch: 152429

Client Sample ID: Lab Control Sample Dup

Prep Type: Total/NA

Analyte	Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec Limits	RPD	RPD Limit
Bromide	10.0	10.3		mg/L		103	90 - 110	0	20
Chloride	10.0	9.43		mg/L		94	90 - 110	0	20
Fluoride	10.0	10.8		mg/L		108	90 - 110	0	20
Sulfate	10.0	10.2		mg/L		102	90 - 110	1	20

Lab Sample ID: MB 860-152430/23

Matrix: Water

Analysis Batch: 152430

Client Sample ID: Method Blank

Prep Type: Total/NA

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Nitrate as N	0.039	U	0.10	0.039	mg/L			03/31/24 11:58	1
Nitrite as N	0.029	U	0.10	0.029	mg/L			03/31/24 11:58	1
Nitrate Nitrite as N	0.039	U	0.10	0.039	mg/L			03/31/24 11:58	1

Lab Sample ID: MB 860-152430/59

Matrix: Water

Analysis Batch: 152430

Client Sample ID: Method Blank

Prep Type: Total/NA

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Nitrate as N	0.039	U	0.10	0.039	mg/L			03/29/24 22:21	1
Nitrite as N	0.029	U	0.10	0.029	mg/L			03/29/24 22:21	1
Nitrate Nitrite as N	0.039	U	0.10	0.039	mg/L			03/29/24 22:21	1

Lab Sample ID: LCS 860-152430/24

Matrix: Water

Analysis Batch: 152430

Client Sample ID: Lab Control Sample

Prep Type: Total/NA

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits
Nitrate as N	10.0	10.5		mg/L		105	80 - 120
Nitrite as N	10.0	10.4		mg/L		104	80 - 120

Lab Sample ID: LCSD 860-152430/25

Matrix: Water

Analysis Batch: 152430

Client Sample ID: Lab Control Sample Dup

Prep Type: Total/NA

Analyte	Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec Limits	RPD	RPD Limit
Nitrate as N	10.0	10.5		mg/L		105	80 - 120	0	20
Nitrite as N	10.0	10.4		mg/L		104	80 - 120	0	20

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QC Sample Results

Client: Messer LLC
Project/Site: Messer Gas ASU Permit Renewal 3-27-24

Job ID: 860-70887-1

Method: 300.0 - Anions, Ion Chromatography (Continued)

Lab Sample ID: LLCS 860-152430/7
Matrix: Water
Analysis Batch: 152430

Client Sample ID: Lab Control Sample
Prep Type: Total/NA

Analyte	Spike Added	LLCS Result	LLCS Qualifier	Unit	D	%Rec	%Rec Limits
Nitrate as N	0.500	0.497		mg/L		99	50 - 150
Nitrite as N	0.500	0.416		mg/L		83	50 - 150

Method: 1631E - Mercury, Low Level (CVAFS)

Lab Sample ID: MB 400-666544/3-A
Matrix: Water
Analysis Batch: 666639

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 666544

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Mercury	0.20	U	0.50	0.20	ng/L		04/01/24 16:00	04/02/24 09:53	1

Lab Sample ID: LCS 400-666544/4-A
Matrix: Water
Analysis Batch: 666639

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 666544

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits
Mercury	5.00	4.98		ng/L		100	79 - 121

Lab Sample ID: LCSD 400-666544/5-A
Matrix: Water
Analysis Batch: 666639

Client Sample ID: Lab Control Sample Dup
Prep Type: Total/NA
Prep Batch: 666544

Analyte	Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec Limits	RPD	RPD Limit
Mercury	5.00	4.99		ng/L		100	79 - 121	0	20

Method: 200.8 - Metals (ICP/MS)

Lab Sample ID: MB 860-152924/1-A
Matrix: Water
Analysis Batch: 153111

Client Sample ID: Method Blank
Prep Type: Total Recoverable
Prep Batch: 152924

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Aluminum	0.0030	U	0.020	0.0030	mg/L		04/02/24 18:00	04/03/24 19:06	1
Antimony	0.0011	U	0.0020	0.0011	mg/L		04/02/24 18:00	04/03/24 19:06	1
Arsenic	0.00034	U	0.0040	0.00034	mg/L		04/02/24 18:00	04/03/24 19:06	1
Barium	0.00029	U	0.0040	0.00029	mg/L		04/02/24 18:00	04/03/24 19:06	1
Beryllium	0.00015	U	0.0020	0.00015	mg/L		04/02/24 18:00	04/03/24 19:06	1
Cadmium	0.00026	U	0.0020	0.00026	mg/L		04/02/24 18:00	04/03/24 19:06	1
Chromium	0.00033	U	0.0040	0.00033	mg/L		04/02/24 18:00	04/03/24 19:06	1
Cobalt	0.00026	U	0.0020	0.00026	mg/L		04/02/24 18:00	04/03/24 19:06	1
Copper	0.00069	U	0.0040	0.00069	mg/L		04/02/24 18:00	04/03/24 19:06	1
Iron	0.0020	U	0.020	0.0020	mg/L		04/02/24 18:00	04/03/24 19:06	1
Lead	0.00014	U	0.0020	0.00014	mg/L		04/02/24 18:00	04/03/24 19:06	1
Magnesium	0.0092	U	0.10	0.0092	mg/L		04/02/24 18:00	04/03/24 19:06	1
Manganese	0.00016	U	0.0020	0.00016	mg/L		04/02/24 18:00	04/03/24 19:06	1
Molybdenum	0.00016	U	0.0020	0.00016	mg/L		04/02/24 18:00	04/03/24 19:06	1
Nickel	0.00049	U	0.0020	0.00049	mg/L		04/02/24 18:00	04/03/24 19:06	1
Selenium	0.00069	U	0.0020	0.00069	mg/L		04/02/24 18:00	04/03/24 19:06	1
Silver	0.00012	U	0.0020	0.00012	mg/L		04/02/24 18:00	04/03/24 19:06	1

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QC Sample Results

Client: Messer LLC
Project/Site: Messer Gas ASU Permit Renewal 3-27-24

Job ID: 860-70887-1

Method: 200.8 - Metals (ICP/MS) (Continued)

Lab Sample ID: MB 860-152924/1-A
Matrix: Water
Analysis Batch: 153111

Client Sample ID: Method Blank
Prep Type: Total Recoverable
Prep Batch: 152924

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Thallium	0.00022	U	0.0020	0.00022	mg/L		04/02/24 18:00	04/03/24 19:06	1
Tin	0.00033	U	0.0020	0.00033	mg/L		04/02/24 18:00	04/03/24 19:06	1
Titanium	0.00042	U	0.0040	0.00042	mg/L		04/02/24 18:00	04/03/24 19:06	1
Zinc	0.00089	U	0.0040	0.00089	mg/L		04/02/24 18:00	04/03/24 19:06	1

Lab Sample ID: MB 860-152924/1-A
Matrix: Water
Analysis Batch: 153322

Client Sample ID: Method Blank
Prep Type: Total Recoverable
Prep Batch: 152924

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Silver	0.00012	U	0.0020	0.00012	mg/L		04/02/24 18:00	04/04/24 13:02	1

Lab Sample ID: MB 860-152924/1-A
Matrix: Water
Analysis Batch: 153356

Client Sample ID: Method Blank
Prep Type: Total Recoverable
Prep Batch: 152924

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Boron	0.0025	U	0.010	0.0025	mg/L		04/02/24 18:00	04/04/24 17:48	1

Lab Sample ID: LCS 860-152924/2-A
Matrix: Water
Analysis Batch: 153111

Client Sample ID: Lab Control Sample
Prep Type: Total Recoverable
Prep Batch: 152924

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits
Aluminum	0.500	0.493		mg/L		99	85 - 115
Antimony	0.100	0.0894		mg/L		89	85 - 115
Arsenic	0.100	0.0941		mg/L		94	85 - 115
Barium	0.100	0.0893		mg/L		89	85 - 115
Beryllium	0.100	0.0987		mg/L		99	85 - 115
Cadmium	0.100	0.0942		mg/L		94	85 - 115
Chromium	0.100	0.0963		mg/L		96	85 - 115
Cobalt	0.100	0.0952		mg/L		95	85 - 115
Copper	0.100	0.0949		mg/L		95	85 - 115
Iron	0.500	0.472		mg/L		94	85 - 115
Lead	0.100	0.0928		mg/L		93	85 - 115
Magnesium	2.50	2.38		mg/L		95	85 - 115
Manganese	0.100	0.0970		mg/L		97	85 - 115
Molybdenum	0.100	0.0930		mg/L		93	85 - 115
Nickel	0.100	0.0948		mg/L		95	85 - 115
Selenium	0.100	0.0945		mg/L		94	85 - 115
Thallium	0.100	0.0904		mg/L		90	85 - 115
Tin	0.100	0.0919		mg/L		92	85 - 115
Titanium	0.100	0.0946		mg/L		95	85 - 115
Zinc	0.100	0.0958		mg/L		96	85 - 115

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QC Sample Results

Client: Messer LLC

Job ID: 860-70887-1

Project/Site: Messer Gas ASU Permit Renewal 3-27-24

Method: 200.8 - Metals (ICP/MS) (Continued)

Lab Sample ID: LCS 860-152924/2-A

Matrix: Water

Analysis Batch: 153322

Client Sample ID: Lab Control Sample

Prep Type: Total Recoverable

Prep Batch: 152924

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits
Silver	0.0500	0.0467		mg/L		93	85 - 115

Lab Sample ID: LCS 860-152924/2-A

Matrix: Water

Analysis Batch: 153356

Client Sample ID: Lab Control Sample

Prep Type: Total Recoverable

Prep Batch: 152924

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits
Boron	0.100	0.0880		mg/L		88	85 - 115

Lab Sample ID: LCSD 860-152924/3-A

Matrix: Water

Analysis Batch: 153111

Client Sample ID: Lab Control Sample Dup

Prep Type: Total Recoverable

Prep Batch: 152924

Analyte	Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec Limits	RPD	RPD Limit
Aluminum	0.500	0.487		mg/L		97	85 - 115	1	20
Antimony	0.100	0.0910		mg/L		91	85 - 115	2	20
Arsenic	0.100	0.0946		mg/L		95	85 - 115	1	20
Barium	0.100	0.0904		mg/L		90	85 - 115	1	20
Beryllium	0.100	0.0981		mg/L		98	85 - 115	1	20
Cadmium	0.100	0.0944		mg/L		94	85 - 115	0	20
Chromium	0.100	0.0966		mg/L		97	85 - 115	0	20
Cobalt	0.100	0.0954		mg/L		95	85 - 115	0	20
Copper	0.100	0.0951		mg/L		95	85 - 115	0	20
Iron	0.500	0.468		mg/L		94	85 - 115	1	20
Lead	0.100	0.0934		mg/L		93	85 - 115	1	20
Magnesium	2.50	2.34		mg/L		94	85 - 115	1	20
Manganese	0.100	0.0971		mg/L		97	85 - 115	0	20
Molybdenum	0.100	0.0940		mg/L		94	85 - 115	1	20
Nickel	0.100	0.0952		mg/L		95	85 - 115	0	20
Selenium	0.100	0.0949		mg/L		95	85 - 115	0	20
Silver	0.0500	0.0429		mg/L		86	85 - 115	3	20
Thallium	0.100	0.0910		mg/L		91	85 - 115	1	20
Tin	0.100	0.0928		mg/L		93	85 - 115	1	20
Titanium	0.100	0.0926		mg/L		93	85 - 115	2	20
Zinc	0.100	0.0958		mg/L		96	85 - 115	0	20

Lab Sample ID: LCSD 860-152924/3-A

Matrix: Water

Analysis Batch: 153322

Client Sample ID: Lab Control Sample Dup

Prep Type: Total Recoverable

Prep Batch: 152924

Analyte	Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec Limits	RPD	RPD Limit
Silver	0.0500	0.0477		mg/L		95	85 - 115	2	20

Lab Sample ID: LCSD 860-152924/3-A

Matrix: Water

Analysis Batch: 153356

Client Sample ID: Lab Control Sample Dup

Prep Type: Total Recoverable

Prep Batch: 152924

Analyte	Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec Limits	RPD	RPD Limit
Boron	0.100	0.0898		mg/L		90	85 - 115	2	20

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QC Sample Results

Client: Messer LLC
Project/Site: Messer Gas ASU Permit Renewal 3-27-24

Job ID: 860-70887-1

Method: 1664B - HEM and SGT-HEM

Lab Sample ID: MB 860-153724/1

Matrix: Water

Analysis Batch: 153724

Client Sample ID: Method Blank

Prep Type: Total/NA

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
HEM	1.6	U	5.0	1.6	mg/L			04/08/24 11:12	1

Lab Sample ID: LCS 860-153724/2

Matrix: Water

Analysis Batch: 153724

Client Sample ID: Lab Control Sample

Prep Type: Total/NA

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits
HEM	40.0	40.7		mg/L		102	78 - 114

Lab Sample ID: LCSD 860-153724/3

Matrix: Water

Analysis Batch: 153724

Client Sample ID: Lab Control Sample Dup

Prep Type: Total/NA

Analyte	Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec Limits	RPD	RPD Limit
HEM	40.0	41.2		mg/L		103	78 - 114	1	18

Method: 350.1 - Nitrogen, Ammonia

Lab Sample ID: MB 860-153225/137

Matrix: Water

Analysis Batch: 153225

Client Sample ID: Method Blank

Prep Type: Total/NA

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Ammonia	0.051	U	0.10	0.051	mg/L			04/03/24 19:52	1

Lab Sample ID: MB 860-153225/179

Matrix: Water

Analysis Batch: 153225

Client Sample ID: Method Blank

Prep Type: Total/NA

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Ammonia	0.051	U	0.10	0.051	mg/L			04/03/24 22:12	1

Lab Sample ID: LCS 860-153225/180

Matrix: Water

Analysis Batch: 153225

Client Sample ID: Lab Control Sample

Prep Type: Total/NA

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits
Ammonia	1.00	0.966		mg/L		97	90 - 110

Lab Sample ID: LCSD 860-153225/181

Matrix: Water

Analysis Batch: 153225

Client Sample ID: Lab Control Sample Dup

Prep Type: Total/NA

Analyte	Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec Limits	RPD	RPD Limit
Ammonia	1.00	0.979		mg/L		98	90 - 110	1	20

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QC Sample Results

Client: Messer LLC
Project/Site: Messer Gas ASU Permit Renewal 3-27-24

Job ID: 860-70887-1

Method: 350.1 - Nitrogen, Ammonia (Continued)

Lab Sample ID: LLCS 860-153225/140
Matrix: Water
Analysis Batch: 153225

Client Sample ID: Lab Control Sample
Prep Type: Total/NA

Analyte	Spike Added	LLCS Result	LLCS Qualifier	Unit	D	%Rec	%Rec Limits
Ammonia	0.100	0.0910	J	mg/L		91	50 - 150

Method: 351.2 - Nitrogen, Total Kjeldahl

Lab Sample ID: MB 860-152741/32-A
Matrix: Water
Analysis Batch: 153251

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 152741

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Nitrogen, Kjeldahl	0.089	U	0.20	0.089	mg/L		04/01/24 20:31	04/03/24 11:57	1

Lab Sample ID: MB 860-152741/4-A
Matrix: Water
Analysis Batch: 153251

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 152741

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Nitrogen, Kjeldahl	0.089	U	0.20	0.089	mg/L		04/01/24 20:31	04/03/24 11:05	1

Lab Sample ID: LCS 860-152741/33-A
Matrix: Water
Analysis Batch: 153251

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 152741

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits
Nitrogen, Kjeldahl	2.00	1.93		mg/L		96	90 - 110

Lab Sample ID: LCSD 860-152741/34-A
Matrix: Water
Analysis Batch: 153251

Client Sample ID: Lab Control Sample Dup
Prep Type: Total/NA
Prep Batch: 152741

Analyte	Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec Limits	RPD	RPD Limit
Nitrogen, Kjeldahl	2.00	2.00		mg/L		100	90 - 110	4	20

Lab Sample ID: LLCS 860-152741/5-A
Matrix: Water
Analysis Batch: 153251

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 152741

Analyte	Spike Added	LLCS Result	LLCS Qualifier	Unit	D	%Rec	%Rec Limits
Nitrogen, Kjeldahl	0.200	0.240		mg/L		120	50 - 150

Method: 365.1 - Phosphorus, Total

Lab Sample ID: MB 860-154088/40
Matrix: Water
Analysis Batch: 154088

Client Sample ID: Method Blank
Prep Type: Total/NA

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Phosphorus Total	0.014	U	0.020	0.014	mg/L			04/09/24 18:25	1

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QC Sample Results

Client: Messer LLC
Project/Site: Messer Gas ASU Permit Renewal 3-27-24

Job ID: 860-70887-1

Method: 365.1 - Phosphorus, Total (Continued)

Lab Sample ID: LCS 860-154088/41
Matrix: Water
Analysis Batch: 154088

Client Sample ID: Lab Control Sample
Prep Type: Total/NA

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits
Phosphorus Total	0.250	0.257		mg/L		103	90 - 110

Lab Sample ID: LCSD 860-154088/42
Matrix: Water
Analysis Batch: 154088

Client Sample ID: Lab Control Sample Dup
Prep Type: Total/NA

Analyte	Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec Limits	RPD	RPD Limit
Phosphorus Total	0.250	0.271		mg/L		108	90 - 110	5	20

Method: 7196A - Chromium, Hexavalent

Lab Sample ID: MB 860-151876/3
Matrix: Water
Analysis Batch: 151876

Client Sample ID: Method Blank
Prep Type: Total/NA

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Cr (VI)	0.0034	U	0.010	0.0034	mg/L			03/27/24 12:02	1

Lab Sample ID: LCS 860-151876/4
Matrix: Water
Analysis Batch: 151876

Client Sample ID: Lab Control Sample
Prep Type: Total/NA

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits
Cr (VI)	0.200	0.191		mg/L		96	85 - 115

Lab Sample ID: LCSD 860-151876/5
Matrix: Water
Analysis Batch: 151876

Client Sample ID: Lab Control Sample Dup
Prep Type: Total/NA

Analyte	Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec Limits	RPD	RPD Limit
Cr (VI)	0.200	0.191		mg/L		96	85 - 115	0	20

Method: 8000 - COD

Lab Sample ID: MB 860-154031/3
Matrix: Water
Analysis Batch: 154031

Client Sample ID: Method Blank
Prep Type: Total/NA

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Chemical Oxygen Demand	3.4	U	20	3.4	mg/L			04/09/24 20:17	1

Lab Sample ID: LCS 860-154031/4
Matrix: Water
Analysis Batch: 154031

Client Sample ID: Lab Control Sample
Prep Type: Total/NA

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits
Chemical Oxygen Demand	100	110		mg/L		110	90 - 110

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QC Sample Results

Client: Messer LLC
Project/Site: Messer Gas ASU Permit Renewal 3-27-24

Job ID: 860-70887-1

Method: OIA-1677 - Cyanide, Available (Flow Injection)

Lab Sample ID: MB 410-489850/17
Matrix: Water
Analysis Batch: 489850

Client Sample ID: Method Blank
Prep Type: Total/NA

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Cyanide, Available	0.0050	U	0.0060	0.0050	mg/L			04/02/24 15:45	1

Lab Sample ID: LCS 410-489850/16
Matrix: Water
Analysis Batch: 489850

Client Sample ID: Lab Control Sample
Prep Type: Total/NA

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits
Cyanide, Available	0.0500	0.0472		mg/L		94	82 - 132

Method: SM 2120B - Color, Colorimetric

Lab Sample ID: MB 860-153543/3
Matrix: Water
Analysis Batch: 153543

Client Sample ID: Method Blank
Prep Type: Total/NA

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Color, Apparent	5.0	U	5.0	5.0	Color Units			03/28/24 17:00	1
Color, True	5.0	U	5.0	5.0	Color Units			03/28/24 17:00	1
pH	na		0.10	0.10	S.U.			03/28/24 17:00	1

Method: SM 2320B - Alkalinity

Lab Sample ID: MB 860-152609/9
Matrix: Water
Analysis Batch: 152609

Client Sample ID: Method Blank
Prep Type: Total/NA

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Alkalinity	4.0	U	4.0	4.0	mg/L			03/29/24 16:09	1
Bicarbonate Alkalinity as CaCO3	4.0	U	4.0	4.0	mg/L			03/29/24 16:09	1
Carbonate Alkalinity as CaCO3	4.0	U	4.0	4.0	mg/L			03/29/24 16:09	1
Hydroxide Alkalinity	4.0	U	4.0	4.0	mg/L			03/29/24 16:09	1
Phenolphthalein Alkalinity	4.0	U	4.0	4.0	mg/L			03/29/24 16:09	1

Lab Sample ID: LCS 860-152609/10
Matrix: Water
Analysis Batch: 152609

Client Sample ID: Lab Control Sample
Prep Type: Total/NA

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits
Alkalinity	250	235		mg/L		94	85 - 115

Lab Sample ID: LCSD 860-152609/11
Matrix: Water
Analysis Batch: 152609

Client Sample ID: Lab Control Sample Dup
Prep Type: Total/NA

Analyte	Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec Limits	RPD	RPD Limit
Alkalinity	250	236		mg/L		94	85 - 115	0	20

Eurofins Houston

QC Sample Results

Client: Messer LLC
Project/Site: Messer Gas ASU Permit Renewal 3-27-24

Job ID: 860-70887-1

Method: SM 2540C - Solids, Total Dissolved (TDS)

Lab Sample ID: MB 860-152828/1
Matrix: Water
Analysis Batch: 152828

Client Sample ID: Method Blank
Prep Type: Total/NA

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Total Dissolved Solids	5.0	U	5.0	5.0	mg/L			04/02/24 12:40	1

Lab Sample ID: LCS 860-152828/2
Matrix: Water
Analysis Batch: 152828

Client Sample ID: Lab Control Sample
Prep Type: Total/NA

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits
Total Dissolved Solids	1000	1110		mg/L		111	80 - 120

Lab Sample ID: LCSD 860-152828/3
Matrix: Water
Analysis Batch: 152828

Client Sample ID: Lab Control Sample Dup
Prep Type: Total/NA

Analyte	Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec Limits	RPD	RPD Limit
Total Dissolved Solids	1000	1110		mg/L		111	80 - 120	0	10

Lab Sample ID: LLCS 860-152828/4
Matrix: Water
Analysis Batch: 152828

Client Sample ID: Lab Control Sample
Prep Type: Total/NA

Analyte	Spike Added	LLCS Result	LLCS Qualifier	Unit	D	%Rec	%Rec Limits
Total Dissolved Solids	5.00	6.00		mg/L		120	50 - 150

Method: SM 2540D - Solids, Total Suspended (TSS)

Lab Sample ID: MB 860-152929/1
Matrix: Water
Analysis Batch: 152929

Client Sample ID: Method Blank
Prep Type: Total/NA

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Total Suspended Solids	4.0	U	4.0	4.0	mg/L			04/02/24 18:32	1

Lab Sample ID: LCS 860-152929/2
Matrix: Water
Analysis Batch: 152929

Client Sample ID: Lab Control Sample
Prep Type: Total/NA

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits
Total Suspended Solids	100	112		mg/L		112	80 - 120

Lab Sample ID: LCSD 860-152929/3
Matrix: Water
Analysis Batch: 152929

Client Sample ID: Lab Control Sample Dup
Prep Type: Total/NA

Analyte	Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec Limits	RPD	RPD Limit
Total Suspended Solids	100	112		mg/L		112	80 - 120	0	10

Eurofins Houston

QC Sample Results

Client: Messer LLC
Project/Site: Messer Gas ASU Permit Renewal 3-27-24

Job ID: 860-70887-1

Method: SM 4500 Cl G - Chlorine, Residual

Lab Sample ID: MB 860-152922/3
Matrix: Water
Analysis Batch: 152922

Client Sample ID: Method Blank
Prep Type: Total/NA

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Chlorine, Total Residual	0.050	U	0.050	0.050	mg/L			04/02/24 18:15	1

Lab Sample ID: LCS 860-152922/4
Matrix: Water
Analysis Batch: 152922

Client Sample ID: Lab Control Sample
Prep Type: Total/NA

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits
Chlorine, Total Residual	0.250	0.257		mg/L		103	85 - 115

Lab Sample ID: LCSD 860-152922/5
Matrix: Water
Analysis Batch: 152922

Client Sample ID: Lab Control Sample Dup
Prep Type: Total/NA

Analyte	Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec Limits	RPD	RPD Limit
Chlorine, Total Residual	0.250	0.244		mg/L		98	85 - 115	5	20

Method: SM 4500 S2 D - Sulfide, Total

Lab Sample ID: MB 860-153135/3
Matrix: Water
Analysis Batch: 153135

Client Sample ID: Method Blank
Prep Type: Total/NA

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Sulfide	0.040	U	0.10	0.040	mg/L			04/03/24 18:05	1

Lab Sample ID: LCS 860-153135/4
Matrix: Water
Analysis Batch: 153135

Client Sample ID: Lab Control Sample
Prep Type: Total/NA

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits
Sulfide	1.00	1.05		mg/L		105	90 - 110

Lab Sample ID: LCSD 860-153135/5
Matrix: Water
Analysis Batch: 153135

Client Sample ID: Lab Control Sample Dup
Prep Type: Total/NA

Analyte	Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec Limits	RPD	RPD Limit
Sulfide	1.00	1.04		mg/L		104	90 - 110	0	20

Method: SM 4500 SO3 B - Sulfite

Lab Sample ID: MB 860-153341/1
Matrix: Water
Analysis Batch: 153341

Client Sample ID: Method Blank
Prep Type: Total/NA

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Sulfite	5.0	U	5.0	5.0	mg/L			04/04/24 17:40	1

Eurofins Houston

QC Sample Results

Client: Messer LLC
Project/Site: Messer Gas ASU Permit Renewal 3-27-24

Job ID: 860-70887-1

Method: SM 4500 SO3 B - Sulfite (Continued)

Lab Sample ID: LCS 860-153341/2
Matrix: Water
Analysis Batch: 153341

Client Sample ID: Lab Control Sample
Prep Type: Total/NA

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits
Sulfite	10.0	9.00		mg/L		90	80 - 120

Lab Sample ID: LCSD 860-153341/3
Matrix: Water
Analysis Batch: 153341

Client Sample ID: Lab Control Sample Dup
Prep Type: Total/NA

Analyte	Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec Limits	RPD	RPD Limit
Sulfite	10.0	9.00		mg/L		90	80 - 120	0	20

Lab Sample ID: 860-70887-1 DU
Matrix: Water
Analysis Batch: 153341

Client Sample ID: Outfall 001
Prep Type: Total/NA

Analyte	Sample Result	Sample Qualifier	DU Result	DU Qualifier	Unit	D	RPD	RPD Limit
Sulfite	5.0	U HF	5.0	U	mg/L		NC	20

Method: SM 5210B - BOD, 5-Day

Lab Sample ID: SCB 860-153612/2
Matrix: Water
Analysis Batch: 153612

Client Sample ID: Method Blank
Prep Type: Total/NA

Analyte	SCB Result	SCB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Biochemical Oxygen Demand	0.894		0.0000020	0.0000020	mg/L			03/28/24 12:09	1

Lab Sample ID: USB 860-153612/1
Matrix: Water
Analysis Batch: 153612

Client Sample ID: Method Blank
Prep Type: Total/NA

Analyte	USB Result	USB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Biochemical Oxygen Demand	0.120		0.0000020	0.0000020	mg/L			03/28/24 12:06	1

Lab Sample ID: LCS 860-153612/3
Matrix: Water
Analysis Batch: 153612

Client Sample ID: Lab Control Sample
Prep Type: Total/NA

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits
Biochemical Oxygen Demand	198	185		mg/L		93	85 - 115

Method: SM 5310C - TOC

Lab Sample ID: MB 860-153920/21
Matrix: Water
Analysis Batch: 153920

Client Sample ID: Method Blank
Prep Type: Total/NA

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Total Organic Carbon	0.50	U	1.0	0.50	mg/L			04/08/24 21:09	1

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QC Sample Results

Client: Messer LLC
Project/Site: Messer Gas ASU Permit Renewal 3-27-24

Job ID: 860-70887-1

Method: SM 5310C - TOC (Continued)

Lab Sample ID: MB 860-153920/55
Matrix: Water
Analysis Batch: 153920

Client Sample ID: Method Blank
Prep Type: Total/NA

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Total Organic Carbon	0.50	U	1.0	0.50	mg/L			04/09/24 05:44	1

Lab Sample ID: LCS 860-153920/22
Matrix: Water
Analysis Batch: 153920

Client Sample ID: Lab Control Sample
Prep Type: Total/NA

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits
Total Organic Carbon	5.00	5.03		mg/L		101	90 - 110

Lab Sample ID: LCS 860-153920/56
Matrix: Water
Analysis Batch: 153920

Client Sample ID: Lab Control Sample
Prep Type: Total/NA

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits
Total Organic Carbon	5.00	5.10		mg/L		102	90 - 110

Lab Sample ID: LCSD 860-153920/23
Matrix: Water
Analysis Batch: 153920

Client Sample ID: Lab Control Sample Dup
Prep Type: Total/NA

Analyte	Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec Limits	RPD	RPD Limit
Total Organic Carbon	5.00	5.32		mg/L		106	90 - 110	6	15

Lab Sample ID: LCSD 860-153920/57
Matrix: Water
Analysis Batch: 153920

Client Sample ID: Lab Control Sample Dup
Prep Type: Total/NA

Analyte	Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec Limits	RPD	RPD Limit
Total Organic Carbon	5.00	5.35		mg/L		107	90 - 110	5	15

Lab Sample ID: LLCS 860-153920/24
Matrix: Water
Analysis Batch: 153920

Client Sample ID: Lab Control Sample
Prep Type: Total/NA

Analyte	Spike Added	LLCS Result	LLCS Qualifier	Unit	D	%Rec	%Rec Limits
Total Organic Carbon	1.00	1.09		mg/L		109	50 - 150

Method: SM5210B CBOD - Carbonaceous BOD, 5 Day

Lab Sample ID: SCB 860-153613/2
Matrix: Water
Analysis Batch: 153613

Client Sample ID: Method Blank
Prep Type: Total/NA

Analyte	SCB Result	SCB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Carbonaceous Biochemical Oxygen Demand	0.840		0.0000020	0.0000020	mg/L			03/28/24 14:58	1

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QC Sample Results

Client: Messer LLC
Project/Site: Messer Gas ASU Permit Renewal 3-27-24

Job ID: 860-70887-1

Method: SM5210B CBOD - Carbonaceous BOD, 5 Day (Continued)

Lab Sample ID: USB 860-153613/1

Matrix: Water

Analysis Batch: 153613

Client Sample ID: Method Blank

Prep Type: Total/NA

Analyte	USB Result	USB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Carbonaceous Biochemical Oxygen Demand	0.0000020	U	0.0000020	0.0000020	mg/L			03/28/24 14:56	1

Lab Sample ID: LCS 860-153613/3

Matrix: Water

Analysis Batch: 153613

Client Sample ID: Lab Control Sample

Prep Type: Total/NA

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits
Carbonaceous Biochemical Oxygen Demand	198	210		mg/L		106	85 - 115

QC Association Summary

Client: Messer LLC
Project/Site: Messer Gas ASU Permit Renewal 3-27-24

Job ID: 860-70887-1

GC/MS VOA

Analysis Batch: 152033

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
860-70887-1	Outfall 001	Total/NA	Water	624.1	
MB 860-152033/9	Method Blank	Total/NA	Water	624.1	
LCS 860-152033/3	Lab Control Sample	Total/NA	Water	624.1	
LCSD 860-152033/4	Lab Control Sample Dup	Total/NA	Water	624.1	
860-70887-1 MS	Outfall 001	Total/NA	Water	624.1	

GC/MS Semi VOA

Prep Batch: 152882

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
860-70887-1	Outfall 001	Total/NA	Water	625	
MB 860-152882/1-A	Method Blank	Total/NA	Water	625	
LCS 860-152882/2-A	Lab Control Sample	Total/NA	Water	625	
LCSD 860-152882/3-A	Lab Control Sample Dup	Total/NA	Water	625	

Analysis Batch: 153021

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
860-70887-1	Outfall 001	Total/NA	Water	625.1	152882
MB 860-152882/1-A	Method Blank	Total/NA	Water	625.1	152882
LCS 860-152882/2-A	Lab Control Sample	Total/NA	Water	625.1	152882
LCSD 860-152882/3-A	Lab Control Sample Dup	Total/NA	Water	625.1	152882

GC Semi VOA

Prep Batch: 154669

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
860-70887-1	Outfall 001	Total/NA	Water	608	
MB 860-154669/1-A	Method Blank	Total/NA	Water	608	
LCS 860-154669/4-A	Lab Control Sample	Total/NA	Water	608	
LCSD 860-154669/5-A	Lab Control Sample Dup	Total/NA	Water	608	

Analysis Batch: 154783

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
860-70887-1	Outfall 001	Total/NA	Water	608.3	154669
MB 860-154669/1-A	Method Blank	Total/NA	Water	608.3	154669
LCS 860-154669/4-A	Lab Control Sample	Total/NA	Water	608.3	154669
LCSD 860-154669/5-A	Lab Control Sample Dup	Total/NA	Water	608.3	154669

HPLC/IC

Analysis Batch: 152429

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
860-70887-1	Outfall 001	Total/NA	Water	300.0	
MB 860-152429/23	Method Blank	Total/NA	Water	300.0	
LCS 860-152429/24	Lab Control Sample	Total/NA	Water	300.0	
LCSD 860-152429/25	Lab Control Sample Dup	Total/NA	Water	300.0	

Analysis Batch: 152430

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
860-70887-1	Outfall 001	Total/NA	Water	300.0	
MB 860-152430/23	Method Blank	Total/NA	Water	300.0	
MB 860-152430/59	Method Blank	Total/NA	Water	300.0	

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QC Association Summary

Client: Messer LLC
Project/Site: Messer Gas ASU Permit Renewal 3-27-24

Job ID: 860-70887-1

HPLC/IC (Continued)

Analysis Batch: 152430 (Continued)

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
LCS 860-152430/24	Lab Control Sample	Total/NA	Water	300.0	
LCSD 860-152430/25	Lab Control Sample Dup	Total/NA	Water	300.0	
LLCS 860-152430/7	Lab Control Sample	Total/NA	Water	300.0	

Metals

Prep Batch: 152924

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
860-70887-1	Outfall 001	Total Recoverable	Water	200.8	
MB 860-152924/1-A	Method Blank	Total Recoverable	Water	200.8	
LCS 860-152924/2-A	Lab Control Sample	Total Recoverable	Water	200.8	
LCSD 860-152924/3-A	Lab Control Sample Dup	Total Recoverable	Water	200.8	

Analysis Batch: 153111

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
860-70887-1	Outfall 001	Total Recoverable	Water	200.8	152924
MB 860-152924/1-A	Method Blank	Total Recoverable	Water	200.8	152924
LCS 860-152924/2-A	Lab Control Sample	Total Recoverable	Water	200.8	152924
LCSD 860-152924/3-A	Lab Control Sample Dup	Total Recoverable	Water	200.8	152924

Analysis Batch: 153322

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
860-70887-1	Outfall 001	Total Recoverable	Water	200.8	152924
MB 860-152924/1-A	Method Blank	Total Recoverable	Water	200.8	152924
LCS 860-152924/2-A	Lab Control Sample	Total Recoverable	Water	200.8	152924
LCSD 860-152924/3-A	Lab Control Sample Dup	Total Recoverable	Water	200.8	152924

Analysis Batch: 153356

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
860-70887-1	Outfall 001	Total Recoverable	Water	200.8	152924
MB 860-152924/1-A	Method Blank	Total Recoverable	Water	200.8	152924
LCS 860-152924/2-A	Lab Control Sample	Total Recoverable	Water	200.8	152924
LCSD 860-152924/3-A	Lab Control Sample Dup	Total Recoverable	Water	200.8	152924

Prep Batch: 666544

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
860-70887-1	Outfall 001	Total/NA	Water	1631E	
MB 400-666544/3-A	Method Blank	Total/NA	Water	1631E	
LCS 400-666544/4-A	Lab Control Sample	Total/NA	Water	1631E	
LCSD 400-666544/5-A	Lab Control Sample Dup	Total/NA	Water	1631E	

Analysis Batch: 666639

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
860-70887-1	Outfall 001	Total/NA	Water	1631E	666544
MB 400-666544/3-A	Method Blank	Total/NA	Water	1631E	666544
LCS 400-666544/4-A	Lab Control Sample	Total/NA	Water	1631E	666544
LCSD 400-666544/5-A	Lab Control Sample Dup	Total/NA	Water	1631E	666544

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QC Association Summary

Client: Messer LLC
Project/Site: Messer Gas ASU Permit Renewal 3-27-24

Job ID: 860-70887-1

General Chemistry

Analysis Batch: 151048

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
860-70887-1	Outfall 001	Total/NA	Water	7196A	

Analysis Batch: 151876

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
860-70887-1	Outfall 001	Total/NA	Water	7196A	
MB 860-151876/3	Method Blank	Total/NA	Water	7196A	
LCS 860-151876/4	Lab Control Sample	Total/NA	Water	7196A	
LCSD 860-151876/5	Lab Control Sample Dup	Total/NA	Water	7196A	

Prep Batch: 152129

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
860-70887-1	Outfall 001	Total/NA	Water	BOD Prep	

Analysis Batch: 152166

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
860-70887-1	Outfall 001	Total/NA	Water	Nitrogen,Org	

Prep Batch: 152194

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
860-70887-1	Outfall 001	Total/NA	Water	BOD Prep	

Analysis Batch: 152539

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
860-70887-1	Outfall 001	Total/NA	Water	360.1	

Analysis Batch: 152609

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
860-70887-1	Outfall 001	Total/NA	Water	SM 2320B	
MB 860-152609/9	Method Blank	Total/NA	Water	SM 2320B	
LCS 860-152609/10	Lab Control Sample	Total/NA	Water	SM 2320B	
LCSD 860-152609/11	Lab Control Sample Dup	Total/NA	Water	SM 2320B	

Prep Batch: 152741

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
860-70887-1	Outfall 001	Total/NA	Water	351.2	
MB 860-152741/32-A	Method Blank	Total/NA	Water	351.2	
MB 860-152741/4-A	Method Blank	Total/NA	Water	351.2	
LCS 860-152741/33-A	Lab Control Sample	Total/NA	Water	351.2	
LCSD 860-152741/34-A	Lab Control Sample Dup	Total/NA	Water	351.2	
LLCS 860-152741/5-A	Lab Control Sample	Total/NA	Water	351.2	

Analysis Batch: 152828

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
860-70887-1	Outfall 001	Total/NA	Water	SM 2540C	
MB 860-152828/1	Method Blank	Total/NA	Water	SM 2540C	
LCS 860-152828/2	Lab Control Sample	Total/NA	Water	SM 2540C	
LCSD 860-152828/3	Lab Control Sample Dup	Total/NA	Water	SM 2540C	
LLCS 860-152828/4	Lab Control Sample	Total/NA	Water	SM 2540C	

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QC Association Summary

Client: Messer LLC
Project/Site: Messer Gas ASU Permit Renewal 3-27-24

Job ID: 860-70887-1

General Chemistry

Analysis Batch: 152922

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
860-70887-1	Outfall 001	Total/NA	Water	SM 4500 Cl G	
MB 860-152922/3	Method Blank	Total/NA	Water	SM 4500 Cl G	
LCS 860-152922/4	Lab Control Sample	Total/NA	Water	SM 4500 Cl G	
LCSD 860-152922/5	Lab Control Sample Dup	Total/NA	Water	SM 4500 Cl G	

Analysis Batch: 152929

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
860-70887-1	Outfall 001	Total/NA	Water	SM 2540D	
MB 860-152929/1	Method Blank	Total/NA	Water	SM 2540D	
LCS 860-152929/2	Lab Control Sample	Total/NA	Water	SM 2540D	
LCSD 860-152929/3	Lab Control Sample Dup	Total/NA	Water	SM 2540D	

Analysis Batch: 153135

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
860-70887-1	Outfall 001	Total/NA	Water	SM 4500 S2 D	
MB 860-153135/3	Method Blank	Total/NA	Water	SM 4500 S2 D	
LCS 860-153135/4	Lab Control Sample	Total/NA	Water	SM 4500 S2 D	
LCSD 860-153135/5	Lab Control Sample Dup	Total/NA	Water	SM 4500 S2 D	

Analysis Batch: 153225

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
860-70887-1	Outfall 001	Total/NA	Water	350.1	
MB 860-153225/137	Method Blank	Total/NA	Water	350.1	
MB 860-153225/179	Method Blank	Total/NA	Water	350.1	
LCS 860-153225/180	Lab Control Sample	Total/NA	Water	350.1	
LCSD 860-153225/181	Lab Control Sample Dup	Total/NA	Water	350.1	
LLCS 860-153225/140	Lab Control Sample	Total/NA	Water	350.1	

Analysis Batch: 153251

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
860-70887-1	Outfall 001	Total/NA	Water	351.2	152741
MB 860-152741/32-A	Method Blank	Total/NA	Water	351.2	152741
MB 860-152741/4-A	Method Blank	Total/NA	Water	351.2	152741
LCS 860-152741/33-A	Lab Control Sample	Total/NA	Water	351.2	152741
LCSD 860-152741/34-A	Lab Control Sample Dup	Total/NA	Water	351.2	152741
LLCS 860-152741/5-A	Lab Control Sample	Total/NA	Water	351.2	152741

Analysis Batch: 153341

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
860-70887-1	Outfall 001	Total/NA	Water	SM 4500 SO3 B	
MB 860-153341/1	Method Blank	Total/NA	Water	SM 4500 SO3 B	
LCS 860-153341/2	Lab Control Sample	Total/NA	Water	SM 4500 SO3 B	
LCSD 860-153341/3	Lab Control Sample Dup	Total/NA	Water	SM 4500 SO3 B	
860-70887-1 DU	Outfall 001	Total/NA	Water	SM 4500 SO3 B	

Analysis Batch: 153543

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
860-70887-1	Outfall 001	Total/NA	Water	SM 2120B	
MB 860-153543/3	Method Blank	Total/NA	Water	SM 2120B	
LCS 860-153543/4	Lab Control Sample	Total/NA	Water	SM 2120B	
LCSD 860-153543/5	Lab Control Sample Dup	Total/NA	Water	SM 2120B	

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QC Association Summary

Client: Messer LLC
Project/Site: Messer Gas ASU Permit Renewal 3-27-24

Job ID: 860-70887-1

General Chemistry

Analysis Batch: 153612

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
860-70887-1	Outfall 001	Total/NA	Water	SM 5210B	152129
SCB 860-153612/2	Method Blank	Total/NA	Water	SM 5210B	
USB 860-153612/1	Method Blank	Total/NA	Water	SM 5210B	
LCS 860-153612/3	Lab Control Sample	Total/NA	Water	SM 5210B	

Analysis Batch: 153613

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
860-70887-1	Outfall 001	Total/NA	Water	SM5210B CBOD	152194
SCB 860-153613/2	Method Blank	Total/NA	Water	SM5210B CBOD	
USB 860-153613/1	Method Blank	Total/NA	Water	SM5210B CBOD	
LCS 860-153613/3	Lab Control Sample	Total/NA	Water	SM5210B CBOD	

Analysis Batch: 153724

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
860-70887-1	Outfall 001	Total/NA	Water	1664B	
MB 860-153724/1	Method Blank	Total/NA	Water	1664B	
LCS 860-153724/2	Lab Control Sample	Total/NA	Water	1664B	
LCSD 860-153724/3	Lab Control Sample Dup	Total/NA	Water	1664B	

Analysis Batch: 153920

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
860-70887-1	Outfall 001	Total/NA	Water	SM 5310C	
MB 860-153920/21	Method Blank	Total/NA	Water	SM 5310C	
MB 860-153920/55	Method Blank	Total/NA	Water	SM 5310C	
LCS 860-153920/22	Lab Control Sample	Total/NA	Water	SM 5310C	
LCS 860-153920/56	Lab Control Sample	Total/NA	Water	SM 5310C	
LCSD 860-153920/23	Lab Control Sample Dup	Total/NA	Water	SM 5310C	
LCSD 860-153920/57	Lab Control Sample Dup	Total/NA	Water	SM 5310C	
LLCS 860-153920/24	Lab Control Sample	Total/NA	Water	SM 5310C	

Analysis Batch: 154031

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
860-70887-1	Outfall 001	Total/NA	Water	8000	
MB 860-154031/3	Method Blank	Total/NA	Water	8000	
LCS 860-154031/4	Lab Control Sample	Total/NA	Water	8000	

Analysis Batch: 154088

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
860-70887-1	Outfall 001	Total/NA	Water	365.1	
MB 860-154088/40	Method Blank	Total/NA	Water	365.1	
LCS 860-154088/41	Lab Control Sample	Total/NA	Water	365.1	
LCSD 860-154088/42	Lab Control Sample Dup	Total/NA	Water	365.1	

Analysis Batch: 489850

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
860-70887-1	Outfall 001	Total/NA	Water	OIA-1677	
MB 410-489850/17	Method Blank	Total/NA	Water	OIA-1677	
LCS 410-489850/16	Lab Control Sample	Total/NA	Water	OIA-1677	

Eurofins Houston

Lab Chronicle

Client: Messer LLC

Job ID: 860-70887-1

Project/Site: Messer Gas ASU Permit Renewal 3-27-24

Client Sample ID: Outfall 001

Lab Sample ID: 860-70887-1

Date Collected: 03/27/24 08:30

Matrix: Water

Date Received: 03/27/24 14:30

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	624.1		1	5 mL	5 mL	152033	03/28/24 11:14	AN	EET HOU
Total/NA	Prep	625			1000 mL	1.00 mL	152882	04/02/24 15:31	DR	EET HOU
Total/NA	Analysis	625.1		1	1 mL	1 mL	153021	04/03/24 22:32	PXS	EET HOU
Total/NA	Prep	608			1000 mL	1 mL	154669	04/13/24 06:30	BH	EET HOU
Total/NA	Analysis	608.3		1			154783	04/15/24 11:50	KM	EET HOU
Total/NA	Analysis	300.0		1			152429	03/31/24 19:26	A1S	EET HOU
Total/NA	Analysis	300.0		1			152430	03/31/24 19:26	A1S	EET HOU
Total/NA	Prep	1631E			40 mL	40 mL	666544	04/01/24 15:00	VLC	EET PEN
							Completed:	04/02/24 08:50 ¹		
Total/NA	Analysis	1631E		1			666639	04/02/24 12:15	VLC	EET PEN
Total Recoverable	Prep	200.8			50 mL	50 mL	152924	04/02/24 18:00	MD	EET HOU
Total Recoverable	Analysis	200.8		1			153111	04/03/24 20:14	DP	EET HOU
Total Recoverable	Prep	200.8			50 mL	50 mL	152924	04/02/24 18:00	MD	EET HOU
Total Recoverable	Analysis	200.8		1			153322	04/04/24 13:15	DP	EET HOU
Total Recoverable	Prep	200.8			50 mL	50 mL	152924	04/02/24 18:00	MD	EET HOU
Total Recoverable	Analysis	200.8		1			153356	04/04/24 18:09	DP	EET HOU
Total/NA	Analysis	1664B		1	950 mL	1000 mL	153724	04/08/24 11:12	TB	EET HOU
Total/NA	Analysis	350.1		1	10 mL	10 mL	153225	04/03/24 23:28	ADL	EET HOU
Total/NA	Prep	351.2			20 mL	20 mL	152741	04/01/24 20:31	SA	EET HOU
Total/NA	Analysis	351.2		1			153251	04/03/24 12:02	LD	EET HOU
Total/NA	Analysis	360.1		1			152539	03/31/24 14:09	HN	EET HOU
Total/NA	Analysis	365.1		2	10 mL	10 mL	154088	04/09/24 19:34	HN	EET HOU
Total/NA	Analysis	7196A		1	25 mL	25 mL	151876	03/27/24 19:03	SCI	EET HOU
Total/NA	Analysis	7196A		1			151048	04/08/24 19:28	SC	EET HOU
Total/NA	Analysis	8000		1	2 mL	2 mL	154031	04/09/24 20:17	ALL	EET HOU
Total/NA	Analysis	Nitrogen,Org		1			152166	04/05/24 18:57	SC	EET HOU
Total/NA	Analysis	OIA-1677		1			489850	04/02/24 16:02	UJE2	ELLE
Total/NA	Analysis	SM 2120B		1	50 mL	50 mL	153543	03/28/24 17:00	YG	EET HOU
Total/NA	Analysis	SM 2320B		1			152609	03/29/24 18:25	SC	EET HOU
Total/NA	Analysis	SM 2540C		1	100 mL	200 mL	152828	04/02/24 12:40	FN	EET HOU
Total/NA	Analysis	SM 2540D		1	1000 mL	1000 mL	152929	04/02/24 18:33	FN	EET HOU
Total/NA	Analysis	SM 4500 CI G		1	10 mL	10 mL	152922	04/02/24 18:16	SCI	EET HOU
Total/NA	Analysis	SM 4500 S2 D		1	7.5 mL	7.5 mL	153135	04/03/24 18:05	SCI	EET HOU
Total/NA	Analysis	SM 4500 SO3 B		1	50 mL	50 mL	153341	04/04/24 17:40	SCI	EET HOU
Total/NA	Prep	BOD Prep					152129	03/28/24 10:11	HN	EET HOU
Total/NA	Analysis	SM 5210B		1	200 mL	300 mL	153612	03/28/24 12:46	ALL	EET HOU
Total/NA	Analysis	SM 5310C		1	40 mL	40 mL	153920	04/09/24 06:59	YG	EET HOU
Total/NA	Prep	BOD Prep					152194	03/28/24 12:52	HN	EET HOU
Total/NA	Analysis	SM5210B CBOD		1	200 mL	300 mL	153613	03/28/24 15:34	ALL	EET HOU

¹ This procedure uses a method stipulated length of time for the process. Both start and end times are displayed.

Eurofins Houston

Lab Chronicle

Client: Messer LLC
Project/Site: Messer Gas ASU Permit Renewal 3-27-24

Job ID: 860-70887-1

Laboratory References:
EET HOU = Eurofins Houston, 4145 Greenbriar Dr, Stafford, TX 77477, TEL (281)240-4200
EET PEN = Eurofins Pensacola, 3355 McLemore Drive, Pensacola, FL 32514, TEL (850)474-1001
ELLE = Eurofins Lancaster Laboratories Environment Testing, LLC, 2425 New Holland Pike, Lancaster, PA 17601, TEL (717)656-2300
Envirodyne = Envirodyne Laboratories, 11011 Brooklet Street Suite 230, Houston, TX 77099

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Accreditation/Certification Summary

Client: Messer LLC

Job ID: 860-70887-1

Project/Site: Messer Gas ASU Permit Renewal 3-27-24

Laboratory: Eurofins Houston

All accreditations/certifications held by this laboratory are listed. Not all accreditations/certifications are applicable to this report.

Authority	Program	Identification Number	Expiration Date
Arkansas DEQ	State	88-00759	08-03-24
Florida	NELAP	E871002	06-30-24
Louisiana (All)	NELAP	03054	06-30-24
Oklahoma	NELAP	1306	08-31-24
Oklahoma	State	2023-139	08-31-24
Texas	NELAP	T104704215	06-30-24
Texas	TCEQ Water Supply	T104704215	12-28-25
USDA	US Federal Programs	525-23-79-79507	03-20-26

Laboratory: Eurofins Lancaster Laboratories Environment Testing, LLC

All accreditations/certifications held by this laboratory are listed. Not all accreditations/certifications are applicable to this report.

Authority	Program	Identification Number	Expiration Date
A2LA	Dept. of Defense ELAP	0001.01	11-30-24
A2LA	ISO/IEC 17025	0001.01	11-30-24
Alabama	State	43200	01-31-25
Alaska	State	PA00009	06-30-24
Alaska (UST)	State	17-027	02-28-25
Arizona	State	AZ0780	03-12-25
Arkansas DEQ	State	88-00660	08-09-24
California	State	2792	11-30-24
Colorado	State	PA00009	06-30-24
Connecticut	State	PH-0746	06-30-25
DE Haz. Subst. Cleanup Act (HSCA)	State	019-006 (PA cert)	01-31-25
Delaware (DW)	State	N/A	01-31-25
Florida	NELAP	E87997	06-30-25
Georgia (DW)	State	C048	01-31-25
Hawaii	State	N/A	01-31-25
Illinois	NELAP	200027	01-31-25
Iowa	State	361	03-01-24 *
Kansas	NELAP	E-10151	10-31-24
Kentucky (DW)	State	KY90088	12-31-24
Kentucky (UST)	State	0001.01	11-30-24
Kentucky (WW)	State	KY90088	12-31-23 *
Louisiana (All)	NELAP	02055	06-30-24
Maine	State	2019012	03-12-25
Maryland	State	100	06-30-25
Massachusetts	State	M-PA009	06-30-24
Michigan	State	9930	01-31-25
Minnesota	NELAP	042-999-487	12-31-24
Mississippi	State	023	01-31-25
Missouri	State	450	01-31-25
Montana (DW)	State	0098	01-01-25
Nebraska	State	NE-OS-32-17	01-31-25
New Hampshire	NELAP	2730	01-10-25
New Jersey	NELAP	PA011	06-30-24
New York	NELAP	10670	04-01-25
North Carolina (DW)	State	42705	07-31-24
North Carolina (WW/SW)	State	521	12-31-24
Oklahoma	NELAP	9804	08-31-24

* Accreditation/Certification renewal pending - accreditation/certification considered valid.

Eurofins Houston

Accreditation/Certification Summary

Client: Messer LLC

Job ID: 860-70887-1

Project/Site: Messer Gas ASU Permit Renewal 3-27-24

Laboratory: Eurofins Lancaster Laboratories Environment Testing, LLC (Continued)

All accreditations/certifications held by this laboratory are listed. Not all accreditations/certifications are applicable to this report.

Authority	Program	Identification Number	Expiration Date
Oregon	NELAP	PA200001	09-11-24
Pennsylvania	NELAP	36-00037	04-07-24
Quebec Ministry of Environment and Fight against Climate Change	PALA	507	09-16-24
Rhode Island	State	LAO00338	12-30-24
South Carolina	State	89002	01-31-24 *
Tennessee	State	02838	01-31-25
Texas	NELAP	T104704194-23-46	08-31-24
USDA	US Federal Programs	525-22-298-19481	10-25-25
Vermont	State	VT - 36037	10-28-24
Virginia	NELAP	460182	06-14-25
Washington	State	C457	04-11-24
West Virginia (DW)	State	9906 C	01-31-25
West Virginia DEP	State	055	07-31-24
Wyoming	State	8TMS-L	01-31-25
Wyoming (UST)	A2LA	0001.01	11-30-24

Laboratory: Eurofins Pensacola

All accreditations/certifications held by this laboratory are listed. Not all accreditations/certifications are applicable to this report.

Authority	Program	Identification Number	Expiration Date
Alabama	State	40150	06-30-24
ANAB	ISO/IEC 17025	L2471	02-22-26
Arkansas DEQ	State	88-00689	08-01-24
California	State	2510	06-30-24
Florida	NELAP	E81010	06-30-24
Georgia	State	E81010(FL)	06-30-24
Illinois	NELAP	200041	10-09-24
Kansas	NELAP	E-10253	10-31-24
Kentucky (UST)	State	53	06-30-24
Louisiana (All)	NELAP	30976	06-30-24
Louisiana (DW)	State	LA017	12-31-24
North Carolina (WW/SW)	State	314	12-31-24
Oklahoma	NELAP	9810	08-31-24
Pennsylvania	NELAP	68-00467	01-31-25
South Carolina	State	96026	06-30-24
Tennessee	State	TN02907	06-30-24
Texas	NELAP	T104704286	09-30-24
US Fish & Wildlife	US Federal Programs	A22340	06-30-24
USDA	US Federal Programs	FLGNV23001	01-08-26
USDA	US Federal Programs	P330-21-00056	05-17-24
Virginia	NELAP	460166	06-14-24
West Virginia DEP	State	136	03-31-25

* Accreditation/Certification renewal pending - accreditation/certification considered valid.

Eurofins Houston

Method Summary

Client: Messer LLC

Job ID: 860-70887-1

Project/Site: Messer Gas ASU Permit Renewal 3-27-24

Method	Method Description	Protocol	Laboratory
624.1	Volatile Organic Compounds (GC/MS)	EPA	EET HOU
625.1	Semivolatile Organic Compounds (GC/MS)	EPA	EET HOU
608.3	Polychlorinated Biphenyls (PCBs) (GC)	EPA	EET HOU
300.0	Anions, Ion Chromatography	EPA	EET HOU
1631E	Mercury, Low Level (CVAFS)	EPA	EET PEN
200.8	Metals (ICP/MS)	EPA	EET HOU
1664B	HEM and SGT-HEM	1664B	EET HOU
350.1	Nitrogen, Ammonia	EPA	EET HOU
351.2	Nitrogen, Total Kjeldahl	EPA	EET HOU
360.1	Oxygen, Dissolved	EPA	EET HOU
365.1	Phosphorus, Total	EPA	EET HOU
7196A	Chromium, Hexavalent	SW846	EET HOU
7196A	Chromium, Trivalent (Colorimetric)	SW846	EET HOU
8000	COD	Hach	EET HOU
Nitrogen,Org	Nitrogen, Organic	EPA	EET HOU
OIA-1677	Cyanide, Available (Flow Injection)	OI CORP	ELLE
SM 2120B	Color, Colorimetric	SM	EET HOU
SM 2320B	Alkalinity	SM	EET HOU
SM 2540C	Solids, Total Dissolved (TDS)	SM	EET HOU
SM 2540D	Solids, Total Suspended (TSS)	SM	EET HOU
SM 4500 Cl G	Chlorine, Residual	SM	EET HOU
SM 4500 S2 D	Sulfide, Total	SM	EET HOU
SM 4500 SO3 B	Sulfite	SM	EET HOU
SM 5210B	BOD, 5-Day	SM	EET HOU
SM 5310C	TOC	SM	EET HOU
SM5210B CBOD	Carbonaceous BOD, 5 Day	SM	EET HOU
Subcontract	Surfactants	None	Envirodyne
1631E	Preparation, Mercury, Low Level	EPA	EET PEN
200.8	Preparation, Total Recoverable Metals	EPA	EET HOU
351.2	Nitrogen, Total Kjeldahl	EPA	EET HOU
608	Liquid-Liquid Extraction (Separatory Funnel)	EPA	EET HOU
625	Liquid-Liquid Extraction	EPA	EET HOU
BOD Prep	Preparation, BOD	SM	EET HOU

Protocol References:

1664B = EPA-821-98-002

EPA = US Environmental Protection Agency

Hach = Hach Company

None = None

OI CORP = OI Corporation Instrument Manual.

SM = "Standard Methods For The Examination Of Water And Wastewater"

SW846 = "Test Methods For Evaluating Solid Waste, Physical/Chemical Methods", Third Edition, November 1986 And Its Updates.

Laboratory References:

EET HOU = Eurofins Houston, 4145 Greenbriar Dr, Stafford, TX 77477, TEL (281)240-4200

EET PEN = Eurofins Pensacola, 3355 McLemore Drive, Pensacola, FL 32514, TEL (850)474-1001

ELLE = Eurofins Lancaster Laboratories Environment Testing, LLC, 2425 New Holland Pike, Lancaster, PA 17601, TEL (717)656-2300

Envirodyne = Envirodyne Laboratories, 11011 Brooklet Street Suite 230, Houston, TX 77099

Eurofins Houston

Sample Summary

Client: Messer LLC
Project/Site: Messer Gas ASU Permit Renewal 3-27-24

Job ID: 860-70887-1

Lab Sample ID	Client Sample ID	Matrix	Collected	Received
860-70887-1	Outfall 001	Water	03/27/24 08:30	03/27/24 14:30

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Envirodyne Laboratories, Inc
11011 Brooklet Dr., # 230
Houston, TX 77099
281.568.7880 Phone
www.envirodyne.com

19 April 2024

Eurofins Houston
Lance Tigrett
4147 Greenbriar Dr.
Stafford, TX 77477

Messer Gas ASU Permit Renewal 2024

Enclosed are the results of analyses for samples received by the laboratory on 28-Mar-24 08:59. The analytical data provided relates only to the samples as received in this laboratory report.

ELI certifies that all results are NELAP compliant and performed in accordance with the referenced method except as noted in the Case Narrative or as noted with a qualifier. Any reproductions of this laboratory report should be in full and only with the written authorization from the client.

The total number of pages in this report is 5

Thank you for selecting ELI for your analytical needs. If you have any questions regarding this report, please contact us.

Sincerely,

A handwritten signature in black ink, appearing to read 'Julie Peterson', is written over a horizontal line.

Julie Peterson
Client Services Representative



Certificate No: T104704265-22-20



Envirodyne Laboratories, Inc
11011 Brooklet Dr., # 230
Houston, TX 77099
281.568.7880 Phone
www.envirodyne.com

Client: Eurofins Houston
Project: Messer Gas ASU Permit Renewal 2024
Work Order: 24D0471

Reported:
19-Apr-24 16:20

ANALYTICAL REPORT FOR SAMPLES

Sample ID	Laboratory ID	Matrix	Date Sampled	Date Received
Outfall 001 (860-70887-1)	24D0471-01	Water	27-Mar-24 08:30	28-Mar-24 08:59

Envirodyne Laboratories, Inc.

The results in this report apply to the samples analyzed in accordance with the chain of custody document. This analytical report must be reproduced in its entirety.

Julie Peterson, Client Services Representative



Envirodyne Laboratories, Inc
11011 Brooklet Dr., # 230
Houston, TX 77099
281.568.7880 Phone
www.envirodyne.com

Client: Eurofins Houston
Project: Messer Gas ASU Permit Renewal 2024
Work Order: 24D0471

Reported:
19-Apr-24 16:20

Outfall 001 (860-70887-1)
24D0471-01 (Water) Sampled: 27-Mar-24 08:30

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Analyst	Notes
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Envirodyne Laboratories, Inc.

Wet Chemistry

Surfactants	<0.10	0.10	mg/L	1	B4C5759	29-Mar-24	29-Mar-24 08:30	SM5540 C	JMM	
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Envirodyne Laboratories, Inc.

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Julie Peterson, Client Services Representative



Envirodyne Laboratories, Inc
11011 Brooklet Dr., # 230
Houston, TX 77099
281.568.7880 Phone
www.envirodyne.com

Client: Eurofins Houston
Project: Messer Gas ASU Permit Renewal 2024
Work Order: 24D0471

Reported:
19-Apr-24 16:20

Wet Chemistry - Quality Control
Envirodyne Laboratories, Inc.

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC Limits	RPD	RPD Limit	Notes
Batch B4C5759 - Inorganics									
Blank (B4C5759-BLK1)				Prepared & Analyzed: 29-Mar-24					
Surfactants	<0.10	0.10	mg/L						
LCS (B4C5759-BS1)				Prepared & Analyzed: 29-Mar-24					
Surfactants	0.900		mg/L	1.00	90.0	90-110			
Duplicate (B4C5759-DUP1)				Prepared & Analyzed: 29-Mar-24					
Surfactants	<0.10	0.10	mg/L		<0.10		0	20	
Reference (B4C5759-SRM1)				Prepared & Analyzed: 29-Mar-24					
Surfactants	0.0800		mg/L	0.100	80.0	0-200			

Envirodyne Laboratories, Inc.

The results in this report apply to the samples analyzed in accordance with the chain of custody document. This analytical report must be reproduced in its entirety.

Julie Peterson, Client Services Representative



Envirodyne Laboratories, Inc
11011 Brooklet Dr., # 230
Houston, TX 77099
281.568.7880 Phone
www.envirodyne.com

Client: Eurofins Houston
Project: Messer Gas ASU Permit Renewal 2024
Work Order: 24D0471

Reported:
19-Apr-24 16:20

Notes and Definitions

ND Analyte NOT DETECTED at or above the reporting limit
< Result is less than the RL
a Analyte not available for TNI/NELAP accreditation
n Not accredited

Envirodyne Laboratories, Inc.

The results in this report apply to the samples analyzed in accordance with the chain of custody document. This analytical report must be reproduced in its entirety.

Julie Peterson, Client Services Representative

121051m7

Chain of Custody Record

[illegible]

aircraft

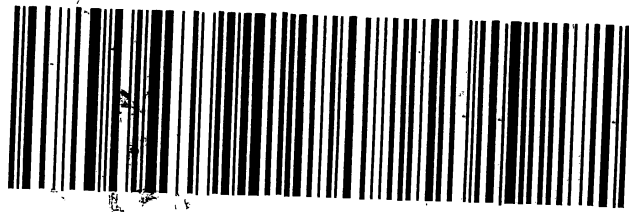
IC No:

Client Information (Sub Contract Lab)		Lab PM: Tigrett, Lance	Carrier Tracking No(s):	COG No: 860-109543.1
Shipping/Receiving		E-Mail: Lance.Tigrett@et.eurofins.com	State of Origin: Texas	Page: Page 1 of 1
Company: Eurofins Environment Testing Southeast,		Accreditations Required (See note): NELAP - Texas		
Address: 3355 McLemore Drive,		Job #: 860-70887-1		
City: Pensacola		Preservation Codes: M - Hexane N - None O - AsNaO2 P - Na2O4S Q - Na2SO3 R - Na2SO4 S - H2SO4 T - TSP Dodecahydrate U - Acetone V - MCAA W - pH 4-5 Y - Trizma Z - other (specify) Other:		
State, Zip: FL, 32514		Analysis Requested		
Phone: 850-474-1001 (Tel) 850-478-2671 (Fax)		Total Number of Containers		
Email:		1631E/631E Prep Mercury, Low Level (CVAFS)		
Project Name: Messer Gas ASU Permit Renewal 3-27-24		Perform MS/MSD (Yes or No)		
Site: SSOW#:		Field Filtered Sample (Yes or No)		
Sample Date		Field Filtered Sample (Yes or No)		
Sample Time		Field Filtered Sample (Yes or No)		
Sample Type (G=grab, P=preservation)		Field Filtered Sample (Yes or No)		
Matrix (W=water, S=solid, O=organic, A=air, G=gas, L=liquid)		Field Filtered Sample (Yes or No)		
Sample Date		Field Filtered Sample (Yes or No)		
Sample Time		Field Filtered Sample (Yes or No)		
Sample Type		Field Filtered Sample (Yes or No)		
Matrix		Field Filtered Sample (Yes or No)		
Sample Date		Field Filtered Sample (Yes or No)		
Sample Time		Field Filtered Sample (Yes or No)		
Sample Type		Field Filtered Sample (Yes or No)		
Matrix		Field Filtered Sample (Yes or No)		
Sample Date		Field Filtered Sample (Yes or No)		
Sample Time		Field Filtered Sample (Yes or No)		
Sample Type		Field Filtered Sample (Yes or No)		
Matrix		Field Filtered Sample (Yes or No)		
Sample Date		Field Filtered Sample (Yes or No)		
Sample Time		Field Filtered Sample (Yes or No)		
Sample Type		Field Filtered Sample (Yes or No)		
Matrix		Field Filtered Sample (Yes or No)		
Sample Date		Field Filtered Sample (Yes or No)		
Sample Time		Field Filtered Sample (Yes or No)		
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Part # 156297-435 RRDB EXP 09/24

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PRIORITY OVERNIGHT

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Environment Testing

AD

Login Sample Receipt Checklist

Client: Messer LLC

Job Number: 860-70887-1

Login Number: 70887

List Number: 1

Creator: Torres, Sandra

List Source: Eurofins Houston

Question	Answer	Comment
Radioactivity wasn't checked or is \leq background as measured by a survey meter.	True	
The cooler's custody seal, if present, is intact.	True	
Sample custody seals, if present, are intact.	True	
The cooler or samples do not appear to have been compromised or tampered with.	True	
Samples were received on ice.	True	
Cooler Temperature is acceptable.	True	
Cooler Temperature is recorded.	True	3.1
COC is present.	True	
COC is filled out in ink and legible.	True	
COC is filled out with all pertinent information.	True	
Is the Field Sampler's name present on COC?	True	
There are no discrepancies between the containers received and the COC.	True	
Samples are received within Holding Time (excluding tests with immediate HTs)	True	
Sample containers have legible labels.	True	
Containers are not broken or leaking.	True	
Sample collection date/times are provided.	True	
Appropriate sample containers are used.	True	
Sample bottles are completely filled.	True	
Sample Preservation Verified.	True	
There is sufficient vol. for all requested analyses, incl. any requested MS/MSDs	True	
Containers requiring zero headspace have no headspace or bubble is $<6\text{mm}$ (1/4").	True	
Multiphasic samples are not present.	True	
Samples do not require splitting or compositing.	True	
Residual Chlorine Checked.	True	

Login Sample Receipt Checklist

Client: Messer LLC

Job Number: 860-70887-1

Login Number: 70887

List Source: Eurofins Lancaster Laboratories Environment Testing, LLC

List Number: 2

List Creation: 03/29/24 10:38 AM

Creator: Santiago, Nathaniel

Question	Answer	Comment
The cooler's custody seal is intact.	N/A	
The cooler or samples do not appear to have been compromised or tampered with.	True	
Samples were received on ice.	True	
Cooler Temperature acceptable, where thermal pres is required ($\leq 6^{\circ}\text{C}$, not frozen).	True	
Cooler Temperature is recorded.	True	
WV: Container Temp acceptable, where thermal pres is required ($\leq 6^{\circ}\text{C}$, not frozen).	N/A	
WV: Container Temperature is recorded.	N/A	
COC is present.	True	
COC is filled out in ink and legible.	True	
COC is filled out with all pertinent information.	True	
There are no discrepancies between the containers received and the COC.	True	
Sample containers have legible labels.	True	
Containers are not broken or leaking.	True	
Sample collection date/times are provided.	True	
Appropriate sample containers are used.	True	
Sample bottles are completely filled.	True	
There is sufficient vol. for all requested analyses.	True	
Is the Field Sampler's name present on COC?	False	Received project as a subcontract.
Sample custody seals are intact.	N/A	
VOA sample vials do not have headspace $> 6\text{mm}$ in diameter (none, if from WV)?	N/A	

Login Sample Receipt Checklist

Client: Messer LLC

Job Number: 860-70887-1

Login Number: 70887

List Number: 3

Creator: Earnest, Tamantha

List Source: Eurofins Pensacola

List Creation: 03/30/24 02:44 PM

Question	Answer	Comment
Radioactivity wasn't checked or is \leq background as measured by a survey meter.	N/A	
The cooler's custody seal, if present, is intact.	N/A	
Sample custody seals, if present, are intact.	N/A	
The cooler or samples do not appear to have been compromised or tampered with.	True	
Samples were received on ice.	True	
Cooler Temperature is acceptable.	True	
Cooler Temperature is recorded.	True	5.0°C IR11
COC is present.	True	
COC is filled out in ink and legible.	True	
COC is filled out with all pertinent information.	True	
Is the Field Sampler's name present on COC?	True	
There are no discrepancies between the containers received and the COC.	True	
Samples are received within Holding Time (excluding tests with immediate HTs)	True	
Sample containers have legible labels.	True	
Containers are not broken or leaking.	True	
Sample collection date/times are provided.	True	
Appropriate sample containers are used.	True	
Sample bottles are completely filled.	True	
Sample Preservation Verified.	N/A	
There is sufficient vol. for all requested analyses, incl. any requested MS/MSDs	True	
Containers requiring zero headspace have no headspace or bubble is $<6\text{mm}$ (1/4").	N/A	
Multiphasic samples are not present.	True	
Samples do not require splitting or compositing.	True	
Residual Chlorine Checked.	N/A	

ANALYTICAL REPORT

PREPARED FOR

Attn: Rami Qafisheh

Messer LLC

11605 Strang Rd.

La Porte, Texas 77571

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JOB DESCRIPTION

Messer Gas ASU Permit Renewal 4-3-24

JOB NUMBER

860-71363-1

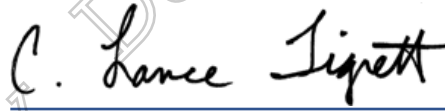
Eurofins Houston

Job Notes

This report may not be reproduced except in full, and with written approval from the laboratory. The results relate only to the samples tested. For questions please contact the Project Manager at the e-mail address or telephone number listed on this page.

Analytical test results meet all requirements of the associated regulatory program (i.e., NELAC (TNI), DoD, and ISO 17025) unless otherwise noted under the individual analysis.

Authorization



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Authorized for release by
Lance Tigrett, Project Manager II
Lance.Tigrett@et.eurofinsus.com
(979)484-9088



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Preliminary Data

Definitions/Glossary

Client: Messer LLC
Project/Site: Messer Gas ASU Permit Renewal 4-3-24

Job ID: 860-71363-1

Qualifiers

GC/MS VOA

Qualifier	Qualifier Description
J	Result is less than the RL but greater than or equal to the MDL and the concentration is an approximate value.
U	Indicates the analyte was analyzed for but not detected.

GC/MS Semi VOA

Qualifier	Qualifier Description
*-	LCS and/or LCSD is outside acceptance limits, low biased.
*+	LCS and/or LCSD is outside acceptance limits, high biased.
*1	LCS/LCSD RPD exceeds control limits.
J	Result is less than the RL but greater than or equal to the MDL and the concentration is an approximate value.
U	Indicates the analyte was analyzed for but not detected.

HPLC/IC

Qualifier	Qualifier Description
J	Result is less than the RL but greater than or equal to the MDL and the concentration is an approximate value.
U	Indicates the analyte was analyzed for but not detected.

Metals

Qualifier	Qualifier Description
J	Result is less than the RL but greater than or equal to the MDL and the concentration is an approximate value.
U	Indicates the analyte was analyzed for but not detected.

General Chemistry

Qualifier	Qualifier Description
^2	Calibration Blank (ICB and/or CCB) is outside acceptance limits.
B	Compound was found in the blank and sample.
F1	MS and/or MSD recovery exceeds control limits.
HF	Parameter with a holding time of 15 minutes. Test performed by laboratory at client's request. Sample was analyzed outside of hold time.
J	Result is less than the RL but greater than or equal to the MDL and the concentration is an approximate value.
U	Indicates the analyte was analyzed for but not detected.

Glossary

Abbreviation	These commonly used abbreviations may or may not be present in this report.
α	Listed under the "D" column to designate that the result is reported on a dry weight basis
%R	Percent Recovery
CFL	Contains Free Liquid
CFU	Colony Forming Unit
CNF	Contains No Free Liquid
DER	Duplicate Error Ratio (normalized absolute difference)
Dil Fac	Dilution Factor
DL	Detection Limit (DoD/DOE)
DL, RA, RE, IN	Indicates a Dilution, Re-analysis, Re-extraction, or additional Initial metals/anion analysis of the sample
DLC	Decision Level Concentration (Radiochemistry)
EDL	Estimated Detection Limit (Dioxin)
LOD	Limit of Detection (DoD/DOE)
LOQ	Limit of Quantitation (DoD/DOE)
MCL	EPA recommended "Maximum Contaminant Level"
MDA	Minimum Detectable Activity (Radiochemistry)
MDC	Minimum Detectable Concentration (Radiochemistry)
MDL	Method Detection Limit
ML	Minimum Level (Dioxin)
MPN	Most Probable Number
MQL	Method Quantitation Limit
NC	Not Calculated
ND	Not Detected at the reporting limit (or MDL or EDL if shown)
NEG	Negative / Absent

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Definitions/Glossary

Client: Messer LLC

Job ID: 860-71363-1

Project/Site: Messer Gas ASU Permit Renewal 4-3-24

Glossary (Continued)

Abbreviation **These commonly used abbreviations may or may not be present in this report.**

POS	Positive / Present
PQL	Practical Quantitation Limit
PRES	Presumptive
QC	Quality Control
RER	Relative Error Ratio (Radiochemistry)
RL	Reporting Limit or Requested Limit (Radiochemistry)
RPD	Relative Percent Difference, a measure of the relative difference between two points
TEF	Toxicity Equivalent Factor (Dioxin)
TEQ	Toxicity Equivalent Quotient (Dioxin)
TNTC	Too Numerous To Count

Preliminary Data

Case Narrative

Client: Messer LLC
Project: Messer Gas ASU Permit Renewal 4-3-24

Job ID: 860-71363-1

Job ID: 860-71363-1

Eurofins Houston

Job Narrative 860-71363-1

Analytical test results meet all requirements of the associated regulatory program listed on the Accreditation/Certification Summary Page unless otherwise noted under the individual analysis. Data qualifiers are applied to indicate exceptions. Noncompliant quality control (QC) is further explained in narrative comments.

- Matrix QC may not be reported if insufficient sample or site-specific QC samples were not submitted. In these situations, to demonstrate precision and accuracy at a batch level, a LCS/LCSD may be performed, unless otherwise specified in the method.
- Surrogate and/or isotope dilution analyte recoveries (if applicable) which are outside of the QC window are confirmed unless attributed to a dilution or otherwise noted in the narrative.

Regulated compliance samples (e.g. SDWA, NPDES) must comply with the associated agency requirements/permits.

Receipt

The sample was received on 4/3/2024 1:40 PM. Unless otherwise noted below, the sample arrived in good condition, and, where required, properly preserved and on ice. The temperature of the cooler at receipt time was 13.0°C.

Subcontract Work

Method Surfactants: This method was subcontracted to Envirodyne Laboratories. The subcontract laboratory certification is different from that of the facility issuing the final report. The subcontract report is appended in its entirety.

GC/MS VOA

No additional analytical or quality issues were noted, other than those described above or in the Definitions/ Glossary page.

GC/MS Semi VOA

Method 625.1: The RPD of the laboratory control sample (LCS) and laboratory control sample duplicate (LCSD) for preparation batch 860-154157 and analytical batch 860-154258 recovered outside control limits for the following analyte: Pyridine.

Method 625.1: The laboratory control sample and the laboratory control sample duplicate (LCS/LCSD) for preparation batch 860-154157 and analytical batch 860-154258 recovered outside control limits for the following analyte: Benzidine. Benzidine has been identified as a poor performing analyte when analyzed using this method; therefore, re-extraction/re-analysis was not performed. Batch precision also exceeded control limits for this analyte. These results have been reported and qualified.

No additional analytical or quality issues were noted, other than those described above or in the Definitions/ Glossary page.

HPLC/IC

Method 300_ORGFM_28D: The instrument blank/CCB for analytical batch 860-153142 contained Chloride greater than the method detection limit (MDL), and were not reanalyzed because associated sample(s) results were greater than 10X the value found in the instrument blank/CCB. The data have been reported.

No additional analytical or quality issues were noted, other than those described above or in the Definitions/ Glossary page.

Metals

Method 200.8 - Total Recoverable: The following sample was diluted to bring the concentration of target analytes within the calibration range: Outfall 001 (860-71363-1). Elevated reporting limits (RLs) are provided.

Method 200.8 - Total Recoverable: The following sample was diluted to bring the concentration of target analytes within the calibration range: Outfall 001 (860-71363-1). Elevated reporting limits (RLs) are provided.

No additional analytical or quality issues were noted, other than those described above or in the Definitions/ Glossary page.

General Chemistry

Method 2320B: The instrument blank/CCB and method blank for analytical batch 860-154745 contained Bicarbonate Alkalinity greater than the reporting limit (RL) and were not reanalyzed because associated sample(s) results were greater than 10X the value found in the instrument blank/CCB. The data have been qualified and reported.

Method 2320B: The method blank for analytical batch 860-154745 contained Bicarbonate Alkalinity above the reporting limit (RL). Associated sample(s) were not re-extracted and/or re-analyzed because results were greater than 10X the value found in the

Eurofins Houston

Case Narrative

Client: Messer LLC
Project: Messer Gas ASU Permit Renewal 4-3-24

Job ID: 860-71363-1

Job ID: 860-71363-1 (Continued)

Eurofins Houston

method blank.

Method 365.1_NP: The matrix spike (MS) and/or matrix spike duplicate (MSD) recovery for analytical batch 860-154643 was outside control limits for the following analyte(s): Phosphorus. Results may be biased high because this analyte is a common laboratory solvent and contaminant.

Method 4500_CL_G: The matrix spike / matrix spike duplicate (MS/MSD) recoveries for analytical batch 860-154024 were outside control limits for one or more analytes. See QC Sample Results for detail. Sample matrix interference and/or non-homogeneity are suspected because the associated laboratory control sample (LCS) recovery is within acceptance limits.

No additional analytical or quality issues were noted, other than those described above or in the Definitions/ Glossary page.

Preliminary Data

Eurofins Houston

Detection Summary

Client: Messer LLC
Project/Site: Messer Gas ASU Permit Renewal 4-3-24

Job ID: 860-71363-1

Client Sample ID: Outfall 001

Lab Sample ID: 860-71363-1

Sample Analysis Not Complete.

Preliminary Data

This Detection Summary does not include radiochemical test results.

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Client Sample Results

Client: Messer LLC
Project/Site: Messer Gas ASU Permit Renewal 4-3-24

Job ID: 860-71363-1

Client Sample ID: Outfall 001

Lab Sample ID: 860-71363-1

Date Collected: 04/03/24 08:00

Matrix: Water

Date Received: 04/03/24 13:40

Method: EPA 624.1 - Volatile Organic Compounds (GC/MS)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Acrolein	0.011	U	0.050	0.011	mg/L			04/05/24 16:50	1
Acrylonitrile	0.014	U	0.050	0.014	mg/L			04/05/24 16:50	1
Benzene	0.00046	U	0.0010	0.00046	mg/L			04/05/24 16:50	1
Carbon tetrachloride	0.00090	U	0.0050	0.00090	mg/L			04/05/24 16:50	1
Chlorobenzene	0.00046	U	0.0010	0.00046	mg/L			04/05/24 16:50	1
1,2,4-Trichlorobenzene	0.0018	U	0.0050	0.0018	mg/L			04/05/24 16:50	1
1,2-Dichloroethane	0.00037	U	0.0010	0.00037	mg/L			04/05/24 16:50	1
1,1,1-Trichloroethane	0.00059	U	0.0050	0.00059	mg/L			04/05/24 16:50	1
1,1-Dichloroethane	0.00064	U	0.0010	0.00064	mg/L			04/05/24 16:50	1
1,1,2-Trichloroethane	0.00041	U	0.0010	0.00041	mg/L			04/05/24 16:50	1
1,2-Dibromoethane	0.0010	U	0.0050	0.0010	mg/L			04/05/24 16:50	1
1,1,2,2-Tetrachloroethane	0.00047	U	0.0010	0.00047	mg/L			04/05/24 16:50	1
Chloroethane	0.0020	U	0.010	0.0020	mg/L			04/05/24 16:50	1
2-Chloroethyl vinyl ether	0.00075	U	0.0050	0.00075	mg/L			04/05/24 16:50	1
Chloroform	0.054		0.0010	0.00046	mg/L			04/05/24 16:50	1
1,2-Dichlorobenzene	0.00043	U	0.0010	0.00043	mg/L			04/05/24 16:50	1
1,3-Dichlorobenzene	0.00041	U	0.0010	0.00041	mg/L			04/05/24 16:50	1
1,4-Dichlorobenzene	0.00045	U	0.0010	0.00045	mg/L			04/05/24 16:50	1
1,1-Dichloroethene	0.00074	U	0.0010	0.00074	mg/L			04/05/24 16:50	1
trans-1,2-Dichloroethene	0.00037	U	0.0010	0.00037	mg/L			04/05/24 16:50	1
1,2-Dichloropropane	0.00056	U	0.0050	0.00056	mg/L			04/05/24 16:50	1
Ethylbenzene	0.00039	U	0.0010	0.00039	mg/L			04/05/24 16:50	1
2-Butanone	0.0083	U	0.050	0.0083	mg/L			04/05/24 16:50	1
Methylene Chloride	0.0017	U	0.0050	0.0017	mg/L			04/05/24 16:50	1
Chloromethane	0.0020	U	0.010	0.0020	mg/L			04/05/24 16:50	1
Bromomethane	0.0014	U	0.0050	0.0014	mg/L			04/05/24 16:50	1
Bromoform	0.00063	U	0.0050	0.00063	mg/L			04/05/24 16:50	1
Bromodichloromethane	0.0060		0.0010	0.00055	mg/L			04/05/24 16:50	1
Chlorodibromomethane	0.0012	J	0.0050	0.00055	mg/L			04/05/24 16:50	1
Hexachlorobutadiene	0.00063	U	0.0050	0.00063	mg/L			04/05/24 16:50	1
Naphthalene	0.0014	U	0.010	0.0014	mg/L			04/05/24 16:50	1
Tetrachloroethene	0.00066	U	0.0010	0.00066	mg/L			04/05/24 16:50	1
Toluene	0.00048	U	0.0010	0.00048	mg/L			04/05/24 16:50	1
Trichloroethene	0.0015	U	0.0050	0.0015	mg/L			04/05/24 16:50	1
Vinyl chloride	0.00043	U	0.0020	0.00043	mg/L			04/05/24 16:50	1
1,3-Dichloropropylene	0.0013	U	0.0050	0.0013	mg/L			04/05/24 16:50	1
cis-1,3-Dichloropropene	0.0011	U	0.0050	0.0011	mg/L			04/05/24 16:50	1
Trihalomethanes, Total	0.061		0.0050	0.00063	mg/L			04/05/24 16:50	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
1,2-Dichloroethane-d4 (Surr)	102		63 - 144		04/05/24 16:50	1
4-Bromofluorobenzene (Surr)	101		74 - 124		04/05/24 16:50	1
Dibromofluoromethane (Surr)	105		75 - 131		04/05/24 16:50	1
Toluene-d8 (Surr)	101		80 - 120		04/05/24 16:50	1

Method: EPA 625.1 - Semivolatile Organic Compounds (GC/MS)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,2,4,5-Tetrachlorobenzene	0.0013	U	0.010	0.0013	mg/L		04/10/24 15:48	04/11/24 20:22	1
1,2-Dichlorobenzene	0.0016	U	0.010	0.0016	mg/L		04/10/24 15:48	04/11/24 20:22	1
1,3-Dichlorobenzene	0.0014	U	0.010	0.0014	mg/L		04/10/24 15:48	04/11/24 20:22	1

Eurofins Houston

Client Sample Results

Client: Messer LLC
Project/Site: Messer Gas ASU Permit Renewal 4-3-24

Job ID: 860-71363-1

Client Sample ID: Outfall 001

Lab Sample ID: 860-71363-1

Date Collected: 04/03/24 08:00

Matrix: Water

Date Received: 04/03/24 13:40

Method: EPA 625.1 - Semivolatile Organic Compounds (GC/MS) (Continued)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,4-Dichlorobenzene	0.0016	U	0.010	0.0016	mg/L		04/10/24 15:48	04/11/24 20:22	1
Acenaphthene	0.0014	U	0.0057	0.0014	mg/L		04/10/24 15:48	04/11/24 20:22	1
Benzidine	0.0048	U *- *1	0.020	0.0048	mg/L		04/10/24 15:48	04/11/24 20:22	1
1,2,4-Trichlorobenzene	0.0016	U	0.0050	0.0016	mg/L		04/10/24 15:48	04/11/24 20:22	1
Hexachlorobenzene	0.00031	U	0.0050	0.00031	mg/L		04/10/24 15:48	04/11/24 20:22	1
Hexachloroethane	0.00053	U	0.0048	0.00053	mg/L		04/10/24 15:48	04/11/24 20:22	1
2,4,5-Trichlorophenol	0.0020	U	0.010	0.0020	mg/L		04/10/24 15:48	04/11/24 20:22	1
Bis(2-chloroethyl)ether	0.0022	U	0.010	0.0022	mg/L		04/10/24 15:48	04/11/24 20:22	1
2-Chloronaphthalene	0.00046	U	0.0050	0.00046	mg/L		04/10/24 15:48	04/11/24 20:22	1
2,4,6-Trichlorophenol	0.0014	U	0.0050	0.0014	mg/L		04/10/24 15:48	04/11/24 20:22	1
p-Chloro-m-cresol	0.0016	U	0.0050	0.0016	mg/L		04/10/24 15:48	04/11/24 20:22	1
2-Chlorophenol	0.00065	U	0.0050	0.00065	mg/L		04/10/24 15:48	04/11/24 20:22	1
3,3'-Dichlorobenzidine	0.00034	U	0.0050	0.00034	mg/L		04/10/24 15:48	04/11/24 20:22	1
2,4-Dichlorophenol	0.00031	U	0.0050	0.00031	mg/L		04/10/24 15:48	04/11/24 20:22	1
2,4-Dimethylphenol	0.00065	U	0.0050	0.00065	mg/L		04/10/24 15:48	04/11/24 20:22	1
2,4-Dinitrotoluene	0.0013	U	0.010	0.0013	mg/L		04/10/24 15:48	04/11/24 20:22	1
1,2-Diphenylhydrazine	0.0015	U	0.010	0.0015	mg/L		04/10/24 15:48	04/11/24 20:22	1
Fluoranthene	0.0016	U	0.0050	0.0016	mg/L		04/10/24 15:48	04/11/24 20:22	1
4-Bromophenyl phenyl ether	0.00026	U	0.0050	0.00026	mg/L		04/10/24 15:48	04/11/24 20:22	1
4-Chlorophenyl phenyl ether	0.0013	U	0.010	0.0013	mg/L		04/10/24 15:48	04/11/24 20:22	1
o-Cresol	0.0016	U	0.010	0.0016	mg/L		04/10/24 15:48	04/11/24 20:22	1
Bis(2-chloroethoxy)methane	0.0018	U	0.010	0.0018	mg/L		04/10/24 15:48	04/11/24 20:22	1
m & p - Cresol	0.0026	U	0.010	0.0026	mg/L		04/10/24 15:48	04/11/24 20:22	1
bis (2-chloroisopropyl) ether	0.0018	U	0.010	0.0018	mg/L		04/10/24 15:48	04/11/24 20:22	1
Hexachlorobutadiene	0.00024	U	0.0010	0.00024	mg/L		04/10/24 15:48	04/11/24 20:22	1
Hexachlorocyclopentadiene	0.0046	U	0.010	0.0046	mg/L		04/10/24 15:48	04/11/24 20:22	1
Isophorone	0.0016	U	0.0050	0.0016	mg/L		04/10/24 15:48	04/11/24 20:22	1
Naphthalene	0.00054	U	0.0025	0.00054	mg/L		04/10/24 15:48	04/11/24 20:22	1
Nitrobenzene	0.0017	U	0.0050	0.0017	mg/L		04/10/24 15:48	04/11/24 20:22	1
4-Nitrophenol	0.0049	U	0.0072	0.0049	mg/L		04/10/24 15:48	04/11/24 20:22	1
2-Nitrophenol	0.0017	U	0.010	0.0017	mg/L		04/10/24 15:48	04/11/24 20:22	1
4,6-Dinitro-o-cresol	0.0014	U	0.010	0.0014	mg/L		04/10/24 15:48	04/11/24 20:22	1
N-Nitrosodimethylamine	0.0020	U	0.010	0.0020	mg/L		04/10/24 15:48	04/11/24 20:22	1
N-Nitrosodiphenylamine	0.0018	U	0.010	0.0018	mg/L		04/10/24 15:48	04/11/24 20:22	1
N-Nitrosodi-n-propylamine	0.0029	U	0.010	0.0029	mg/L		04/10/24 15:48	04/11/24 20:22	1
Pentachlorophenol	0.00023	U	0.010	0.00023	mg/L		04/10/24 15:48	04/11/24 20:22	1
Phenol	0.00042	U	0.0045	0.00042	mg/L		04/10/24 15:48	04/11/24 20:22	1
Bis(2-ethylhexyl) phthalate	0.00028	U	0.0050	0.00028	mg/L		04/10/24 15:48	04/11/24 20:22	1
Butyl benzyl phthalate	0.00034	U	0.0050	0.00034	mg/L		04/10/24 15:48	04/11/24 20:22	1
Di-n-butyl phthalate	0.00025	U *+	0.0050	0.00025	mg/L		04/10/24 15:48	04/11/24 20:22	1
Di-n-octyl phthalate	0.00037	U *+	0.0050	0.00037	mg/L		04/10/24 15:48	04/11/24 20:22	1
Diethyl phthalate	0.0016	U	0.0050	0.0016	mg/L		04/10/24 15:48	04/11/24 20:22	1
Dimethyl phthalate	0.00030	U	0.0025	0.00030	mg/L		04/10/24 15:48	04/11/24 20:22	1
Benzo[a]anthracene	0.00017	U	0.0050	0.00017	mg/L		04/10/24 15:48	04/11/24 20:22	1
Benzo[a]pyrene	0.00036	U	0.0050	0.00036	mg/L		04/10/24 15:48	04/11/24 20:22	1
Benzo[b]fluoranthene	0.0020	U	0.010	0.0020	mg/L		04/10/24 15:48	04/11/24 20:22	1
Benzo[k]fluoranthene	0.00038	U	0.0050	0.00038	mg/L		04/10/24 15:48	04/11/24 20:22	1
Chrysene	0.00022	U	0.0050	0.00022	mg/L		04/10/24 15:48	04/11/24 20:22	1
Acenaphthylene	0.0014	U	0.010	0.0014	mg/L		04/10/24 15:48	04/11/24 20:22	1

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Client Sample Results

Client: Messer LLC
Project/Site: Messer Gas ASU Permit Renewal 4-3-24

Job ID: 860-71363-1

Client Sample ID: Outfall 001

Lab Sample ID: 860-71363-1

Date Collected: 04/03/24 08:00

Matrix: Water

Date Received: 04/03/24 13:40

Method: EPA 625.1 - Semivolatile Organic Compounds (GC/MS) (Continued)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Anthracene	0.0015	U	0.0057	0.0015	mg/L		04/10/24 15:48	04/11/24 20:22	1
Benzo[g,h,i]perylene	0.0027	U	0.010	0.0027	mg/L		04/10/24 15:48	04/11/24 20:22	1
Fluorene	0.0016	U	0.0050	0.0016	mg/L		04/10/24 15:48	04/11/24 20:22	1
Phenanthrene	0.0014	U	0.010	0.0014	mg/L		04/10/24 15:48	04/11/24 20:22	1
Dibenz(a,h)anthracene	0.00025	U	0.0050	0.00025	mg/L		04/10/24 15:48	04/11/24 20:22	1
Indeno[1,2,3-cd]pyrene	0.0023	U	0.010	0.0023	mg/L		04/10/24 15:48	04/11/24 20:22	1
Pyrene	0.00018	U	0.0050	0.00018	mg/L		04/10/24 15:48	04/11/24 20:22	1
2,4-Dinitrophenol	0.0016	U	0.010	0.0016	mg/L		04/10/24 15:48	04/11/24 20:22	1
2,6-Dinitrotoluene	0.0016	U	0.0050	0.0016	mg/L		04/10/24 15:48	04/11/24 20:22	1
N-Nitrosodi-n-butylamine	0.0015	U	0.010	0.0015	mg/L		04/10/24 15:48	04/11/24 20:22	1
N-Nitrosodiethylamine	0.0018	U	0.010	0.0018	mg/L		04/10/24 15:48	04/11/24 20:22	1
Nonylphenol	0.010	U	0.010	0.010	mg/L		04/10/24 15:48	04/11/24 20:22	1
Pentachlorobenzene	0.0011	U	0.010	0.0011	mg/L		04/10/24 15:48	04/11/24 20:22	1
Pyridine	0.0026	U *1	0.010	0.0026	mg/L		04/10/24 15:48	04/11/24 20:22	1
Total Cresols	0.0026	U	0.010	0.0026	mg/L		04/10/24 15:48	04/11/24 20:22	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
2,4,6-Tribromophenol (Surr)	85		31 - 132	04/10/24 15:48	04/11/24 20:22	1
2-Fluorobiphenyl (Surr)	76		29 - 112	04/10/24 15:48	04/11/24 20:22	1
2-Fluorophenol (Surr)	34		28 - 114	04/10/24 15:48	04/11/24 20:22	1
Nitrobenzene-d5 (Surr)	82		15 - 314	04/10/24 15:48	04/11/24 20:22	1
p-Terphenyl-d14 (Surr)	95		20 - 141	04/10/24 15:48	04/11/24 20:22	1
Phenol-d5 (Surr)	24		8 - 424	04/10/24 15:48	04/11/24 20:22	1

Method: EPA 300.0 - Anions, Ion Chromatography

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Bromide	0.071	U	0.50	0.071	mg/L			04/03/24 22:19	1
Nitrate as N	4.3		0.10	0.039	mg/L			04/03/24 22:19	1
Chloride	360		0.50	0.25	mg/L			04/03/24 22:19	1
Nitrite as N	0.029	U	0.10	0.029	mg/L			04/03/24 22:19	1
Fluoride	0.70		0.50	0.10	mg/L			04/03/24 22:19	1
Nitrate Nitrite as N	4.3		0.10	0.039	mg/L			04/03/24 22:19	1
Sulfate	360		0.50	0.20	mg/L			04/03/24 22:19	1

Method: EPA 1631E - Mercury, Low Level (CVAFS)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Mercury	15		0.50	0.20	ng/L		04/08/24 14:05	04/09/24 13:44	1

Method: EPA 200.8 - Metals (ICP/MS) - Total Recoverable

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Aluminum	0.19		0.020	0.0030	mg/L		04/10/24 12:00	04/10/24 21:07	1
Antimony	0.0013	J	0.0020	0.0011	mg/L		04/10/24 12:00	04/10/24 21:07	1
Arsenic	0.0045		0.0040	0.00034	mg/L		04/10/24 12:00	04/10/24 21:07	1
Barium	0.17		0.0040	0.00029	mg/L		04/10/24 12:00	04/10/24 21:07	1
Beryllium	0.00015	U	0.0020	0.00015	mg/L		04/10/24 12:00	04/10/24 21:07	1
Boron	0.35		0.10	0.025	mg/L		04/10/24 12:00	04/11/24 13:19	10
Cadmium	0.00026	U	0.0020	0.00026	mg/L		04/10/24 12:00	04/10/24 21:07	1
Chromium	0.0026	J	0.0040	0.00033	mg/L		04/10/24 12:00	04/10/24 21:07	1
Cobalt	0.00065	J	0.0020	0.00026	mg/L		04/10/24 12:00	04/10/24 21:07	1
Copper	0.042		0.0040	0.00069	mg/L		04/10/24 12:00	04/10/24 21:07	1

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Client Sample Results

Client: Messer LLC
Project/Site: Messer Gas ASU Permit Renewal 4-3-24

Job ID: 860-71363-1

Client Sample ID: Outfall 001

Lab Sample ID: 860-71363-1

Date Collected: 04/03/24 08:00

Matrix: Water

Date Received: 04/03/24 13:40

Method: EPA 200.8 - Metals (ICP/MS) - Total Recoverable (Continued)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Iron	0.80		0.020	0.0020	mg/L		04/10/24 12:00	04/10/24 21:07	1
Lead	0.00059	J	0.0020	0.00014	mg/L		04/10/24 12:00	04/10/24 21:07	1
Magnesium	16		2.0	0.18	mg/L		04/10/24 12:00	04/10/24 21:11	20
Manganese	0.035		0.0020	0.00016	mg/L		04/10/24 12:00	04/10/24 21:07	1
Molybdenum	0.0086		0.0020	0.00016	mg/L		04/10/24 12:00	04/10/24 21:07	1
Nickel	0.016		0.0020	0.00049	mg/L		04/10/24 12:00	04/10/24 21:07	1
Selenium	0.00095	J	0.0020	0.00069	mg/L		04/10/24 12:00	04/10/24 21:07	1
Silver	0.00012	U	0.0020	0.00012	mg/L		04/10/24 12:00	04/10/24 21:07	1
Thallium	0.00022	U	0.0020	0.00022	mg/L		04/10/24 12:00	04/10/24 21:07	1
Tin	0.00040	J	0.0020	0.00033	mg/L		04/10/24 12:00	04/10/24 21:07	1
Titanium	0.0018	J	0.0040	0.00042	mg/L		04/10/24 12:00	04/10/24 21:07	1
Zinc	0.017		0.0040	0.00089	mg/L		04/10/24 12:00	04/10/24 21:07	1

General Chemistry

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
HEM (1664B)	1.9	J	5.0	1.6	mg/L			04/12/24 15:05	1
Ammonia (EPA 350.1)	0.051	U	0.10	0.051	mg/L			04/11/24 10:53	1
Nitrogen, Kjeldahl (EPA 351.2)	2.9		0.20	0.089	mg/L		04/08/24 19:05	04/09/24 14:44	1
Oxygen, Dissolved (EPA 360.1)	9.9	HF	1.0	1.0	mg/L			04/08/24 16:30	1
Phosphorus Total (EPA 365.1)	3.2	F1	0.10	0.072	mg/L			04/12/24 13:05	5
Cr (VI) (SW846 7196A)	0.0040	J	0.010	0.0034	mg/L			04/03/24 18:19	1
Chemical Oxygen Demand (Hach 8000)	55		20	3.4	mg/L			04/11/24 21:15	1
Cyanide, Available (OI CORP OIA-1677)	0.0055	J	0.0060	0.0050	mg/L			04/08/24 14:03	1
Color, Apparent (SM 2120B)	30		10	10	Color Units			04/03/24 18:45	2
Color, True (SM 2120B)	15		5.0	5.0	Color Units			04/03/24 18:45	1
pH (SM 2120B)	8.1		0.10	0.10	S.U.			04/03/24 18:45	2
Alkalinity (SM 2320B)	130		4.0	4.0	mg/L			04/14/24 13:14	1
Bicarbonate Alkalinity as CaCO3 (SM 2320B)	130	B ^2	4.0	4.0	mg/L			04/14/24 13:14	1
Carbonate Alkalinity as CaCO3 (SM 2320B)	4.0	U	4.0	4.0	mg/L			04/14/24 13:14	1
Hydroxide Alkalinity (SM 2320B)	4.0	U	4.0	4.0	mg/L			04/14/24 13:14	1
Phenolphthalein Alkalinity (SM 2320B)	4.0	U	4.0	4.0	mg/L			04/14/24 13:14	1
Total Dissolved Solids (SM 2540C)	1400		20	20	mg/L			04/08/24 11:13	1
Total Suspended Solids (SM 2540D)	16		4.0	4.0	mg/L			04/09/24 19:40	1
Chlorine, Total Residual (SM 4500 Cl G)	0.88	HF F1	0.10	0.10	mg/L			04/09/24 19:26	2
Sulfide (SM 4500 S2 D)	0.040	U	0.10	0.040	mg/L			04/08/24 17:25	1
Sulfite (SM 4500 SO3 B)	5.0	U HF	5.0	5.0	mg/L			04/09/24 18:52	1
Biochemical Oxygen Demand (SM 5210B)	3.0	U	3.0	3.0	mg/L		04/04/24 10:55	04/04/24 13:49	1
Total Organic Carbon (SM 5310C)	12		1.0	0.50	mg/L			04/11/24 04:35	1
Carbonaceous Biochemical Oxygen Demand (SM5210B CBOD)	6.0	U	6.0	6.0	mg/L		04/04/24 17:01	04/04/24 17:24	1

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Surrogate Summary

Client: Messer LLC

Job ID: 860-71363-1

Project/Site: Messer Gas ASU Permit Renewal 4-3-24

Method: 624.1 - Volatile Organic Compounds (GC/MS)

Matrix: Water

Prep Type: Total/NA

Percent Surrogate Recovery (Acceptance Limits)

Lab Sample ID	Client Sample ID	DCA (63-144)	BFB (74-124)	DBFM (75-131)	TOL (80-120)
860-71363-1	Outfall 001	102	101	105	101
LCS 860-153406/3	Lab Control Sample	86	100	88	98
LCSD 860-153406/4	Lab Control Sample Dup	84	99	90	96
MB 860-153406/9	Method Blank	99	100	99	101

Surrogate Legend

DCA = 1,2-Dichloroethane-d4 (Surr)

BFB = 4-Bromofluorobenzene (Surr)

DBFM = Dibromofluoromethane (Surr)

TOL = Toluene-d8 (Surr)

Method: 625.1 - Semivolatile Organic Compounds (GC/MS)

Matrix: Water

Prep Type: Total/NA

Percent Surrogate Recovery (Acceptance Limits)

Lab Sample ID	Client Sample ID	TBP (31-132)	FBP (29-112)	2FP (28-114)	NBZ (15-314)	TPHd14 (20-141)	PHL (8-424)
860-71363-1	Outfall 001	85	76	34	82	95	24
LCS 860-154157/2-A	Lab Control Sample	90	76	41	80	99	29
LCSD 860-154157/3-A	Lab Control Sample Dup	92	84	41	86	108	30
MB 860-154157/1-A	Method Blank	69	78	35	88	110	23

Surrogate Legend

TBP = 2,4,6-Tribromophenol (Surr)

FBP = 2-Fluorobiphenyl (Surr)

2FP = 2-Fluorophenol (Surr)

NBZ = Nitrobenzene-d5 (Surr)

TPHd14 = p-Terphenyl-d14 (Surr)

PHL = Phenol-d5 (Surr)

QC Sample Results

Client: Messer LLC
Project/Site: Messer Gas ASU Permit Renewal 4-3-24

Job ID: 860-71363-1

Method: 624.1 - Volatile Organic Compounds (GC/MS)

Lab Sample ID: MB 860-153406/9

Matrix: Water

Analysis Batch: 153406

Client Sample ID: Method Blank

Prep Type: Total/NA

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Acrolein	0.011	U	0.050	0.011	mg/L			04/05/24 12:19	1
Acrylonitrile	0.014	U	0.050	0.014	mg/L			04/05/24 12:19	1
Benzene	0.00046	U	0.0010	0.00046	mg/L			04/05/24 12:19	1
Carbon tetrachloride	0.00090	U	0.0050	0.00090	mg/L			04/05/24 12:19	1
Chlorobenzene	0.00046	U	0.0010	0.00046	mg/L			04/05/24 12:19	1
1,2,4-Trichlorobenzene	0.0018	U	0.0050	0.0018	mg/L			04/05/24 12:19	1
1,2-Dichloroethane	0.00037	U	0.0010	0.00037	mg/L			04/05/24 12:19	1
1,1,1-Trichloroethane	0.00059	U	0.0050	0.00059	mg/L			04/05/24 12:19	1
1,1-Dichloroethane	0.00064	U	0.0010	0.00064	mg/L			04/05/24 12:19	1
1,1,2-Trichloroethane	0.00041	U	0.0010	0.00041	mg/L			04/05/24 12:19	1
1,2-Dibromoethane	0.0010	U	0.0050	0.0010	mg/L			04/05/24 12:19	1
1,1,1,2-Tetrachloroethane	0.00047	U	0.0010	0.00047	mg/L			04/05/24 12:19	1
Chloroethane	0.0020	U	0.010	0.0020	mg/L			04/05/24 12:19	1
2-Chloroethyl vinyl ether	0.00075	U	0.0050	0.00075	mg/L			04/05/24 12:19	1
Chloroform	0.00046	U	0.0010	0.00046	mg/L			04/05/24 12:19	1
1,2-Dichlorobenzene	0.00043	U	0.0010	0.00043	mg/L			04/05/24 12:19	1
1,3-Dichlorobenzene	0.00041	U	0.0010	0.00041	mg/L			04/05/24 12:19	1
1,4-Dichlorobenzene	0.00045	U	0.0010	0.00045	mg/L			04/05/24 12:19	1
1,1-Dichloroethene	0.00074	U	0.0010	0.00074	mg/L			04/05/24 12:19	1
trans-1,2-Dichloroethene	0.00037	U	0.0010	0.00037	mg/L			04/05/24 12:19	1
1,2-Dichloropropane	0.00056	U	0.0050	0.00056	mg/L			04/05/24 12:19	1
Ethylbenzene	0.00039	U	0.0010	0.00039	mg/L			04/05/24 12:19	1
2-Butanone	0.0083	U	0.050	0.0083	mg/L			04/05/24 12:19	1
Methylene Chloride	0.0017	U	0.0050	0.0017	mg/L			04/05/24 12:19	1
Chloromethane	0.0020	U	0.010	0.0020	mg/L			04/05/24 12:19	1
Bromomethane	0.0014	U	0.0050	0.0014	mg/L			04/05/24 12:19	1
Bromoform	0.00063	U	0.0050	0.00063	mg/L			04/05/24 12:19	1
Bromodichloromethane	0.00055	U	0.0010	0.00055	mg/L			04/05/24 12:19	1
Chlorodibromomethane	0.00055	U	0.0050	0.00055	mg/L			04/05/24 12:19	1
Hexachlorobutadiene	0.00063	U	0.0050	0.00063	mg/L			04/05/24 12:19	1
Naphthalene	0.0014	U	0.010	0.0014	mg/L			04/05/24 12:19	1
Tetrachloroethene	0.00066	U	0.0010	0.00066	mg/L			04/05/24 12:19	1
Toluene	0.00048	U	0.0010	0.00048	mg/L			04/05/24 12:19	1
Trichloroethene	0.0015	U	0.0050	0.0015	mg/L			04/05/24 12:19	1
Vinyl chloride	0.00043	U	0.0020	0.00043	mg/L			04/05/24 12:19	1
1,3-Dichloropropylene	0.0013	U	0.0050	0.0013	mg/L			04/05/24 12:19	1
cis-1,3-Dichloropropene	0.0011	U	0.0050	0.0011	mg/L			04/05/24 12:19	1
Trihalomethanes, Total	0.00063	U	0.0050	0.00063	mg/L			04/05/24 12:19	1

Surrogate	MB %Recovery	MB Qualifier	Limits	Prepared	Analyzed	Dil Fac
1,2-Dichloroethane-d4 (Surr)	99		63 - 144		04/05/24 12:19	1
4-Bromofluorobenzene (Surr)	100		74 - 124		04/05/24 12:19	1
Dibromofluoromethane (Surr)	99		75 - 131		04/05/24 12:19	1
Toluene-d8 (Surr)	101		80 - 120		04/05/24 12:19	1

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QC Sample Results

Client: Messer LLC
Project/Site: Messer Gas ASU Permit Renewal 4-3-24

Job ID: 860-71363-1

Method: 624.1 - Volatile Organic Compounds (GC/MS) (Continued)

Lab Sample ID: LCS 860-153406/3

Matrix: Water

Analysis Batch: 153406

Client Sample ID: Lab Control Sample

Prep Type: Total/NA

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits
Acrolein	0.250	0.209		mg/L		84	60 - 140
Acrylonitrile	0.500	0.407		mg/L		81	60 - 140
Benzene	0.0500	0.0507		mg/L		101	75 - 125
Carbon tetrachloride	0.0500	0.0563		mg/L		113	70 - 125
Chlorobenzene	0.0500	0.0533		mg/L		107	82 - 135
1,2,4-Trichlorobenzene	0.0500	0.0520		mg/L		104	75 - 135
1,2-Dichloroethane	0.0500	0.0435		mg/L		87	72 - 130
1,1,1-Trichloroethane	0.0500	0.0520		mg/L		104	70 - 130
1,1-Dichloroethane	0.0500	0.0483		mg/L		97	71 - 130
1,1,2-Trichloroethane	0.0500	0.0480		mg/L		96	75 - 130
1,2-Dibromoethane	0.0500	0.0517		mg/L		103	73 - 125
1,1,2,2-Tetrachloroethane	0.0500	0.0448		mg/L		90	74 - 125
Chloroethane	0.0500	0.0462		mg/L		92	60 - 140
2-Chloroethyl vinyl ether	0.0500	0.0527		mg/L		105	50 - 150
Chloroform	0.0500	0.0463		mg/L		93	70 - 121
1,2-Dichlorobenzene	0.0500	0.0539		mg/L		108	75 - 125
1,3-Dichlorobenzene	0.0500	0.0559		mg/L		112	75 - 125
1,4-Dichlorobenzene	0.0500	0.0521		mg/L		104	75 - 125
1,1-Dichloroethene	0.0500	0.0548		mg/L		110	50 - 150
trans-1,2-Dichloroethene	0.0500	0.0563		mg/L		113	75 - 125
1,2-Dichloropropane	0.0500	0.0492		mg/L		98	74 - 125
Ethylbenzene	0.0500	0.0586		mg/L		117	75 - 125
2-Butanone	0.250	0.213		mg/L		85	60 - 140
Methylene Chloride	0.0500	0.0481		mg/L		96	71 - 125
Chloromethane	0.0500	0.0486		mg/L		97	60 - 140
Bromomethane	0.0500	0.0458		mg/L		92	60 - 140
Bromoform	0.0500	0.0549		mg/L		110	70 - 130
Bromodichloromethane	0.0500	0.0516		mg/L		103	75 - 125
Chlorodibromomethane	0.0500	0.0535		mg/L		107	73 - 125
Hexachlorobutadiene	0.0500	0.0624		mg/L		125	75 - 125
Naphthalene	0.0500	0.0491		mg/L		98	70 - 130
Tetrachloroethene	0.0500	0.0599		mg/L		120	71 - 125
Toluene	0.0500	0.0551		mg/L		110	75 - 130
Trichloroethene	0.0500	0.0567		mg/L		113	75 - 135
Vinyl chloride	0.0500	0.0508		mg/L		102	60 - 140
cis-1,3-Dichloropropene	0.0500	0.0546		mg/L		109	74 - 125

Surrogate	LCS %Recovery	LCS Qualifier	Limits
1,2-Dichloroethane-d4 (Surr)	86		63 - 144
4-Bromofluorobenzene (Surr)	100		74 - 124
Dibromofluoromethane (Surr)	88		75 - 131
Toluene-d8 (Surr)	98		80 - 120

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QC Sample Results

Client: Messer LLC
Project/Site: Messer Gas ASU Permit Renewal 4-3-24

Job ID: 860-71363-1

Method: 624.1 - Volatile Organic Compounds (GC/MS) (Continued)

Lab Sample ID: LCSD 860-153406/4

Matrix: Water

Analysis Batch: 153406

Client Sample ID: Lab Control Sample Dup

Prep Type: Total/NA

Analyte	Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec Limits	RPD	RPD Limit
Acrolein	0.250	0.210		mg/L		84	60 - 140	0	25
Acrylonitrile	0.500	0.414		mg/L		83	60 - 140	2	25
Benzene	0.0500	0.0473		mg/L		95	75 - 125	7	25
Carbon tetrachloride	0.0500	0.0526		mg/L		105	70 - 125	7	25
Chlorobenzene	0.0500	0.0497		mg/L		99	82 - 135	7	25
1,2,4-Trichlorobenzene	0.0500	0.0526		mg/L		105	75 - 135	1	25
1,2-Dichloroethane	0.0500	0.0415		mg/L		83	72 - 130	5	25
1,1,1-Trichloroethane	0.0500	0.0492		mg/L		98	70 - 130	6	25
1,1-Dichloroethane	0.0500	0.0458		mg/L		92	71 - 130	5	25
1,1,2-Trichloroethane	0.0500	0.0462		mg/L		92	75 - 130	4	25
1,2-Dibromoethane	0.0500	0.0502		mg/L		100	73 - 125	3	25
1,1,2,2-Tetrachloroethane	0.0500	0.0445		mg/L		89	74 - 125	1	25
Chloroethane	0.0500	0.0407		mg/L		81	60 - 140	13	25
2-Chloroethyl vinyl ether	0.0500	0.0507		mg/L		101	50 - 150	4	25
Chloroform	0.0500	0.0447		mg/L		89	70 - 121	4	25
1,2-Dichlorobenzene	0.0500	0.0520		mg/L		104	75 - 125	4	25
1,3-Dichlorobenzene	0.0500	0.0544		mg/L		109	75 - 125	3	25
1,4-Dichlorobenzene	0.0500	0.0501		mg/L		100	75 - 125	4	25
1,1-Dichloroethene	0.0500	0.0508		mg/L		102	50 - 150	8	25
trans-1,2-Dichloroethene	0.0500	0.0534		mg/L		107	75 - 125	5	25
1,2-Dichloropropane	0.0500	0.0472		mg/L		94	74 - 125	4	25
Ethylbenzene	0.0500	0.0548		mg/L		110	75 - 125	7	25
2-Butanone	0.250	0.215		mg/L		86	60 - 140	1	25
Methylene Chloride	0.0500	0.0469		mg/L		94	71 - 125	2	25
Chloromethane	0.0500	0.0435		mg/L		87	60 - 140	11	25
Bromomethane	0.0500	0.0421		mg/L		84	60 - 140	8	25
Bromoform	0.0500	0.0541		mg/L		108	70 - 130	2	25
Bromodichloromethane	0.0500	0.0494		mg/L		99	75 - 125	4	25
Chlorodibromomethane	0.0500	0.0517		mg/L		103	73 - 125	3	25
Hexachlorobutadiene	0.0500	0.0607		mg/L		121	75 - 125	3	25
Naphthalene	0.0500	0.0520		mg/L		104	70 - 130	6	25
Tetrachloroethene	0.0500	0.0552		mg/L		110	71 - 125	8	25
Toluene	0.0500	0.0518		mg/L		104	75 - 130	6	25
Trichloroethene	0.0500	0.0529		mg/L		106	75 - 135	7	25
Vinyl chloride	0.0500	0.0451		mg/L		90	60 - 140	12	25
cis-1,3-Dichloropropene	0.0500	0.0526		mg/L		105	74 - 125	4	25

Surrogate	LCSD %Recovery	LCSD Qualifier	Limits
1,2-Dichloroethane-d4 (Surr)	84		63 - 144
4-Bromofluorobenzene (Surr)	99		74 - 124
Dibromofluoromethane (Surr)	90		75 - 131
Toluene-d8 (Surr)	96		80 - 120

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QC Sample Results

Client: Messer LLC
Project/Site: Messer Gas ASU Permit Renewal 4-3-24

Job ID: 860-71363-1

Method: 625.1 - Semivolatile Organic Compounds (GC/MS)

Lab Sample ID: MB 860-154157/1-A

Matrix: Water

Analysis Batch: 154258

Client Sample ID: Method Blank

Prep Type: Total/NA

Prep Batch: 154157

Analyte	MB	MB	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
	Result	Qualifier							
1,2,4,5-Tetrachlorobenzene	0.0013	U	0.010	0.0013	mg/L		04/10/24 15:48	04/11/24 16:49	1
1,2-Dichlorobenzene	0.0016	U	0.010	0.0016	mg/L		04/10/24 15:48	04/11/24 16:49	1
1,3-Dichlorobenzene	0.0014	U	0.010	0.0014	mg/L		04/10/24 15:48	04/11/24 16:49	1
1,4-Dichlorobenzene	0.0016	U	0.010	0.0016	mg/L		04/10/24 15:48	04/11/24 16:49	1
Acenaphthene	0.0014	U	0.0057	0.0014	mg/L		04/10/24 15:48	04/11/24 16:49	1
Benzidine	0.0048	U	0.020	0.0048	mg/L		04/10/24 15:48	04/11/24 16:49	1
1,2,4-Trichlorobenzene	0.0016	U	0.0050	0.0016	mg/L		04/10/24 15:48	04/11/24 16:49	1
Hexachlorobenzene	0.00031	U	0.0050	0.00031	mg/L		04/10/24 15:48	04/11/24 16:49	1
Hexachloroethane	0.00053	U	0.0048	0.00053	mg/L		04/10/24 15:48	04/11/24 16:49	1
2,4,5-Trichlorophenol	0.0020	U	0.010	0.0020	mg/L		04/10/24 15:48	04/11/24 16:49	1
Bis(2-chloroethyl)ether	0.0022	U	0.010	0.0022	mg/L		04/10/24 15:48	04/11/24 16:49	1
2-Chloronaphthalene	0.00046	U	0.0050	0.00046	mg/L		04/10/24 15:48	04/11/24 16:49	1
2,4,6-Trichlorophenol	0.0014	U	0.0050	0.0014	mg/L		04/10/24 15:48	04/11/24 16:49	1
p-Chloro-m-cresol	0.0016	U	0.0050	0.0016	mg/L		04/10/24 15:48	04/11/24 16:49	1
2-Chlorophenol	0.00065	U	0.0050	0.00065	mg/L		04/10/24 15:48	04/11/24 16:49	1
3,3'-Dichlorobenzidine	0.00034	U	0.0050	0.00034	mg/L		04/10/24 15:48	04/11/24 16:49	1
2,4-Dichlorophenol	0.00031	U	0.0050	0.00031	mg/L		04/10/24 15:48	04/11/24 16:49	1
2,4-Dimethylphenol	0.00065	U	0.0050	0.00065	mg/L		04/10/24 15:48	04/11/24 16:49	1
2,4-Dinitrotoluene	0.0013	U	0.010	0.0013	mg/L		04/10/24 15:48	04/11/24 16:49	1
1,2-Diphenylhydrazine	0.0015	U	0.010	0.0015	mg/L		04/10/24 15:48	04/11/24 16:49	1
Fluoranthene	0.0016	U	0.0050	0.0016	mg/L		04/10/24 15:48	04/11/24 16:49	1
4-Bromophenyl phenyl ether	0.00026	U	0.0050	0.00026	mg/L		04/10/24 15:48	04/11/24 16:49	1
4-Chlorophenyl phenyl ether	0.0013	U	0.010	0.0013	mg/L		04/10/24 15:48	04/11/24 16:49	1
o-Cresol	0.0016	U	0.010	0.0016	mg/L		04/10/24 15:48	04/11/24 16:49	1
Bis(2-chloroethoxy)methane	0.0018	U	0.010	0.0018	mg/L		04/10/24 15:48	04/11/24 16:49	1
m & p - Cresol	0.0026	U	0.010	0.0026	mg/L		04/10/24 15:48	04/11/24 16:49	1
bis (2-chloroisopropyl) ether	0.0018	U	0.010	0.0018	mg/L		04/10/24 15:48	04/11/24 16:49	1
Hexachlorobutadiene	0.00024	U	0.0010	0.00024	mg/L		04/10/24 15:48	04/11/24 16:49	1
Hexachlorocyclopentadiene	0.0046	U	0.010	0.0046	mg/L		04/10/24 15:48	04/11/24 16:49	1
Isophorone	0.0016	U	0.0050	0.0016	mg/L		04/10/24 15:48	04/11/24 16:49	1
Naphthalene	0.00054	U	0.0025	0.00054	mg/L		04/10/24 15:48	04/11/24 16:49	1
Nitrobenzene	0.0017	U	0.0050	0.0017	mg/L		04/10/24 15:48	04/11/24 16:49	1
4-Nitrophenol	0.0049	U	0.0072	0.0049	mg/L		04/10/24 15:48	04/11/24 16:49	1
2-Nitrophenol	0.0017	U	0.010	0.0017	mg/L		04/10/24 15:48	04/11/24 16:49	1
4,6-Dinitro-o-cresol	0.0014	U	0.010	0.0014	mg/L		04/10/24 15:48	04/11/24 16:49	1
N-Nitrosodimethylamine	0.0020	U	0.010	0.0020	mg/L		04/10/24 15:48	04/11/24 16:49	1
N-Nitrosodiphenylamine	0.0018	U	0.010	0.0018	mg/L		04/10/24 15:48	04/11/24 16:49	1
N-Nitrosodi-n-propylamine	0.0029	U	0.010	0.0029	mg/L		04/10/24 15:48	04/11/24 16:49	1
Pentachlorophenol	0.00023	U	0.010	0.00023	mg/L		04/10/24 15:48	04/11/24 16:49	1
Phenol	0.00042	U	0.0045	0.00042	mg/L		04/10/24 15:48	04/11/24 16:49	1
Bis(2-ethylhexyl) phthalate	0.00028	U	0.0050	0.00028	mg/L		04/10/24 15:48	04/11/24 16:49	1
Butyl benzyl phthalate	0.00034	U	0.0050	0.00034	mg/L		04/10/24 15:48	04/11/24 16:49	1
Di-n-butyl phthalate	0.00025	U	0.0050	0.00025	mg/L		04/10/24 15:48	04/11/24 16:49	1
Di-n-octyl phthalate	0.00037	U	0.0050	0.00037	mg/L		04/10/24 15:48	04/11/24 16:49	1
Diethyl phthalate	0.0016	U	0.0050	0.0016	mg/L		04/10/24 15:48	04/11/24 16:49	1
Dimethyl phthalate	0.00030	U	0.0025	0.00030	mg/L		04/10/24 15:48	04/11/24 16:49	1
Benzo[a]anthracene	0.00017	U	0.0050	0.00017	mg/L		04/10/24 15:48	04/11/24 16:49	1
Benzo[a]pyrene	0.00036	U	0.0050	0.00036	mg/L		04/10/24 15:48	04/11/24 16:49	1

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QC Sample Results

Client: Messer LLC
Project/Site: Messer Gas ASU Permit Renewal 4-3-24

Job ID: 860-71363-1

Method: 625.1 - Semivolatile Organic Compounds (GC/MS) (Continued)

Lab Sample ID: MB 860-154157/1-A

Matrix: Water

Analysis Batch: 154258

Client Sample ID: Method Blank

Prep Type: Total/NA

Prep Batch: 154157

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Benzo[b]fluoranthene	0.0020	U	0.010	0.0020	mg/L		04/10/24 15:48	04/11/24 16:49	1
Benzo[k]fluoranthene	0.00038	U	0.0050	0.00038	mg/L		04/10/24 15:48	04/11/24 16:49	1
Chrysene	0.00022	U	0.0050	0.00022	mg/L		04/10/24 15:48	04/11/24 16:49	1
Acenaphthylene	0.0014	U	0.010	0.0014	mg/L		04/10/24 15:48	04/11/24 16:49	1
Anthracene	0.0015	U	0.0057	0.0015	mg/L		04/10/24 15:48	04/11/24 16:49	1
Benzo[g,h,i]perylene	0.0027	U	0.010	0.0027	mg/L		04/10/24 15:48	04/11/24 16:49	1
Fluorene	0.0016	U	0.0050	0.0016	mg/L		04/10/24 15:48	04/11/24 16:49	1
Phenanthrene	0.0014	U	0.010	0.0014	mg/L		04/10/24 15:48	04/11/24 16:49	1
Dibenz(a,h)anthracene	0.00025	U	0.0050	0.00025	mg/L		04/10/24 15:48	04/11/24 16:49	1
Indeno[1,2,3-cd]pyrene	0.0023	U	0.010	0.0023	mg/L		04/10/24 15:48	04/11/24 16:49	1
Pyrene	0.00018	U	0.0050	0.00018	mg/L		04/10/24 15:48	04/11/24 16:49	1
2,4-Dinitrophenol	0.0016	U	0.010	0.0016	mg/L		04/10/24 15:48	04/11/24 16:49	1
2,6-Dinitrotoluene	0.0016	U	0.0050	0.0016	mg/L		04/10/24 15:48	04/11/24 16:49	1
N-Nitrosodi-n-butylamine	0.0015	U	0.010	0.0015	mg/L		04/10/24 15:48	04/11/24 16:49	1
N-Nitrosodiethylamine	0.0018	U	0.010	0.0018	mg/L		04/10/24 15:48	04/11/24 16:49	1
Nonylphenol	0.010	U	0.010	0.010	mg/L		04/10/24 15:48	04/11/24 16:49	1
Pentachlorobenzene	0.0011	U	0.010	0.0011	mg/L		04/10/24 15:48	04/11/24 16:49	1
Pyridine	0.0026	U	0.010	0.0026	mg/L		04/10/24 15:48	04/11/24 16:49	1
Total Cresols	0.0026	U	0.010	0.0026	mg/L		04/10/24 15:48	04/11/24 16:49	1

Surrogate	MB %Recovery	MB Qualifier	Limits	Prepared	Analyzed	Dil Fac
2,4,6-Tribromophenol (Surr)	69		31 - 132	04/10/24 15:48	04/11/24 16:49	1
2-Fluorobiphenyl (Surr)	78		29 - 112	04/10/24 15:48	04/11/24 16:49	1
2-Fluorophenol (Surr)	35		28 - 114	04/10/24 15:48	04/11/24 16:49	1
Nitrobenzene-d5 (Surr)	88		15 - 314	04/10/24 15:48	04/11/24 16:49	1
p-Terphenyl-d14 (Surr)	110		20 - 141	04/10/24 15:48	04/11/24 16:49	1
Phenol-d5 (Surr)	23		8 - 424	04/10/24 15:48	04/11/24 16:49	1

Lab Sample ID: LCS 860-154157/2-A

Matrix: Water

Analysis Batch: 154258

Client Sample ID: Lab Control Sample

Prep Type: Total/NA

Prep Batch: 154157

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	Limits
1,2,4,5-Tetrachlorobenzene	0.0400	0.0288		mg/L		72	41 - 125
1,2-Dichlorobenzene	0.0400	0.0278		mg/L		69	60 - 140
1,3-Dichlorobenzene	0.0400	0.0273		mg/L		68	60 - 140
1,4-Dichlorobenzene	0.0400	0.0277		mg/L		69	19 - 121
Acenaphthene	0.0400	0.0330		mg/L		83	60 - 132
Benzidine	0.0400	0.00703	J *	mg/L		18	25 - 125
1,2,4-Trichlorobenzene	0.0400	0.0271		mg/L		68	57 - 130
Hexachlorobenzene	0.0400	0.0356		mg/L		89	8 - 142
Hexachloroethane	0.0400	0.0262		mg/L		65	55 - 120
2,4,5-Trichlorophenol	0.0400	0.0341		mg/L		85	35 - 111
Bis(2-chloroethyl)ether	0.0400	0.0310		mg/L		77	43 - 126
2-Chloronaphthalene	0.0400	0.0321		mg/L		80	65 - 120
2,4,6-Trichlorophenol	0.0400	0.0334		mg/L		83	52 - 129
p-Chloro-m-cresol	0.0400	0.0323		mg/L		81	41 - 128
2-Chlorophenol	0.0400	0.0258		mg/L		65	36 - 120

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QC Sample Results

Client: Messer LLC
Project/Site: Messer Gas ASU Permit Renewal 4-3-24

Job ID: 860-71363-1

Method: 625.1 - Semivolatile Organic Compounds (GC/MS) (Continued)

Lab Sample ID: LCS 860-154157/2-A

Matrix: Water

Analysis Batch: 154258

Client Sample ID: Lab Control Sample

Prep Type: Total/NA

Prep Batch: 154157

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits
3,3'-Dichlorobenzidine	0.0400	0.0364		mg/L		91	18 - 213
2,4-Dichlorophenol	0.0400	0.0303		mg/L		76	53 - 122
2,4-Dimethylphenol	0.0400	0.0408		mg/L		102	42 - 120
2,4-Dinitrotoluene	0.0400	0.0391		mg/L		98	48 - 127
1,2-Diphenylhydrazine	0.0400	0.0434		mg/L		109	28 - 136
Fluoranthene	0.0400	0.0417		mg/L		104	43 - 121
4-Bromophenyl phenyl ether	0.0400	0.0361		mg/L		90	65 - 120
4-Chlorophenyl phenyl ether	0.0400	0.0349		mg/L		87	38 - 145
o-Cresol	0.0400	0.0218		mg/L		55	14 - 176
Bis(2-chloroethoxy)methane	0.0400	0.0305		mg/L		76	49 - 165
m & p - Cresol	0.0400	0.0216		mg/L		54	14 - 176
bis (2-chloroisopropyl) ether	0.0400	0.0347		mg/L		87	63 - 139
Hexachlorobutadiene	0.0400	0.0269		mg/L		67	38 - 120
Hexachlorocyclopentadiene	0.0400	0.0345		mg/L		86	41 - 125
Isophorone	0.0400	0.0328		mg/L		82	47 - 180
Naphthalene	0.0400	0.0298		mg/L		74	36 - 120
Nitrobenzene	0.0400	0.0326		mg/L		82	54 - 158
4-Nitrophenol	0.0400	0.0153		mg/L		38	13 - 129
2-Nitrophenol	0.0400	0.0306		mg/L		76	45 - 167
4,6-Dinitro-o-cresol	0.0400	0.0433		mg/L		108	53 - 130
N-Nitrosodimethylamine	0.0400	0.0138		mg/L		34	20 - 125
N-Nitrosodiphenylamine	0.0400	0.0344		mg/L		86	2 - 196
N-Nitrosodi-n-propylamine	0.0400	0.0332		mg/L		83	14 - 198
Pentachlorophenol	0.0400	0.0271		mg/L		68	38 - 152
Phenol	0.0400	0.0140		mg/L		35	17 - 120
Bis(2-ethylhexyl) phthalate	0.0400	0.0460		mg/L		115	29 - 137
Butyl benzyl phthalate	0.0400	0.0449		mg/L		112	12 - 140
Di-n-butyl phthalate	0.0400	0.0456		mg/L		114	8 - 120
Di-n-octyl phthalate	0.0400	0.0529		mg/L		132	19 - 132
Diethyl phthalate	0.0400	0.0387		mg/L		97	17 - 120
Dimethyl phthalate	0.0400	0.0362		mg/L		91	25 - 120
Benzo[a]anthracene	0.0400	0.0396		mg/L		99	42 - 133
Benzo[a]pyrene	0.0400	0.0453		mg/L		113	32 - 148
Benzo[b]fluoranthene	0.0400	0.0429		mg/L		107	42 - 140
Benzo[k]fluoranthene	0.0400	0.0437		mg/L		109	25 - 146
Chrysene	0.0400	0.0394		mg/L		98	44 - 140
Acenaphthylene	0.0400	0.0329		mg/L		82	54 - 126
Anthracene	0.0400	0.0418		mg/L		104	43 - 120
Benzo[g,h,i]perylene	0.0400	0.0429		mg/L		107	13 - 195
Fluorene	0.0400	0.0370		mg/L		92	70 - 120
Phenanthrene	0.0400	0.0405		mg/L		101	65 - 120
Dibenz(a,h)anthracene	0.0400	0.0466		mg/L		117	16 - 200
Indeno[1,2,3-cd]pyrene	0.0400	0.0464		mg/L		116	13 - 151
Pyrene	0.0400	0.0442		mg/L		110	70 - 120
2,4-Dinitrophenol	0.0400	0.0251		mg/L		63	12 - 173
2,6-Dinitrotoluene	0.0400	0.0365		mg/L		91	68 - 137
N-Nitrosodi-n-butylamine	0.0400	0.0295		mg/L		74	33 - 141
N-Nitrosodiethylamine	0.0400	0.0354		mg/L		88	30 - 160
Pentachlorobenzene	0.0400	0.0301		mg/L		75	25 - 131

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QC Sample Results

Client: Messer LLC
Project/Site: Messer Gas ASU Permit Renewal 4-3-24

Job ID: 860-71363-1

Method: 625.1 - Semivolatile Organic Compounds (GC/MS) (Continued)

Lab Sample ID: LCS 860-154157/2-A

Matrix: Water

Analysis Batch: 154258

Client Sample ID: Lab Control Sample

Prep Type: Total/NA

Prep Batch: 154157

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits
Pyridine	0.0400	0.00827	J	mg/L		21	5 - 94

Surrogate	LCS %Recovery	LCS Qualifier	Limits
2,4,6-Tribromophenol (Surr)	90		31 - 132
2-Fluorobiphenyl (Surr)	76		29 - 112
2-Fluorophenol (Surr)	41		28 - 114
Nitrobenzene-d5 (Surr)	80		15 - 314
p-Terphenyl-d14 (Surr)	99		20 - 141
Phenol-d5 (Surr)	29		8 - 424

Lab Sample ID: LCSD 860-154157/3-A

Matrix: Water

Analysis Batch: 154258

Client Sample ID: Lab Control Sample Dup

Prep Type: Total/NA

Prep Batch: 154157

Analyte	Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec Limits	RPD	RPD Limit
1,2,4,5-Tetrachlorobenzene	0.0400	0.0305		mg/L		76	41 - 125	6	30
1,2-Dichlorobenzene	0.0400	0.0275		mg/L		69	60 - 140	1	30
1,3-Dichlorobenzene	0.0400	0.0275		mg/L		69	60 - 140	1	30
1,4-Dichlorobenzene	0.0400	0.0278		mg/L		69	19 - 121	0	30
Acenaphthene	0.0400	0.0364		mg/L		91	60 - 132	10	29
Benzidine	0.0400	0.0048	U * - *1	mg/L		9	25 - 125	67	30
1,2,4-Trichlorobenzene	0.0400	0.0264		mg/L		66	57 - 130	3	30
Hexachlorobenzene	0.0400	0.0362		mg/L		90	8 - 142	2	30
Hexachloroethane	0.0400	0.0267		mg/L		67	55 - 120	2	30
2,4,5-Trichlorophenol	0.0400	0.0357		mg/L		89	35 - 111	5	30
Bis(2-chloroethyl)ether	0.0400	0.0330		mg/L		82	43 - 126	6	30
2-Chloronaphthalene	0.0400	0.0343		mg/L		86	65 - 120	7	15
2,4,6-Trichlorophenol	0.0400	0.0357		mg/L		89	52 - 129	7	30
p-Chloro-m-cresol	0.0400	0.0339		mg/L		85	41 - 128	5	30
2-Chlorophenol	0.0400	0.0262		mg/L		65	36 - 120	1	30
3,3'-Dichlorobenzidine	0.0400	0.0383		mg/L		96	18 - 213	5	30
2,4-Dichlorophenol	0.0400	0.0310		mg/L		77	53 - 122	2	30
2,4-Dimethylphenol	0.0400	0.0428		mg/L		107	42 - 120	5	30
2,4-Dinitrotoluene	0.0400	0.0407		mg/L		102	48 - 127	4	25
1,2-Diphenylhydrazine	0.0400	0.0490		mg/L		123	28 - 136	12	30
Fluoranthene	0.0400	0.0441		mg/L		110	43 - 121	6	30
4-Bromophenyl phenyl ether	0.0400	0.0371		mg/L		93	65 - 120	3	26
4-Chlorophenyl phenyl ether	0.0400	0.0370		mg/L		93	38 - 145	6	30
o-Cresol	0.0400	0.0224		mg/L		56	14 - 176	3	30
Bis(2-chloroethoxy)methane	0.0400	0.0323		mg/L		81	49 - 165	6	30
m & p - Cresol	0.0400	0.0230		mg/L		57	14 - 176	6	30
bis (2-chloroisopropyl) ether	0.0400	0.0382		mg/L		95	63 - 139	10	30
Hexachlorobutadiene	0.0400	0.0258		mg/L		65	38 - 120	4	30
Hexachlorocyclopentadiene	0.0400	0.0388		mg/L		97	41 - 125	12	30
Isophorone	0.0400	0.0355		mg/L		89	47 - 180	8	30
Naphthalene	0.0400	0.0305		mg/L		76	36 - 120	2	30
Nitrobenzene	0.0400	0.0339		mg/L		85	54 - 158	4	30
4-Nitrophenol	0.0400	0.0158		mg/L		39	13 - 129	3	30

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QC Sample Results

Client: Messer LLC
Project/Site: Messer Gas ASU Permit Renewal 4-3-24

Job ID: 860-71363-1

Method: 625.1 - Semivolatile Organic Compounds (GC/MS) (Continued)

Lab Sample ID: LCSD 860-154157/3-A

Matrix: Water

Analysis Batch: 154258

Client Sample ID: Lab Control Sample Dup

Prep Type: Total/NA

Prep Batch: 154157

Analyte	Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec Limits	RPD	RPD Limit
2-Nitrophenol	0.0400	0.0306		mg/L		77	45 - 167	0	30
4,6-Dinitro-o-cresol	0.0400	0.0459		mg/L		115	53 - 130	6	30
N-Nitrosodimethylamine	0.0400	0.0132		mg/L		33	20 - 125	5	30
N-Nitrosodiphenylamine	0.0400	0.0352		mg/L		88	2 - 196	2	30
N-Nitrosodi-n-propylamine	0.0400	0.0358		mg/L		90	14 - 198	7	30
Pentachlorophenol	0.0400	0.0278		mg/L		70	38 - 152	3	30
Phenol	0.0400	0.0146		mg/L		36	17 - 120	4	30
Bis(2-ethylhexyl) phthalate	0.0400	0.0531		mg/L		133	29 - 137	14	30
Butyl benzyl phthalate	0.0400	0.0512		mg/L		128	12 - 140	13	30
Di-n-butyl phthalate	0.0400	0.0488	*+	mg/L		122	8 - 120	7	28
Di-n-octyl phthalate	0.0400	0.0606	*+	mg/L		152	19 - 132	14	30
Diethyl phthalate	0.0400	0.0399		mg/L		100	17 - 120	3	30
Dimethyl phthalate	0.0400	0.0381		mg/L		95	25 - 120	5	30
Benzo[a]anthracene	0.0400	0.0419		mg/L		105	42 - 133	6	30
Benzo[a]pyrene	0.0400	0.0482		mg/L		120	32 - 148	6	30
Benzo[b]fluoranthene	0.0400	0.0476		mg/L		119	42 - 140	11	30
Benzo[k]fluoranthene	0.0400	0.0438		mg/L		110	25 - 146	0	30
Chrysene	0.0400	0.0419		mg/L		105	44 - 140	6	30
Acenaphthylene	0.0400	0.0347		mg/L		87	54 - 126	5	30
Anthracene	0.0400	0.0438		mg/L		109	43 - 120	5	30
Benzo[g,h,i]perylene	0.0400	0.0439		mg/L		110	13 - 195	2	30
Fluorene	0.0400	0.0394		mg/L		99	70 - 120	6	23
Phenanthrene	0.0400	0.0420		mg/L		105	65 - 120	4	30
Dibenz(a,h)anthracene	0.0400	0.0488		mg/L		122	16 - 200	4	30
Indeno[1,2,3-cd]pyrene	0.0400	0.0478		mg/L		120	13 - 151	3	30
Pyrene	0.0400	0.0474		mg/L		118	70 - 120	7	30
2,4-Dinitrophenol	0.0400	0.0268		mg/L		67	12 - 173	7	30
2,6-Dinitrotoluene	0.0400	0.0374		mg/L		94	68 - 137	2	29
N-Nitrosodi-n-butylamine	0.0400	0.0323		mg/L		81	33 - 141	9	30
N-Nitrosodiethylamine	0.0400	0.0366		mg/L		91	30 - 160	3	30
Pentachlorobenzene	0.0400	0.0308		mg/L		77	25 - 131	2	30
Pyridine	0.0400	0.00467	J *1	mg/L		12	5 - 94	56	30

Surrogate	LCSD %Recovery	LCSD Qualifier	Limits
2,4,6-Tribromophenol (Surr)	92		31 - 132
2-Fluorobiphenyl (Surr)	84		29 - 112
2-Fluorophenol (Surr)	41		28 - 114
Nitrobenzene-d5 (Surr)	86		15 - 314
p-Terphenyl-d14 (Surr)	108		20 - 141
Phenol-d5 (Surr)	30		8 - 424

Method: 300.0 - Anions, Ion Chromatography

Lab Sample ID: MB 860-153142/3

Matrix: Water

Analysis Batch: 153142

Client Sample ID: Method Blank

Prep Type: Total/NA

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Bromide	0.071	U	0.50	0.071	mg/L			04/03/24 19:31	1

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QC Sample Results

Client: Messer LLC

Job ID: 860-71363-1

Project/Site: Messer Gas ASU Permit Renewal 4-3-24

Method: 300.0 - Anions, Ion Chromatography (Continued)

Lab Sample ID: MB 860-153142/3

Client Sample ID: Method Blank

Matrix: Water

Prep Type: Total/NA

Analysis Batch: 153142

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	0.25	U	0.50	0.25	mg/L			04/03/24 19:31	1
Fluoride	0.10	U	0.50	0.10	mg/L			04/03/24 19:31	1
Sulfate	0.20	U	0.50	0.20	mg/L			04/03/24 19:31	1

Lab Sample ID: LCS 860-153142/4

Client Sample ID: Lab Control Sample

Matrix: Water

Prep Type: Total/NA

Analysis Batch: 153142

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits
Bromide	10.0	10.6		mg/L		106	90 - 110
Chloride	10.0	9.24		mg/L		92	90 - 110
Fluoride	10.0	10.6		mg/L		106	90 - 110
Sulfate	10.0	9.19		mg/L		92	90 - 110

Lab Sample ID: LCSD 860-153142/5

Client Sample ID: Lab Control Sample Dup

Matrix: Water

Prep Type: Total/NA

Analysis Batch: 153142

Analyte	Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec Limits	RPD	RPD Limit
Bromide	10.0	10.5		mg/L		105	90 - 110	1	20
Chloride	10.0	9.25		mg/L		92	90 - 110	0	20
Fluoride	10.0	10.6		mg/L		106	90 - 110	0	20
Sulfate	10.0	9.23		mg/L		92	90 - 110	0	20

Lab Sample ID: LLCS 860-153142/7

Client Sample ID: Lab Control Sample

Matrix: Water

Prep Type: Total/NA

Analysis Batch: 153142

Analyte	Spike Added	LLCS Result	LLCS Qualifier	Unit	D	%Rec	%Rec Limits
Bromide	0.500	0.465	J	mg/L		93	50 - 150
Chloride	0.500	0.575		mg/L		115	50 - 150
Fluoride	0.500	0.420	J	mg/L		84	50 - 150

Lab Sample ID: MB 860-153143/3

Client Sample ID: Method Blank

Matrix: Water

Prep Type: Total/NA

Analysis Batch: 153143

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Nitrate as N	0.039	U	0.10	0.039	mg/L			04/03/24 19:31	1
Nitrite as N	0.029	U	0.10	0.029	mg/L			04/03/24 19:31	1
Nitrate Nitrite as N	0.039	U	0.10	0.039	mg/L			04/03/24 19:31	1

Lab Sample ID: LCS 860-153143/4

Client Sample ID: Lab Control Sample

Matrix: Water

Prep Type: Total/NA

Analysis Batch: 153143

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits
Nitrate as N	10.0	10.3		mg/L		103	80 - 120
Nitrite as N	10.0	10.3		mg/L		103	80 - 120

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QC Sample Results

Client: Messer LLC
Project/Site: Messer Gas ASU Permit Renewal 4-3-24

Job ID: 860-71363-1

Method: 300.0 - Anions, Ion Chromatography (Continued)

Lab Sample ID: LCSD 860-153143/5
Matrix: Water
Analysis Batch: 153143

Client Sample ID: Lab Control Sample Dup
Prep Type: Total/NA

Analyte	Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec Limits	RPD	RPD Limit
Nitrate as N	10.0	10.3		mg/L		103	80 - 120	0	20
Nitrite as N	10.0	10.3		mg/L		103	80 - 120	0	20

Method: 1631E - Mercury, Low Level (CVAFS)

Lab Sample ID: MB 400-667323/4-A
Matrix: Water
Analysis Batch: 667418

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 667323

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Mercury	0.20	U	0.50	0.20	ng/L		04/08/24 16:00	04/09/24 10:10	1

Lab Sample ID: LCS 400-667323/5-A
Matrix: Water
Analysis Batch: 667418

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 667323

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits
Mercury	5.00	4.64		ng/L		93	79 - 121

Lab Sample ID: LCSD 400-667323/6-A
Matrix: Water
Analysis Batch: 667418

Client Sample ID: Lab Control Sample Dup
Prep Type: Total/NA
Prep Batch: 667323

Analyte	Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec Limits	RPD	RPD Limit
Mercury	5.00	4.69		ng/L		94	79 - 121	1	20

Lab Sample ID: MRL 400-667323/3-A
Matrix: Water
Analysis Batch: 667418

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 667323

Analyte	Spike Added	MRL Result	MRL Qualifier	Unit	D	%Rec	%Rec Limits
Mercury	0.500	0.493	J	ng/L		99	75 - 125

Method: 200.8 - Metals (ICP/MS)

Lab Sample ID: MB 860-154112/1-A
Matrix: Water
Analysis Batch: 154173

Client Sample ID: Method Blank
Prep Type: Total Recoverable
Prep Batch: 154112

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Aluminum	0.0030	U	0.020	0.0030	mg/L		04/10/24 12:00	04/10/24 19:57	1
Antimony	0.0011	U	0.0020	0.0011	mg/L		04/10/24 12:00	04/10/24 19:57	1
Arsenic	0.00034	U	0.0040	0.00034	mg/L		04/10/24 12:00	04/10/24 19:57	1
Barium	0.00029	U	0.0040	0.00029	mg/L		04/10/24 12:00	04/10/24 19:57	1
Beryllium	0.00015	U	0.0020	0.00015	mg/L		04/10/24 12:00	04/10/24 19:57	1
Cadmium	0.00026	U	0.0020	0.00026	mg/L		04/10/24 12:00	04/10/24 19:57	1
Chromium	0.00033	U	0.0040	0.00033	mg/L		04/10/24 12:00	04/10/24 19:57	1
Cobalt	0.00026	U	0.0020	0.00026	mg/L		04/10/24 12:00	04/10/24 19:57	1
Copper	0.00069	U	0.0040	0.00069	mg/L		04/10/24 12:00	04/10/24 19:57	1
Iron	0.0020	U	0.020	0.0020	mg/L		04/10/24 12:00	04/10/24 19:57	1

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QC Sample Results

Client: Messer LLC
Project/Site: Messer Gas ASU Permit Renewal 4-3-24

Job ID: 860-71363-1

Method: 200.8 - Metals (ICP/MS) (Continued)

Lab Sample ID: MB 860-154112/1-A
Matrix: Water
Analysis Batch: 154173

Client Sample ID: Method Blank
Prep Type: Total Recoverable
Prep Batch: 154112

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Lead	0.00014	U	0.0020	0.00014	mg/L		04/10/24 12:00	04/10/24 19:57	1
Magnesium	0.0092	U	0.10	0.0092	mg/L		04/10/24 12:00	04/10/24 19:57	1
Manganese	0.00016	U	0.0020	0.00016	mg/L		04/10/24 12:00	04/10/24 19:57	1
Molybdenum	0.00016	U	0.0020	0.00016	mg/L		04/10/24 12:00	04/10/24 19:57	1
Nickel	0.00049	U	0.0020	0.00049	mg/L		04/10/24 12:00	04/10/24 19:57	1
Selenium	0.00069	U	0.0020	0.00069	mg/L		04/10/24 12:00	04/10/24 19:57	1
Silver	0.00012	U	0.0020	0.00012	mg/L		04/10/24 12:00	04/10/24 19:57	1
Thallium	0.00022	U	0.0020	0.00022	mg/L		04/10/24 12:00	04/10/24 19:57	1
Tin	0.00033	U	0.0020	0.00033	mg/L		04/10/24 12:00	04/10/24 19:57	1
Titanium	0.00042	U	0.0040	0.00042	mg/L		04/10/24 12:00	04/10/24 19:57	1
Zinc	0.00089	U	0.0040	0.00089	mg/L		04/10/24 12:00	04/10/24 19:57	1

Lab Sample ID: MB 860-154112/1-A
Matrix: Water
Analysis Batch: 154352

Client Sample ID: Method Blank
Prep Type: Total Recoverable
Prep Batch: 154112

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Boron	0.0025	U	0.010	0.0025	mg/L		04/10/24 12:00	04/11/24 12:58	1

Lab Sample ID: LCS 860-154112/2-A
Matrix: Water
Analysis Batch: 154173

Client Sample ID: Lab Control Sample
Prep Type: Total Recoverable
Prep Batch: 154112

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits
Aluminum	0.500	0.487		mg/L		97	85 - 115
Antimony	0.100	0.0985		mg/L		99	85 - 115
Arsenic	0.100	0.0959		mg/L		96	85 - 115
Barium	0.100	0.0938		mg/L		94	85 - 115
Beryllium	0.100	0.0982		mg/L		98	85 - 115
Cadmium	0.100	0.103		mg/L		103	85 - 115
Chromium	0.100	0.0937		mg/L		94	85 - 115
Cobalt	0.100	0.0930		mg/L		93	85 - 115
Copper	0.100	0.0932		mg/L		93	85 - 115
Iron	0.500	0.483		mg/L		97	85 - 115
Lead	0.100	0.0962		mg/L		96	85 - 115
Magnesium	2.50	2.37		mg/L		95	85 - 115
Manganese	0.100	0.0946		mg/L		95	85 - 115
Molybdenum	0.100	0.0996		mg/L		100	85 - 115
Nickel	0.100	0.0930		mg/L		93	85 - 115
Selenium	0.100	0.0956		mg/L		96	85 - 115
Silver	0.0500	0.0502		mg/L		100	85 - 115
Thallium	0.100	0.0968		mg/L		97	85 - 115
Tin	0.100	0.101		mg/L		101	85 - 115
Titanium	0.100	0.0920		mg/L		92	85 - 115
Zinc	0.100	0.0963		mg/L		96	85 - 115

QC Sample Results

Client: Messer LLC
Project/Site: Messer Gas ASU Permit Renewal 4-3-24

Job ID: 860-71363-1

Method: 200.8 - Metals (ICP/MS) (Continued)

Lab Sample ID: LCS 860-154112/2-A
Matrix: Water
Analysis Batch: 154352

Client Sample ID: Lab Control Sample
Prep Type: Total Recoverable
Prep Batch: 154112

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits
Boron	0.100	0.0934		mg/L		93	85 - 115

Lab Sample ID: LCSD 860-154112/3-A
Matrix: Water
Analysis Batch: 154173

Client Sample ID: Lab Control Sample Dup
Prep Type: Total Recoverable
Prep Batch: 154112

Analyte	Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec Limits	RPD	RPD Limit
Aluminum	0.500	0.493		mg/L		99	85 - 115	1	20
Antimony	0.100	0.0990		mg/L		99	85 - 115	0	20
Arsenic	0.100	0.0962		mg/L		96	85 - 115	0	20
Barium	0.100	0.0934		mg/L		93	85 - 115	1	20
Beryllium	0.100	0.0973		mg/L		97	85 - 115	1	20
Cadmium	0.100	0.103		mg/L		103	85 - 115	0	20
Chromium	0.100	0.0936		mg/L		94	85 - 115	0	20
Cobalt	0.100	0.0936		mg/L		94	85 - 115	1	20
Copper	0.100	0.0937		mg/L		94	85 - 115	1	20
Iron	0.500	0.477		mg/L		95	85 - 115	1	20
Lead	0.100	0.0966		mg/L		97	85 - 115	0	20
Magnesium	2.50	2.39		mg/L		96	85 - 115	1	20
Manganese	0.100	0.0941		mg/L		94	85 - 115	1	20
Molybdenum	0.100	0.0998		mg/L		100	85 - 115	0	20
Nickel	0.100	0.0934		mg/L		93	85 - 115	0	20
Selenium	0.100	0.0967		mg/L		97	85 - 115	1	20
Silver	0.0500	0.0498		mg/L		100	85 - 115	1	20
Thallium	0.100	0.0967		mg/L		97	85 - 115	0	20
Tin	0.100	0.101		mg/L		101	85 - 115	0	20
Titanium	0.100	0.0917		mg/L		92	85 - 115	0	20
Zinc	0.100	0.0968		mg/L		97	85 - 115	0	20

Lab Sample ID: LCSD 860-154112/3-A
Matrix: Water
Analysis Batch: 154352

Client Sample ID: Lab Control Sample Dup
Prep Type: Total Recoverable
Prep Batch: 154112

Analyte	Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec Limits	RPD	RPD Limit
Boron	0.100	0.0959		mg/L		96	85 - 115	3	20

Method: 1664B - HEM and SGT-HEM

Lab Sample ID: MB 860-154578/1
Matrix: Water
Analysis Batch: 154578

Client Sample ID: Method Blank
Prep Type: Total/NA

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
HEM	1.6	U	5.0	1.6	mg/L			04/12/24 15:05	1

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QC Sample Results

Client: Messer LLC
Project/Site: Messer Gas ASU Permit Renewal 4-3-24

Job ID: 860-71363-1

Method: 1664B - HEM and SGT-HEM (Continued)

Lab Sample ID: LCS 860-154578/2
Matrix: Water
Analysis Batch: 154578

Client Sample ID: Lab Control Sample
Prep Type: Total/NA

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits
HEM	40.0	41.0		mg/L		102	78 - 114

Lab Sample ID: LCSD 860-154578/3
Matrix: Water
Analysis Batch: 154578

Client Sample ID: Lab Control Sample Dup
Prep Type: Total/NA

Analyte	Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec Limits	RPD	RPD Limit
HEM	40.0	39.4		mg/L		99	78 - 114	9	18

Method: 350.1 - Nitrogen, Ammonia

Lab Sample ID: MB 860-154343/73
Matrix: Water
Analysis Batch: 154343

Client Sample ID: Method Blank
Prep Type: Total/NA

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Ammonia	0.051	U	0.10	0.051	mg/L			04/11/24 12:10	1

Lab Sample ID: LCS 860-154343/74
Matrix: Water
Analysis Batch: 154343

Client Sample ID: Lab Control Sample
Prep Type: Total/NA

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits
Ammonia	1.00	0.959		mg/L		96	90 - 110

Lab Sample ID: LCSD 860-154343/75
Matrix: Water
Analysis Batch: 154343

Client Sample ID: Lab Control Sample Dup
Prep Type: Total/NA

Analyte	Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec Limits	RPD	RPD Limit
Ammonia	1.00	0.972		mg/L		97	90 - 110	1	20

Method: 351.2 - Nitrogen, Total Kjeldahl

Lab Sample ID: MB 860-153831/32-A
Matrix: Water
Analysis Batch: 153982

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 153831

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Nitrogen, Kjeldahl	0.089	U	0.20	0.089	mg/L		04/08/24 19:05	04/09/24 14:51	1

Lab Sample ID: MB 860-153831/4-A
Matrix: Water
Analysis Batch: 153982

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 153831

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Nitrogen, Kjeldahl	0.089	U	0.20	0.089	mg/L		04/08/24 19:05	04/09/24 14:38	1

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QC Sample Results

Client: Messer LLC
Project/Site: Messer Gas ASU Permit Renewal 4-3-24

Job ID: 860-71363-1

Method: 351.2 - Nitrogen, Total Kjeldahl (Continued)

Lab Sample ID: LCS 860-153831/33-A
Matrix: Water
Analysis Batch: 153982

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 153831

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits
Nitrogen, Kjeldahl	2.00	2.00		mg/L		100	90 - 110

Lab Sample ID: LCS 860-153831/6-A
Matrix: Water
Analysis Batch: 153982

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 153831

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits
Nitrogen, Kjeldahl	2.00	2.01		mg/L		101	90 - 110

Lab Sample ID: LCSD 860-153831/34-A
Matrix: Water
Analysis Batch: 153982

Client Sample ID: Lab Control Sample Dup
Prep Type: Total/NA
Prep Batch: 153831

Analyte	Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec Limits	RPD	RPD Limit
Nitrogen, Kjeldahl	2.00	1.98		mg/L		99	90 - 110	1	20

Lab Sample ID: LCSD 860-153831/7-A
Matrix: Water
Analysis Batch: 153982

Client Sample ID: Lab Control Sample Dup
Prep Type: Total/NA
Prep Batch: 153831

Analyte	Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec Limits	RPD	RPD Limit
Nitrogen, Kjeldahl	2.00	1.98		mg/L		99	90 - 110	2	20

Lab Sample ID: LLCS 860-153831/5-A
Matrix: Water
Analysis Batch: 153982

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 153831

Analyte	Spike Added	LLCS Result	LLCS Qualifier	Unit	D	%Rec	%Rec Limits
Nitrogen, Kjeldahl	0.200	0.224		mg/L		112	50 - 150

Method: 365.1 - Phosphorus, Total

Lab Sample ID: MB 860-154643/16
Matrix: Water
Analysis Batch: 154643

Client Sample ID: Method Blank
Prep Type: Total/NA

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Phosphorus Total	0.014	U	0.020	0.014	mg/L			04/12/24 12:55	1

Lab Sample ID: LCS 860-154643/17
Matrix: Water
Analysis Batch: 154643

Client Sample ID: Lab Control Sample
Prep Type: Total/NA

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits
Phosphorus Total	0.250	0.262		mg/L		105	90 - 110

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QC Sample Results

Client: Messer LLC
Project/Site: Messer Gas ASU Permit Renewal 4-3-24

Job ID: 860-71363-1

Method: 365.1 - Phosphorus, Total (Continued)

Lab Sample ID: LCSD 860-154643/18
Matrix: Water
Analysis Batch: 154643

Client Sample ID: Lab Control Sample Dup
Prep Type: Total/NA

Analyte	Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec Limits	RPD	RPD Limit
Phosphorus Total	0.250	0.264		mg/L		106	90 - 110	1	20

Lab Sample ID: 860-71363-1 MS
Matrix: Water
Analysis Batch: 154643

Client Sample ID: Outfall 001
Prep Type: Total/NA

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec Limits	RPD	RPD Limit
Phosphorus Total	3.2	F1	1.25	4.48		mg/L		104	90 - 110		

Lab Sample ID: 860-71363-1 MSD
Matrix: Water
Analysis Batch: 154643

Client Sample ID: Outfall 001
Prep Type: Total/NA

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	%Rec Limits	RPD	RPD Limit
Phosphorus Total	3.2	F1	1.25	4.58	F1	mg/L		112	90 - 110	2	20

Method: 7196A - Chromium, Hexavalent

Lab Sample ID: MB 860-153082/3
Matrix: Water
Analysis Batch: 153082

Client Sample ID: Method Blank
Prep Type: Total/NA

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Cr (VI)	0.0034	U	0.010	0.0034	mg/L			04/03/24 13:50	1

Lab Sample ID: LCS 860-153082/4
Matrix: Water
Analysis Batch: 153082

Client Sample ID: Lab Control Sample
Prep Type: Total/NA

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits	RPD	RPD Limit
Cr (VI)	0.200	0.189		mg/L		94	85 - 115		

Lab Sample ID: LCSD 860-153082/5
Matrix: Water
Analysis Batch: 153082

Client Sample ID: Lab Control Sample Dup
Prep Type: Total/NA

Analyte	Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec Limits	RPD	RPD Limit
Cr (VI)	0.200	0.189		mg/L		94	85 - 115	0	20

Method: 8000 - COD

Lab Sample ID: MB 860-154414/3
Matrix: Water
Analysis Batch: 154414

Client Sample ID: Method Blank
Prep Type: Total/NA

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Chemical Oxygen Demand	3.4	U	20	3.4	mg/L			04/11/24 21:15	1

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QC Sample Results

Client: Messer LLC
Project/Site: Messer Gas ASU Permit Renewal 4-3-24

Job ID: 860-71363-1

Method: 8000 - COD (Continued)

Lab Sample ID: LCS 860-154414/4
Matrix: Water
Analysis Batch: 154414

Client Sample ID: Lab Control Sample
Prep Type: Total/NA

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits
Chemical Oxygen Demand	100	107		mg/L		107	90 - 110

Method: OIA-1677 - Cyanide, Available (Flow Injection)

Lab Sample ID: MB 410-491900/34
Matrix: Water
Analysis Batch: 491900

Client Sample ID: Method Blank
Prep Type: Total/NA

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Cyanide, Available	0.0050	U	0.0060	0.0050	mg/L			04/08/24 13:33	1

Lab Sample ID: LCS 410-491900/33
Matrix: Water
Analysis Batch: 491900

Client Sample ID: Lab Control Sample
Prep Type: Total/NA

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits
Cyanide, Available	0.0500	0.0507		mg/L		101	82 - 132

Lab Sample ID: LCSD 410-491900/17
Matrix: Water
Analysis Batch: 491900

Client Sample ID: Lab Control Sample Dup
Prep Type: Total/NA

Analyte	Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec Limits	RPD	RPD Limit
Cyanide, Available	0.0500	0.0470		mg/L		94	82 - 132	1	11

Method: SM 2120B - Color, Colorimetric

Lab Sample ID: MB 860-153545/3
Matrix: Water
Analysis Batch: 153545

Client Sample ID: Method Blank
Prep Type: Total/NA

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Color, Apparent	5.0	U	5.0	5.0	Color Units			04/03/24 18:45	1
Color, True	5.0	U	5.0	5.0	Color Units			04/03/24 18:45	1
pH	na		0.10	0.10	S.U.			04/03/24 18:45	1

Method: SM 2320B - Alkalinity

Lab Sample ID: MB 860-154745/2
Matrix: Water
Analysis Batch: 154745

Client Sample ID: Method Blank
Prep Type: Total/NA

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Alkalinity	4.0	U	4.0	4.0	mg/L			04/14/24 10:55	1
Bicarbonate Alkalinity as CaCO3	6.93		4.0	4.0	mg/L			04/14/24 10:55	1
Carbonate Alkalinity as CaCO3	4.0	U	4.0	4.0	mg/L			04/14/24 10:55	1
Hydroxide Alkalinity	4.0	U	4.0	4.0	mg/L			04/14/24 10:55	1
Phenolphthalein Alkalinity	4.0	U	4.0	4.0	mg/L			04/14/24 10:55	1

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QC Sample Results

Client: Messer LLC
Project/Site: Messer Gas ASU Permit Renewal 4-3-24

Job ID: 860-71363-1

Method: SM 2320B - Alkalinity (Continued)

Lab Sample ID: LCS 860-154745/3
Matrix: Water
Analysis Batch: 154745

Client Sample ID: Lab Control Sample
Prep Type: Total/NA

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits
Alkalinity	250	254		mg/L		102	85 - 115

Lab Sample ID: LCSD 860-154745/4
Matrix: Water
Analysis Batch: 154745

Client Sample ID: Lab Control Sample Dup
Prep Type: Total/NA

Analyte	Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec Limits	RPD	RPD Limit
Alkalinity	250	255		mg/L		102	85 - 115	0	20

Method: SM 2540C - Solids, Total Dissolved (TDS)

Lab Sample ID: MB 860-153725/1
Matrix: Water
Analysis Batch: 153725

Client Sample ID: Method Blank
Prep Type: Total/NA

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Total Dissolved Solids	5.0	U	5.0	5.0	mg/L			04/08/24 11:13	1

Lab Sample ID: LCS 860-153725/2
Matrix: Water
Analysis Batch: 153725

Client Sample ID: Lab Control Sample
Prep Type: Total/NA

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits
Total Dissolved Solids	1000	1110		mg/L		111	80 - 120

Lab Sample ID: LCSD 860-153725/3
Matrix: Water
Analysis Batch: 153725

Client Sample ID: Lab Control Sample Dup
Prep Type: Total/NA

Analyte	Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec Limits	RPD	RPD Limit
Total Dissolved Solids	1000	1110		mg/L		111	80 - 120	0	10

Lab Sample ID: LLCS 860-153725/4
Matrix: Water
Analysis Batch: 153725

Client Sample ID: Lab Control Sample
Prep Type: Total/NA

Analyte	Spike Added	LLCS Result	LLCS Qualifier	Unit	D	%Rec	%Rec Limits
Total Dissolved Solids	5.00	6.00		mg/L		120	50 - 150

Method: SM 2540D - Solids, Total Suspended (TSS)

Lab Sample ID: MB 860-154025/1
Matrix: Water
Analysis Batch: 154025

Client Sample ID: Method Blank
Prep Type: Total/NA

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Total Suspended Solids	4.0	U	4.0	4.0	mg/L			04/09/24 19:40	1

Eurofins Houston

QC Sample Results

Client: Messer LLC
Project/Site: Messer Gas ASU Permit Renewal 4-3-24

Job ID: 860-71363-1

Method: SM 2540D - Solids, Total Suspended (TSS) (Continued)

Lab Sample ID: LCS 860-154025/2
Matrix: Water
Analysis Batch: 154025

Client Sample ID: Lab Control Sample
Prep Type: Total/NA

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits
Total Suspended Solids	100	112		mg/L		112	80 - 120

Lab Sample ID: LCSD 860-154025/3
Matrix: Water
Analysis Batch: 154025

Client Sample ID: Lab Control Sample Dup
Prep Type: Total/NA

Analyte	Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec Limits	RPD	RPD Limit
Total Suspended Solids	100	111		mg/L		111	80 - 120	1	10

Method: SM 4500 Cl G - Chlorine, Residual

Lab Sample ID: MB 860-154024/3
Matrix: Water
Analysis Batch: 154024

Client Sample ID: Method Blank
Prep Type: Total/NA

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Chlorine, Total Residual	0.050	U	0.050	0.050	mg/L			04/09/24 19:26	1

Lab Sample ID: LCS 860-154024/4
Matrix: Water
Analysis Batch: 154024

Client Sample ID: Lab Control Sample
Prep Type: Total/NA

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits
Chlorine, Total Residual	0.250	0.244		mg/L		98	85 - 115

Lab Sample ID: LCSD 860-154024/5
Matrix: Water
Analysis Batch: 154024

Client Sample ID: Lab Control Sample Dup
Prep Type: Total/NA

Analyte	Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec Limits	RPD	RPD Limit
Chlorine, Total Residual	0.250	0.232		mg/L		93	85 - 115	5	20

Lab Sample ID: 860-71363-1 MS
Matrix: Water
Analysis Batch: 154024

Client Sample ID: Outfall 001
Prep Type: Total/NA

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec Limits
Chlorine, Total Residual	0.88	HF F1	0.500	1.25	F1	mg/L		74	90 - 110

Lab Sample ID: 860-71363-1 MSD
Matrix: Water
Analysis Batch: 154024

Client Sample ID: Outfall 001
Prep Type: Total/NA

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	%Rec Limits	RPD	RPD Limit
Chlorine, Total Residual	0.88	HF F1	0.500	1.23	F1	mg/L		69	90 - 110	2	20

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QC Sample Results

Client: Messer LLC
Project/Site: Messer Gas ASU Permit Renewal 4-3-24

Job ID: 860-71363-1

Method: SM 4500 S2 D - Sulfide, Total

Lab Sample ID: MB 860-153820/3

Matrix: Water

Analysis Batch: 153820

Client Sample ID: Method Blank

Prep Type: Total/NA

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Sulfide	0.040	U	0.10	0.040	mg/L			04/08/24 17:25	1

Lab Sample ID: LCS 860-153820/4

Matrix: Water

Analysis Batch: 153820

Client Sample ID: Lab Control Sample

Prep Type: Total/NA

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits
Sulfide	1.00	1.06		mg/L		106	90 - 110

Lab Sample ID: LCSD 860-153820/5

Matrix: Water

Analysis Batch: 153820

Client Sample ID: Lab Control Sample Dup

Prep Type: Total/NA

Analyte	Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec Limits	RPD	RPD Limit
Sulfide	1.00	1.06		mg/L		106	90 - 110	0	20

Method: SM 4500 SO3 B - Sulfite

Lab Sample ID: MB 860-154018/1

Matrix: Water

Analysis Batch: 154018

Client Sample ID: Method Blank

Prep Type: Total/NA

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Sulfite	5.0	U	5.0	5.0	mg/L			04/09/24 18:52	1

Lab Sample ID: LCS 860-154018/2

Matrix: Water

Analysis Batch: 154018

Client Sample ID: Lab Control Sample

Prep Type: Total/NA

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits
Sulfite	10.0	10.0		mg/L		100	80 - 120

Lab Sample ID: LCSD 860-154018/3

Matrix: Water

Analysis Batch: 154018

Client Sample ID: Lab Control Sample Dup

Prep Type: Total/NA

Analyte	Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec Limits	RPD	RPD Limit
Sulfite	10.0	10.0		mg/L		100	80 - 120	0	20

Method: SM 5210B - BOD, 5-Day

Lab Sample ID: SCB 860-154588/2

Matrix: Water

Analysis Batch: 154588

Client Sample ID: Method Blank

Prep Type: Total/NA

Analyte	SCB Result	SCB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Biochemical Oxygen Demand	0.990		0.0000020	0.0000020	mg/L			04/04/24 10:56	1

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QC Sample Results

Client: Messer LLC
Project/Site: Messer Gas ASU Permit Renewal 4-3-24

Job ID: 860-71363-1

Method: SM 5210B - BOD, 5-Day (Continued)

Lab Sample ID: USB 860-154588/1
Matrix: Water
Analysis Batch: 154588

Client Sample ID: Method Blank
Prep Type: Total/NA

Analyte	USB Result	USB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Biochemical Oxygen Demand	0.0000020	U	0.0000020	0.0000020	mg/L			04/04/24 10:42	1

Lab Sample ID: LCS 860-154588/3
Matrix: Water
Analysis Batch: 154588

Client Sample ID: Lab Control Sample
Prep Type: Total/NA

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits
Biochemical Oxygen Demand	198	200		mg/L		101	85 - 115

Method: SM 5310C - TOC

Lab Sample ID: MB 860-154300/27
Matrix: Water
Analysis Batch: 154300

Client Sample ID: Method Blank
Prep Type: Total/NA

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Total Organic Carbon	0.50	U	1.0	0.50	mg/L			04/11/24 00:48	1

Lab Sample ID: LCS 860-154300/28
Matrix: Water
Analysis Batch: 154300

Client Sample ID: Lab Control Sample
Prep Type: Total/NA

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits
Total Organic Carbon	5.00	5.11		mg/L		102	90 - 110

Lab Sample ID: LCSD 860-154300/29
Matrix: Water
Analysis Batch: 154300

Client Sample ID: Lab Control Sample Dup
Prep Type: Total/NA

Analyte	Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec Limits	RPD	RPD Limit
Total Organic Carbon	5.00	5.10		mg/L		102	90 - 110	0	15

Method: SM5210B CBOD - Carbonaceous BOD, 5 Day

Lab Sample ID: SCB 860-154301/2
Matrix: Water
Analysis Batch: 154301

Client Sample ID: Method Blank
Prep Type: Total/NA

Analyte	SCB Result	SCB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Carbonaceous Biochemical Oxygen Demand	0.930		0.0000020	0.0000020	mg/L			04/04/24 17:02	1

Lab Sample ID: USB 860-154301/1
Matrix: Water
Analysis Batch: 154301

Client Sample ID: Method Blank
Prep Type: Total/NA

Analyte	USB Result	USB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Carbonaceous Biochemical Oxygen Demand	0.0000020	U	0.0000020	0.0000020	mg/L			04/04/24 16:59	1

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QC Sample Results

Client: Messer LLC
Project/Site: Messer Gas ASU Permit Renewal 4-3-24

Job ID: 860-71363-1

Method: SM5210B CBOD - Carbonaceous BOD, 5 Day (Continued)

Lab Sample ID: LCS 860-154301/3

Matrix: Water

Analysis Batch: 154301

Client Sample ID: Lab Control Sample

Prep Type: Total/NA

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits
Carbonaceous Biochemical Oxygen Demand	198	194		mg/L		98	85 - 115

Preliminary Data

QC Association Summary

Client: Messer LLC
Project/Site: Messer Gas ASU Permit Renewal 4-3-24

Job ID: 860-71363-1

GC/MS VOA

Analysis Batch: 153406

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
860-71363-1	Outfall 001	Total/NA	Water	624.1	
MB 860-153406/9	Method Blank	Total/NA	Water	624.1	
LCS 860-153406/3	Lab Control Sample	Total/NA	Water	624.1	
LCSD 860-153406/4	Lab Control Sample Dup	Total/NA	Water	624.1	

GC/MS Semi VOA

Prep Batch: 154157

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
860-71363-1	Outfall 001	Total/NA	Water	625	
MB 860-154157/1-A	Method Blank	Total/NA	Water	625	
LCS 860-154157/2-A	Lab Control Sample	Total/NA	Water	625	
LCSD 860-154157/3-A	Lab Control Sample Dup	Total/NA	Water	625	

Analysis Batch: 154258

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
860-71363-1	Outfall 001	Total/NA	Water	625.1	154157
MB 860-154157/1-A	Method Blank	Total/NA	Water	625.1	154157
LCS 860-154157/2-A	Lab Control Sample	Total/NA	Water	625.1	154157
LCSD 860-154157/3-A	Lab Control Sample Dup	Total/NA	Water	625.1	154157

HPLC/IC

Analysis Batch: 153142

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
860-71363-1	Outfall 001	Total/NA	Water	300.0	
MB 860-153142/3	Method Blank	Total/NA	Water	300.0	
LCS 860-153142/4	Lab Control Sample	Total/NA	Water	300.0	
LCSD 860-153142/5	Lab Control Sample Dup	Total/NA	Water	300.0	
LLCS 860-153142/7	Lab Control Sample	Total/NA	Water	300.0	

Analysis Batch: 153143

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
860-71363-1	Outfall 001	Total/NA	Water	300.0	
MB 860-153143/3	Method Blank	Total/NA	Water	300.0	
LCS 860-153143/4	Lab Control Sample	Total/NA	Water	300.0	
LCSD 860-153143/5	Lab Control Sample Dup	Total/NA	Water	300.0	

Metals

Prep Batch: 154112

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
860-71363-1	Outfall 001	Total Recoverable	Water	200.8	
MB 860-154112/1-A	Method Blank	Total Recoverable	Water	200.8	
LCS 860-154112/2-A	Lab Control Sample	Total Recoverable	Water	200.8	
LCSD 860-154112/3-A	Lab Control Sample Dup	Total Recoverable	Water	200.8	

Analysis Batch: 154173

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
860-71363-1	Outfall 001	Total Recoverable	Water	200.8	154112
860-71363-1	Outfall 001	Total Recoverable	Water	200.8	154112
MB 860-154112/1-A	Method Blank	Total Recoverable	Water	200.8	154112

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QC Association Summary

Client: Messer LLC
Project/Site: Messer Gas ASU Permit Renewal 4-3-24

Job ID: 860-71363-1

Metals (Continued)

Analysis Batch: 154173 (Continued)

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
LCS 860-154112/2-A	Lab Control Sample	Total Recoverable	Water	200.8	154112
LCSD 860-154112/3-A	Lab Control Sample Dup	Total Recoverable	Water	200.8	154112

Analysis Batch: 154352

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
860-71363-1	Outfall 001	Total Recoverable	Water	200.8	154112
MB 860-154112/1-A	Method Blank	Total Recoverable	Water	200.8	154112
LCS 860-154112/2-A	Lab Control Sample	Total Recoverable	Water	200.8	154112
LCSD 860-154112/3-A	Lab Control Sample Dup	Total Recoverable	Water	200.8	154112

Prep Batch: 667323

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
860-71363-1	Outfall 001	Total/NA	Water	1631E	
MB 400-667323/4-A	Method Blank	Total/NA	Water	1631E	
LCS 400-667323/5-A	Lab Control Sample	Total/NA	Water	1631E	
LCSD 400-667323/6-A	Lab Control Sample Dup	Total/NA	Water	1631E	
MRL 400-667323/3-A	Lab Control Sample	Total/NA	Water	1631E	

Analysis Batch: 667418

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
860-71363-1	Outfall 001	Total/NA	Water	1631E	667323
MB 400-667323/4-A	Method Blank	Total/NA	Water	1631E	667323
LCS 400-667323/5-A	Lab Control Sample	Total/NA	Water	1631E	667323
LCSD 400-667323/6-A	Lab Control Sample Dup	Total/NA	Water	1631E	667323
MRL 400-667323/3-A	Lab Control Sample	Total/NA	Water	1631E	667323

General Chemistry

Analysis Batch: 153082

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
860-71363-1	Outfall 001	Total/NA	Water	7196A	
MB 860-153082/3	Method Blank	Total/NA	Water	7196A	
LCS 860-153082/4	Lab Control Sample	Total/NA	Water	7196A	
LCSD 860-153082/5	Lab Control Sample Dup	Total/NA	Water	7196A	

Prep Batch: 153239

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
860-71363-1	Outfall 001	Total/NA	Water	BOD Prep	

Prep Batch: 153333

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
860-71363-1	Outfall 001	Total/NA	Water	BOD Prep	

Analysis Batch: 153545

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
860-71363-1	Outfall 001	Total/NA	Water	SM 2120B	
860-71363-1	Outfall 001	Total/NA	Water	SM 2120B	
MB 860-153545/3	Method Blank	Total/NA	Water	SM 2120B	
LCS 860-153545/4	Lab Control Sample	Total/NA	Water	SM 2120B	
LCSD 860-153545/5	Lab Control Sample Dup	Total/NA	Water	SM 2120B	

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QC Association Summary

Client: Messer LLC
Project/Site: Messer Gas ASU Permit Renewal 4-3-24

Job ID: 860-71363-1

General Chemistry

Analysis Batch: 153725

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
860-71363-1	Outfall 001	Total/NA	Water	SM 2540C	
MB 860-153725/1	Method Blank	Total/NA	Water	SM 2540C	
LCS 860-153725/2	Lab Control Sample	Total/NA	Water	SM 2540C	
LCSD 860-153725/3	Lab Control Sample Dup	Total/NA	Water	SM 2540C	
LLCS 860-153725/4	Lab Control Sample	Total/NA	Water	SM 2540C	

Analysis Batch: 153803

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
860-71363-1	Outfall 001	Total/NA	Water	360.1	

Analysis Batch: 153820

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
860-71363-1	Outfall 001	Total/NA	Water	SM 4500 S2 D	
MB 860-153820/3	Method Blank	Total/NA	Water	SM 4500 S2 D	
LCS 860-153820/4	Lab Control Sample	Total/NA	Water	SM 4500 S2 D	
LCSD 860-153820/5	Lab Control Sample Dup	Total/NA	Water	SM 4500 S2 D	

Prep Batch: 153831

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
860-71363-1	Outfall 001	Total/NA	Water	351.2	
MB 860-153831/32-A	Method Blank	Total/NA	Water	351.2	
MB 860-153831/4-A	Method Blank	Total/NA	Water	351.2	
LCS 860-153831/33-A	Lab Control Sample	Total/NA	Water	351.2	
LCS 860-153831/6-A	Lab Control Sample	Total/NA	Water	351.2	
LCSD 860-153831/34-A	Lab Control Sample Dup	Total/NA	Water	351.2	
LCSD 860-153831/7-A	Lab Control Sample Dup	Total/NA	Water	351.2	
LLCS 860-153831/5-A	Lab Control Sample	Total/NA	Water	351.2	

Analysis Batch: 153982

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
860-71363-1	Outfall 001	Total/NA	Water	351.2	153831
MB 860-153831/32-A	Method Blank	Total/NA	Water	351.2	153831
MB 860-153831/4-A	Method Blank	Total/NA	Water	351.2	153831
LCS 860-153831/33-A	Lab Control Sample	Total/NA	Water	351.2	153831
LCS 860-153831/6-A	Lab Control Sample	Total/NA	Water	351.2	153831
LCSD 860-153831/34-A	Lab Control Sample Dup	Total/NA	Water	351.2	153831
LCSD 860-153831/7-A	Lab Control Sample Dup	Total/NA	Water	351.2	153831
LLCS 860-153831/5-A	Lab Control Sample	Total/NA	Water	351.2	153831

Analysis Batch: 154018

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
860-71363-1	Outfall 001	Total/NA	Water	SM 4500 SO3 B	
MB 860-154018/1	Method Blank	Total/NA	Water	SM 4500 SO3 B	
LCS 860-154018/2	Lab Control Sample	Total/NA	Water	SM 4500 SO3 B	
LCSD 860-154018/3	Lab Control Sample Dup	Total/NA	Water	SM 4500 SO3 B	

Analysis Batch: 154024

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
860-71363-1	Outfall 001	Total/NA	Water	SM 4500 CI G	
MB 860-154024/3	Method Blank	Total/NA	Water	SM 4500 CI G	
LCS 860-154024/4	Lab Control Sample	Total/NA	Water	SM 4500 CI G	

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QC Association Summary

Client: Messer LLC
Project/Site: Messer Gas ASU Permit Renewal 4-3-24

Job ID: 860-71363-1

General Chemistry (Continued)

Analysis Batch: 154024 (Continued)

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
LCSD 860-154024/5	Lab Control Sample Dup	Total/NA	Water	SM 4500 Cl G	
860-71363-1 MS	Outfall 001	Total/NA	Water	SM 4500 Cl G	
860-71363-1 MSD	Outfall 001	Total/NA	Water	SM 4500 Cl G	

Analysis Batch: 154025

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
860-71363-1	Outfall 001	Total/NA	Water	SM 2540D	
MB 860-154025/1	Method Blank	Total/NA	Water	SM 2540D	
LCS 860-154025/2	Lab Control Sample	Total/NA	Water	SM 2540D	
LCSD 860-154025/3	Lab Control Sample Dup	Total/NA	Water	SM 2540D	

Analysis Batch: 154300

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
860-71363-1	Outfall 001	Total/NA	Water	SM 5310C	
MB 860-154300/27	Method Blank	Total/NA	Water	SM 5310C	
LCS 860-154300/28	Lab Control Sample	Total/NA	Water	SM 5310C	
LCSD 860-154300/29	Lab Control Sample Dup	Total/NA	Water	SM 5310C	

Analysis Batch: 154301

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
860-71363-1	Outfall 001	Total/NA	Water	SM5210B CBOD	153333
SCB 860-154301/2	Method Blank	Total/NA	Water	SM5210B CBOD	
USB 860-154301/1	Method Blank	Total/NA	Water	SM5210B CBOD	
LCS 860-154301/3	Lab Control Sample	Total/NA	Water	SM5210B CBOD	

Analysis Batch: 154343

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
860-71363-1	Outfall 001	Total/NA	Water	350.1	
MB 860-154343/73	Method Blank	Total/NA	Water	350.1	
LCS 860-154343/74	Lab Control Sample	Total/NA	Water	350.1	
LCSD 860-154343/75	Lab Control Sample Dup	Total/NA	Water	350.1	

Analysis Batch: 154414

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
860-71363-1	Outfall 001	Total/NA	Water	8000	
MB 860-154414/3	Method Blank	Total/NA	Water	8000	
LCS 860-154414/4	Lab Control Sample	Total/NA	Water	8000	

Analysis Batch: 154578

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
860-71363-1	Outfall 001	Total/NA	Water	1664B	
MB 860-154578/1	Method Blank	Total/NA	Water	1664B	
LCS 860-154578/2	Lab Control Sample	Total/NA	Water	1664B	
LCSD 860-154578/3	Lab Control Sample Dup	Total/NA	Water	1664B	

Analysis Batch: 154588

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
860-71363-1	Outfall 001	Total/NA	Water	SM 5210B	153239
SCB 860-154588/2	Method Blank	Total/NA	Water	SM 5210B	
USB 860-154588/1	Method Blank	Total/NA	Water	SM 5210B	
LCS 860-154588/3	Lab Control Sample	Total/NA	Water	SM 5210B	

Eurofins Houston

QC Association Summary

Client: Messer LLC
Project/Site: Messer Gas ASU Permit Renewal 4-3-24

Job ID: 860-71363-1

General Chemistry

Analysis Batch: 154643

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
860-71363-1	Outfall 001	Total/NA	Water	365.1	
MB 860-154643/16	Method Blank	Total/NA	Water	365.1	
LCS 860-154643/17	Lab Control Sample	Total/NA	Water	365.1	
LCSD 860-154643/18	Lab Control Sample Dup	Total/NA	Water	365.1	
860-71363-1 MS	Outfall 001	Total/NA	Water	365.1	
860-71363-1 MSD	Outfall 001	Total/NA	Water	365.1	

Analysis Batch: 154745

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
860-71363-1	Outfall 001	Total/NA	Water	SM 2320B	
MB 860-154745/2	Method Blank	Total/NA	Water	SM 2320B	
LCS 860-154745/3	Lab Control Sample	Total/NA	Water	SM 2320B	
LCSD 860-154745/4	Lab Control Sample Dup	Total/NA	Water	SM 2320B	

Analysis Batch: 491900

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
860-71363-1	Outfall 001	Total/NA	Water	OIA-1677	
MB 410-491900/34	Method Blank	Total/NA	Water	OIA-1677	
LCS 410-491900/33	Lab Control Sample	Total/NA	Water	OIA-1677	
LCSD 410-491900/17	Lab Control Sample Dup	Total/NA	Water	OIA-1677	

Lab Chronicle

Client: Messer LLC

Job ID: 860-71363-1

Project/Site: Messer Gas ASU Permit Renewal 4-3-24

Client Sample ID: Outfall 001

Lab Sample ID: 860-71363-1

Date Collected: 04/03/24 08:00

Matrix: Water

Date Received: 04/03/24 13:40

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	624.1		1	5 mL	5 mL	153406	04/05/24 16:50	AK1	EET HOU
Total/NA	Prep	625			1000 mL	1.00 mL	154157	04/10/24 15:48	DR	EET HOU
Total/NA	Analysis	625.1		1	1 mL	1 mL	154258	04/11/24 20:22	LPL	EET HOU
Total/NA	Analysis	300.0		1			153142	04/03/24 22:19	A1S	EET HOU
Total/NA	Analysis	300.0		1			153143	04/03/24 22:19	A1S	EET HOU
Total/NA	Prep	1631E			40 mL	40 mL	667323	04/08/24 14:05	VLC	EET PEN
Completed:								04/09/24 09:00 ¹		
Total/NA	Analysis	1631E		1			667418	04/09/24 13:44	VLC	EET PEN
Total Recoverable	Prep	200.8			50 mL	50 mL	154112	04/10/24 12:00	MD	EET HOU
Total Recoverable	Analysis	200.8		10			154352	04/11/24 13:19	DP	EET HOU
Total Recoverable	Prep	200.8			50 mL	50 mL	154112	04/10/24 12:00	MD	EET HOU
Total Recoverable	Analysis	200.8		1			154173	04/10/24 21:07	DP	EET HOU
Total Recoverable	Prep	200.8			50 mL	50 mL	154112	04/10/24 12:00	MD	EET HOU
Total Recoverable	Analysis	200.8		20			154173	04/10/24 21:11	DP	EET HOU
Total/NA	Analysis	1664B		1	1000 mL	1000 mL	154578	04/12/24 15:05	TB	EET HOU
Total/NA	Analysis	350.1		1	10 mL	10 mL	154343	04/11/24 10:53	ADL	EET HOU
Total/NA	Prep	351.2			20 mL	20 mL	153831	04/08/24 19:05	SA	EET HOU
Total/NA	Analysis	351.2		1			153982	04/09/24 14:44	LD	EET HOU
Total/NA	Analysis	360.1		1			153803	04/08/24 16:30	HN	EET HOU
Total/NA	Analysis	365.1		5	10 mL	10 mL	154643	04/12/24 13:05	HN	EET HOU
Total/NA	Analysis	7196A		1	25 mL	25 mL	153082	04/03/24 18:19	SCI	EET HOU
Total/NA	Analysis	8000		1	2 mL	2 mL	154414	04/11/24 21:15	ALL	EET HOU
Total/NA	Analysis	OIA-1677		1			491900	04/08/24 14:03	UJE2	ELLE
Total/NA	Analysis	SM 2120B		2	50 mL	50 mL	153545	04/03/24 18:45	YG	EET HOU
Total/NA	Analysis	SM 2120B		1	50 mL	50 mL	153545	04/03/24 18:45	YG	EET HOU
Total/NA	Analysis	SM 2320B		1			154745	04/14/24 13:14	RY	EET HOU
Total/NA	Analysis	SM 2540C		1	50 mL	200 mL	153725	04/08/24 11:13	FN	EET HOU
Total/NA	Analysis	SM 2540D		1	1000 mL	1000 mL	154025	04/09/24 19:40	SA	EET HOU
Total/NA	Analysis	SM 4500 CI G		2	10 mL	10 mL	154024	04/09/24 19:26	SCI	EET HOU
Total/NA	Analysis	SM 4500 S2 D		1	7.5 mL	7.5 mL	153820	04/08/24 17:25	SCI	EET HOU
Total/NA	Analysis	SM 4500 SO3 B		1	50 mL	50 mL	154018	04/09/24 18:52	SCI	EET HOU
Total/NA	Prep	BOD Prep					153239	04/04/24 10:55	HN	EET HOU
Total/NA	Analysis	SM 5210B		1	200 mL	300 mL	154588	04/04/24 13:49	ALL	EET HOU
Total/NA	Analysis	SM 5310C		1	40 mL	40 mL	154300	04/11/24 04:35	YG	EET HOU
Total/NA	Prep	BOD Prep					153333	04/04/24 17:01	ALL	EET HOU
Total/NA	Analysis	SM5210B CBOD		1	100 mL	300 mL	154301	04/04/24 17:24	ALL	EET HOU

¹ This procedure uses a method stipulated length of time for the process. Both start and end times are displayed.

Laboratory References:

EET HOU = Eurofins Houston, 4145 Greenbriar Dr, Stafford, TX 77477, TEL (281)240-4200

EET PEN = Eurofins Pensacola, 3355 McLemore Drive, Pensacola, FL 32514, TEL (850)474-1001

ELLE = Eurofins Lancaster Laboratories Environment Testing, LLC, 2425 New Holland Pike, Lancaster, PA 17601, TEL (717)656-2300

Eurofins Houston

Accreditation/Certification Summary

Client: Messer LLC

Job ID: 860-71363-1

Project/Site: Messer Gas ASU Permit Renewal 4-3-24

Laboratory: Eurofins Houston

All accreditations/certifications held by this laboratory are listed. Not all accreditations/certifications are applicable to this report.

Authority	Program	Identification Number	Expiration Date
Arkansas DEQ	State	88-00759	08-03-24
Florida	NELAP	E871002	06-30-24
Louisiana (All)	NELAP	03054	06-30-24
Oklahoma	NELAP	1306	08-31-24
Oklahoma	State	2023-139	08-31-24
Texas	NELAP	T104704215	06-30-24
Texas	TCEQ Water Supply	T104704215	12-28-25
USDA	US Federal Programs	525-23-79-79507	03-20-26

Laboratory: Eurofins Lancaster Laboratories Environment Testing, LLC

All accreditations/certifications held by this laboratory are listed. Not all accreditations/certifications are applicable to this report.

Authority	Program	Identification Number	Expiration Date
A2LA	Dept. of Defense ELAP	0001.01	11-30-24
A2LA	ISO/IEC 17025	0001.01	11-30-24
Alabama	State	43200	01-31-25
Alaska	State	PA00009	06-30-24
Alaska (UST)	State	17-027	02-28-25
Arizona	State	AZ0780	03-12-25
Arkansas DEQ	State	88-00660	08-09-24
California	State	2792	11-30-24
Colorado	State	PA00009	06-30-24
Connecticut	State	PH-0746	06-30-25
DE Haz. Subst. Cleanup Act (HSCA)	State	019-006 (PA cert)	01-31-25
Delaware (DW)	State	N/A	01-31-25
Florida	NELAP	E87997	06-30-25
Georgia (DW)	State	C048	01-31-25
Hawaii	State	N/A	01-31-25
Illinois	NELAP	200027	01-31-25
Iowa	State	361	03-01-24 *
Kansas	NELAP	E-10151	10-31-24
Kentucky (DW)	State	KY90088	12-31-24
Kentucky (UST)	State	0001.01	11-30-24
Kentucky (WW)	State	KY90088	12-31-23 *
Louisiana (All)	NELAP	02055	06-30-24
Maine	State	2019012	03-12-25
Maryland	State	100	06-30-24
Massachusetts	State	M-PA009	06-30-24
Michigan	State	9930	01-31-25
Minnesota	NELAP	042-999-487	12-31-24
Mississippi	State	023	01-31-25
Missouri	State	450	01-31-25
Montana (DW)	State	0098	01-01-25
Nebraska	State	NE-OS-32-17	01-31-25
New Hampshire	NELAP	2730	01-10-25
New Jersey	NELAP	PA011	06-30-24
New York	NELAP	10670	04-01-25
North Carolina (DW)	State	42705	07-31-24
North Carolina (WW/SW)	State	521	12-31-24
Oklahoma	NELAP	9804	08-31-24

* Accreditation/Certification renewal pending - accreditation/certification considered valid.

Eurofins Houston

Accreditation/Certification Summary

Client: Messer LLC
Project/Site: Messer Gas ASU Permit Renewal 4-3-24

Job ID: 860-71363-1

Laboratory: Eurofins Lancaster Laboratories Environment Testing, LLC (Continued)

All accreditations/certifications held by this laboratory are listed. Not all accreditations/certifications are applicable to this report.

Authority	Program	Identification Number	Expiration Date
Oregon	NELAP	PA200001	09-11-24
Pennsylvania	NELAP	36-00037	01-31-25
Quebec Ministry of Environment and Fight against Climate Change	PALA	507	09-16-24
Rhode Island	State	LAO00338	12-30-24
South Carolina	State	89002	01-31-24 *
Tennessee	State	02838	01-31-25
Texas	NELAP	T104704194-23-46	08-31-24
USDA	US Federal Programs	525-22-298-19481	10-25-25
Vermont	State	VT - 36037	10-28-24
Virginia	NELAP	460182	06-14-25
Washington	State	C457	04-11-24
West Virginia (DW)	State	9906 C	01-31-25
West Virginia DEP	State	055	07-31-24
Wyoming	State	8TMS-L	01-31-25
Wyoming (UST)	A2LA	0001.01	11-30-24

Laboratory: Eurofins Pensacola

All accreditations/certifications held by this laboratory are listed. Not all accreditations/certifications are applicable to this report.

Authority	Program	Identification Number	Expiration Date
Alabama	State	40150	06-30-24
ANAB	ISO/IEC 17025	L2471	02-22-26
Arkansas DEQ	State	88-00689	08-01-24
California	State	2510	06-30-24
Florida	NELAP	E81010	06-30-24
Georgia	State	E81010(FL)	06-30-24
Illinois	NELAP	200041	10-09-24
Kansas	NELAP	E-10253	10-31-24
Kentucky (UST)	State	53	06-30-24
Louisiana (All)	NELAP	30976	06-30-24
Louisiana (DW)	State	LA017	12-31-24
North Carolina (WW/SW)	State	314	12-31-24
Oklahoma	NELAP	9810	08-31-24
Pennsylvania	NELAP	68-00467	01-31-25
South Carolina	State	96026	06-30-24
Tennessee	State	TN02907	06-30-24
Texas	NELAP	T104704286	09-30-24
US Fish & Wildlife	US Federal Programs	A22340	06-30-24
USDA	US Federal Programs	FLGNV23001	01-08-26
USDA	US Federal Programs	P330-21-00056	05-17-24
Virginia	NELAP	460166	06-14-24
West Virginia DEP	State	136	03-31-25

* Accreditation/Certification renewal pending - accreditation/certification considered valid.

Eurofins Houston

Method Summary

Client: Messer LLC

Job ID: 860-71363-1

Project/Site: Messer Gas ASU Permit Renewal 4-3-24

Method	Method Description	Protocol	Laboratory
624.1	Volatile Organic Compounds (GC/MS)	EPA	EET HOU
625.1	Semivolatile Organic Compounds (GC/MS)	EPA	EET HOU
300.0	Anions, Ion Chromatography	EPA	EET HOU
1631E	Mercury, Low Level (CVAFS)	EPA	EET PEN
200.8	Metals (ICP/MS)	EPA	EET HOU
1664B	HEM and SGT-HEM	1664B	EET HOU
350.1	Nitrogen, Ammonia	EPA	EET HOU
351.2	Nitrogen, Total Kjeldahl	EPA	EET HOU
360.1	Oxygen, Dissolved	EPA	EET HOU
365.1	Phosphorus, Total	EPA	EET HOU
7196A	Chromium, Hexavalent	SW846	EET HOU
8000	COD	Hach	EET HOU
OIA-1677	Cyanide, Available (Flow Injection)	OI CORP	ELLE
SM 2120B	Color, Colorimetric	SM	EET HOU
SM 2320B	Alkalinity	SM	EET HOU
SM 2540C	Solids, Total Dissolved (TDS)	SM	EET HOU
SM 2540D	Solids, Total Suspended (TSS)	SM	EET HOU
SM 4500 Cl G	Chlorine, Residual	SM	EET HOU
SM 4500 S2 D	Sulfide, Total	SM	EET HOU
SM 4500 SO3 B	Sulfite	SM	EET HOU
SM 5210B	BOD, 5-Day	SM	EET HOU
SM 5310C	TOC	SM	EET HOU
SM5210B CBOD	Carbonaceous BOD, 5 Day	SM	EET HOU
1631E	Preparation, Mercury, Low Level	EPA	EET PEN
200.8	Preparation, Total Recoverable Metals	EPA	EET HOU
351.2	Nitrogen, Total Kjeldahl	EPA	EET HOU
625	Liquid-Liquid Extraction	EPA	EET HOU
BOD Prep	Preparation, BOD	SM	EET HOU

Protocol References:

1664B = EPA-821-98-002

EPA = US Environmental Protection Agency

Hach = Hach Company

OI CORP = OI Corporation Instrument Manual.

SM = "Standard Methods For The Examination Of Water And Wastewater"

SW846 = "Test Methods For Evaluating Solid Waste, Physical/Chemical Methods", Third Edition, November 1986 And Its Updates.

Laboratory References:

EET HOU = Eurofins Houston, 4145 Greenbriar Dr, Stafford, TX 77477, TEL (281)240-4200

EET PEN = Eurofins Pensacola, 3355 McLemore Drive, Pensacola, FL 32514, TEL (850)474-1001

ELLE = Eurofins Lancaster Laboratories Environment Testing, LLC, 2425 New Holland Pike, Lancaster, PA 17601, TEL (717)656-2300

Eurofins Houston

Sample Summary

Client: Messer LLC
Project/Site: Messer Gas ASU Permit Renewal 4-3-24

Job ID: 860-71363-1

Lab Sample ID	Client Sample ID	Matrix	Collected	Received
860-71363-1	Outfall 001	Water	04/03/24 08:00	04/03/24 13:40

Preliminary Data

- 1
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Chain of Custody Record

4145 Greenbriar Dr
Stafford TX 77477
Phone (281) 240-4200

1000

860-71363 Chain of Custody

COG: Nr.

eurofins

For Teachers

Client Information Client Contact: <u>Rami Gafishah</u> Phone: <u>954-278-1838</u> Email: <u>Lance.Tigret@et.eurofnus.com</u>		Sample ID: <u>JEFF ALBERS</u> Lab P.M.: <u>Tigret, Lance</u>	
Company: <u>Messer LLC</u> Address: <u>11605 Strang Rd.</u> City: <u>La Porte</u> State, Zip: <u>TX, 77571</u> Phone: <u></u> Email: <u>rami.gafishah@messer-us.com</u> Project Name: <u>Messer Gas ASU Permit Renewal 2024</u> Site: <u></u>		Due Date Requested: <u></u> TAT Requested (days): <u></u> Compliance Project: <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No PO #: <u></u> NO #: <u></u> Project #: <u>86006711</u> SSON#: <u></u>	
Analysis Requested		Preservation Codes:	
Field Filtered Sample (Yes or No) <input checked="" type="checkbox"/> Perform MS/MSD (Yes or No) <input checked="" type="checkbox"/> 1631E Mercury Low Level (CVAFS) <input checked="" type="checkbox"/> 1677 - Available CN <input checked="" type="checkbox"/> SM4500_S2_D -Sulfide <input checked="" type="checkbox"/> 350.1 351.2, 355.1 HACH8000_NP COD <input checked="" type="checkbox"/> 5310C Total Organic Carbon (TOC) <input checked="" type="checkbox"/> 2320B, 300_ORGFM_2BD, 300_ORGFMS, TON <input checked="" type="checkbox"/> 2120B, 4500_CL_G, 5540C, 7196A, 7196A_CR3 <input checked="" type="checkbox"/> 200.8 Custom List 22 Analytes <input checked="" type="checkbox"/> 608.3_PCB, 625.1 624.1 VOCs+ Ac/Ac/2CVCe+TTHMs <input checked="" type="checkbox"/> 2540D (TSS), 2540C_Calcd (TDS) <input checked="" type="checkbox"/> 1664B_NP HEM Only <input checked="" type="checkbox"/> SM4500SO3_B Sulfite <input checked="" type="checkbox"/> 360.1 SM5210B_Calc, SM5210B_CBODCal <input checked="" type="checkbox"/> Total Number of containers <u>26</u>		A HCL B NaOH C Zn Acetate D Nitric Acid E NaHSO4 F MeOH G Ammonia H Acetic Acid I Ice J DI Water K EDTA L EDA Other: <u></u>	
Special Instructions/Note:		Preservation Codes:	
Field pH: <u>2.6</u> Temp: <u>12.6</u>		Hexane M None N None O AsNaO2 P Na2OAS Q Na2SO3 R Na2SO4 S H2SO4 T TSP Dodecylate U Acetone V MCAA W pH 4.5 Y Tizane Z other (Specify) <u></u>	
Sample Identification			
Sample Date: <u>4-3-24</u> Sample Time: <u>8am</u> Sample Type: <u>G</u> Matrix: <u>Water</u> Preservation Code: <u></u>	Field Filtered Sample (Yes or No) <input checked="" type="checkbox"/> Perform MS/MSD (Yes or No) <input checked="" type="checkbox"/> 1631E Mercury Low Level (CVAFS) <input checked="" type="checkbox"/> 1677 - Available CN <input checked="" type="checkbox"/> SM4500_S2_D -Sulfide <input checked="" type="checkbox"/> 350.1 351.2, 355.1 HACH8000_NP COD <input checked="" type="checkbox"/> 5310C Total Organic Carbon (TOC) <input checked="" type="checkbox"/> 2320B, 300_ORGFM_2BD, 300_ORGFMS, TON <input checked="" type="checkbox"/> 2120B, 4500_CL_G, 5540C, 7196A, 7196A_CR3 <input checked="" type="checkbox"/> 200.8 Custom List 22 Analytes <input checked="" type="checkbox"/> 608.3_PCB, 625.1 624.1 VOCs+ Ac/Ac/2CVCe+TTHMs <input checked="" type="checkbox"/> 2540D (TSS), 2540C_Calcd (TDS) <input checked="" type="checkbox"/> 1664B_NP HEM Only <input checked="" type="checkbox"/> SM4500SO3_B Sulfite <input checked="" type="checkbox"/> 360.1 SM5210B_Calc, SM5210B_CBODCal <input checked="" type="checkbox"/> Total Number of containers <u>26</u>	Field pH: <u>2.6</u> Temp: <u>12.6</u>	Hexane M None N None O AsNaO2 P Na2OAS Q Na2SO3 R Na2SO4 S H2SO4 T TSP Dodecylate U Acetone V MCAA W pH 4.5 Y Tizane Z other (Specify) <u></u>
Deliverable Requested			
I II III IV Other (Specify) <u></u>			
Sample Disposal			
A fee may be assessed if samples are retained longer than 1 month. <u>13.0</u>			
Return To Client <input type="checkbox"/> Disposal By Lab <input type="checkbox"/> Archive For <u>13</u> Months			
Empty Kit Relinquished by:			
Relinquished by: <u>Jeff Albers</u> Date/Time: <u>4-3-24 11:10am</u> Company: <u>Messer</u>	Date: <u></u> Time: <u></u>	Method of Shipment: <u></u>	
Relinquished by:			
Relinquished by: <u>Jeff Albers</u> Date/Time: <u>4-3-24 13:40</u> Company: <u>Coron</u>	Date/Time: <u></u> Company: <u></u>	Received by: <u>Jeff Albers</u> Date/Time: <u>4-3-24 13:40</u> Company: <u>Coron</u>	
Custody Seals Intact: <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No Custody Seal No. <u></u>			

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Environment testing

4145 Greenbriar Dr
Stafford, TX 77477
Phone: 281-240-4200

Client Information (Sub Contract Lab)

Client Contact: Shipping/Receiving

Phone:

E-Mail: Lance.Tigrett@et.eurofinsus.com

State of Origin: Texas

Page: 1 of 1

Company: Eurofins Environment Testing Southeast,

Address: 3365 McLemore Drive,

City: Pensacola

State, Zip: FL, 32514

Phone: 850-474-1001(Tel) 850-478-2671(Fax)

Email: 850-474-1001(Tel) 850-478-2671(Fax)

Project Name: Messer Gas ASU Permit Renewal 2024

Site: SSOW#:

Project #: 86006711

Sampler: Lab PM: Tigrett, Lance

Carrier (tracking No.):

COC No: 860-111376.1

Due Date Requested: 4/10/2024

TAT Requested (days):

PO #:

WO #:

Analysis Requested

Job #: 860-71363-1

Preservation Codes: A - HCL, B - NaOH, C - Zn Acetate, D - Nitric Acid, E - NaHSO4, F - MeOH, G - Amethor, H - Ascorbic Acid, I - Ice, J - DI Water, K - EDTA, L - EDTA, M - Hexane, N - None, O - AsNaO2, P - Na2O4S, Q - Na2SO3, R - Na2S2O3, S - H2SO4, T - TSP Dodecyl/drate, U - Acetone, V - MCAA, W - PH 4-5, Y - Trizma, Z - other (specify)

Other:

Special Instructions/Note:

Sample Identification - Client ID (Lab ID)

Sample Date

Sample Time

Sample Type (C=comp, G=grab)

Matrix (W=water, S=solid, O=overhead, BT=Trisau, A=Air)

Field Filtered Sample (Yes or No)

Perform MS/MSD (Yes or No)

1631E/1631E_Prep Mercury, Low Level (CVAFS)

Total Number of containers

Special Instructions/Note:

Outfall 001 (860-71363-1)

4/3/24

08:00

Central

Water

X

2

Unconfirmed

Deliverable Requested: I, II, III, IV, Other (specify)

Primary Deliverable Rank: 2

Special Instructions/QC Requirements:

Sample Disposal (A fee may be assessed if samples are retained longer than 1 month)

Return To Client

Disposal By Lab

Archive For

Months

Empty Kit Relinquished by

Relinquished by:

Relinquished by:

Relinquished by:

Custody Seals Intact:

Custody Seal No.:

Cooler Temperature(s) °C and Other Remarks:

0.4°C

5228

Method of Shipment:

Received by:

Received by:

Received by:

Date/Time:

Date/Time:

Date/Time:

Company:

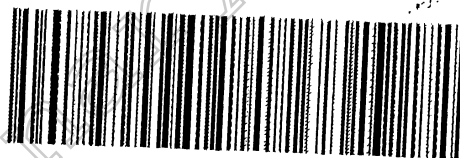
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Company:

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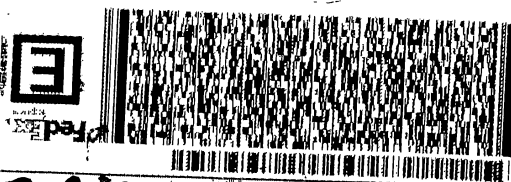
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32514 BFM FL-US

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PRIORITY OVERNIGHT

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ADMINISTRATIVE
4145 BREWERMAN DR
KENOS HOUSTON
STAFFORD, TX 77477
UNDETERMINED
TO BENJAMIN WHATLEY
EUROFINS PENSACOLA
3355 MCLEMORE DRIVE
PENSACOLA FL 32514



0.40c
100

EXP 01/24

DLL GENDCR

Cleared:



W

Login Sample Receipt Checklist

Client: Messer LLC

Job Number: 860-71363-1

Login Number: 71363

List Source: Eurofins Houston

List Number: 1

Creator: Torres, Sandra

Question	Answer	Comment
Radioactivity wasn't checked or is \leq background as measured by a survey meter.	True	
The cooler's custody seal, if present, is intact.	True	
Sample custody seals, if present, are intact.	True	
The cooler or samples do not appear to have been compromised or tampered with.	True	
Samples were received on ice.	True	
Cooler Temperature is acceptable.	True	Received same day of collection; chilling process has begun.
Cooler Temperature is recorded.	True	13.0
COC is present.	True	
COC is filled out in ink and legible.	True	
COC is filled out with all pertinent information.	True	
Is the Field Sampler's name present on COC?	True	
There are no discrepancies between the containers received and the COC.	True	
Samples are received within Holding Time (excluding tests with immediate HTs)	True	
Sample containers have legible labels.	True	
Containers are not broken or leaking.	True	
Sample collection date/times are provided.	True	
Appropriate sample containers are used.	True	
Sample bottles are completely filled.	True	
Sample Preservation Verified.	True	
There is sufficient vol. for all requested analyses, incl. any requested MS/MSDs	True	
Containers requiring zero headspace have no headspace or bubble is $<6\text{mm}$ (1/4").	True	
Multiphasic samples are not present.	True	
Samples do not require splitting or compositing.	True	
Residual Chlorine Checked.	True	

Login Sample Receipt Checklist

Client: Messer LLC

Job Number: 860-71363-1

Login Number: 71363

List Source: Eurofins Lancaster Laboratories Environment Testing, LLC

List Number: 2

List Creation: 04/05/24 01:24 PM

Creator: McCaskey, Jonathan

Question	Answer	Comment
The cooler's custody seal is intact.	N/A	
The cooler or samples do not appear to have been compromised or tampered with.	True	
Samples were received on ice.	True	
Cooler Temperature acceptable, where thermal pres is required ($\leq 6^{\circ}\text{C}$, not frozen).	True	
Cooler Temperature is recorded.	True	
WV: Container Temp acceptable, where thermal pres is required ($\leq 6^{\circ}\text{C}$, not frozen).	N/A	
WV: Container Temperature is recorded.	N/A	
COC is present.	True	
COC is filled out in ink and legible.	True	
COC is filled out with all pertinent information.	True	
There are no discrepancies between the containers received and the COC.	True	
Sample containers have legible labels.	True	
Containers are not broken or leaking.	True	
Sample collection date/times are provided.	True	
Appropriate sample containers are used.	True	
Sample bottles are completely filled.	True	
There is sufficient vol. for all requested analyses.	True	
Is the Field Sampler's name present on COC?	False	Received project as a subcontract.
Sample custody seals are intact.	N/A	
VOA sample vials do not have headspace $> 6\text{mm}$ in diameter (none, if from WV)?	N/A	

Login Sample Receipt Checklist

Client: Messer LLC

Job Number: 860-71363-1

Login Number: 71363

List Number: 3

Creator: Earnest, Tamantha

List Source: Eurofins Pensacola

List Creation: 04/05/24 06:19 PM

Question	Answer	Comment
Radioactivity wasn't checked or is \leq background as measured by a survey meter.	N/A	
The cooler's custody seal, if present, is intact.	N/A	
Sample custody seals, if present, are intact.	N/A	
The cooler or samples do not appear to have been compromised or tampered with.	True	
Samples were received on ice.	True	
Cooler Temperature is acceptable.	True	
Cooler Temperature is recorded.	True	0.4°C IR8
COC is present.	True	
COC is filled out in ink and legible.	True	
COC is filled out with all pertinent information.	True	
Is the Field Sampler's name present on COC?	True	
There are no discrepancies between the containers received and the COC.	True	
Samples are received within Holding Time (excluding tests with immediate HTs)	True	
Sample containers have legible labels.	True	
Containers are not broken or leaking.	True	
Sample collection date/times are provided.	True	
Appropriate sample containers are used.	True	
Sample bottles are completely filled.	True	
Sample Preservation Verified.	N/A	
There is sufficient vol. for all requested analyses, incl. any requested MS/MSDs	True	
Containers requiring zero headspace have no headspace or bubble is $<6\text{mm}$ (1/4").	N/A	
Multiphasic samples are not present.	True	
Samples do not require splitting or compositing.	True	
Residual Chlorine Checked.	N/A	

ANALYTICAL REPORT

PREPARED FOR

Attn: Rami Qafisheh

Messer LLC

11605 Strang Rd.

La Porte, Texas 77571

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JOB DESCRIPTION

Messer Gas ASU Permit Renewal 4-9-24

JOB NUMBER

860-71662-1

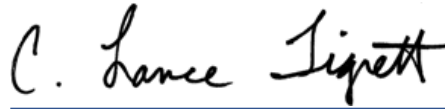
Eurofins Houston

Job Notes

This report may not be reproduced except in full, and with written approval from the laboratory. The results relate only to the samples tested. For questions please contact the Project Manager at the e-mail address or telephone number listed on this page.

Analytical test results meet all requirements of the associated regulatory program (i.e., NELAC (TNI), DoD, and ISO 17025) unless otherwise noted under the individual analysis.

Authorization



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Authorized for release by
Lance Tigrett, Project Manager II
Lance.Tigrett@et.eurofinsus.com
(979)484-9088

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Definitions/Glossary

Client: Messer LLC

Job ID: 860-71662-1

Project/Site: Messer Gas ASU Permit Renewal 4-9-24

Qualifiers

GC/MS VOA

Qualifier	Qualifier Description
U	Indicates the analyte was analyzed for but not detected.

GC/MS Semi VOA

Qualifier	Qualifier Description
*-	LCS and/or LCSD is outside acceptance limits, low biased.
*1	LCS/LCSD RPD exceeds control limits.
J	Result is less than the RL but greater than or equal to the MDL and the concentration is an approximate value.
S1-	Surrogate recovery exceeds control limits, low biased.
U	Indicates the analyte was analyzed for but not detected.

GC Semi VOA

Qualifier	Qualifier Description
U	Indicates the analyte was analyzed for but not detected.

HPLC/IC

Qualifier	Qualifier Description
J	Result is less than the RL but greater than or equal to the MDL and the concentration is an approximate value.
U	Indicates the analyte was analyzed for but not detected.

Metals

Qualifier	Qualifier Description
B	Compound was found in the blank and sample.
J	Result is less than the RL but greater than or equal to the MDL and the concentration is an approximate value.
U	Indicates the analyte was analyzed for but not detected.

General Chemistry

Qualifier	Qualifier Description
HF	Parameter with a holding time of 15 minutes. Test performed by laboratory at client's request. Sample was analyzed outside of hold time.
J	Result is less than the RL but greater than or equal to the MDL and the concentration is an approximate value.
U	Indicates the analyte was analyzed for but not detected.

Glossary

Abbreviation	These commonly used abbreviations may or may not be present in this report.
α	Listed under the "D" column to designate that the result is reported on a dry weight basis
%R	Percent Recovery
CFL	Contains Free Liquid
CFU	Colony Forming Unit
CNF	Contains No Free Liquid
DER	Duplicate Error Ratio (normalized absolute difference)
Dil Fac	Dilution Factor
DL	Detection Limit (DoD/DOE)
DL, RA, RE, IN	Indicates a Dilution, Re-analysis, Re-extraction, or additional Initial metals/anion analysis of the sample
DLC	Decision Level Concentration (Radiochemistry)
EDL	Estimated Detection Limit (Dioxin)
LOD	Limit of Detection (DoD/DOE)
LOQ	Limit of Quantitation (DoD/DOE)
MCL	EPA recommended "Maximum Contaminant Level"
MDA	Minimum Detectable Activity (Radiochemistry)
MDC	Minimum Detectable Concentration (Radiochemistry)
MDL	Method Detection Limit
ML	Minimum Level (Dioxin)
MPN	Most Probable Number
MQL	Method Quantitation Limit
NC	Not Calculated
ND	Not Detected at the reporting limit (or MDL or EDL if shown)
NEG	Negative / Absent

Eurofins Houston

Definitions/Glossary

Client: Messer LLC
Project/Site: Messer Gas ASU Permit Renewal 4-9-24

Job ID: 860-71662-1

Glossary (Continued)

Abbreviation	These commonly used abbreviations may or may not be present in this report.
POS	Positive / Present
PQL	Practical Quantitation Limit
PRES	Presumptive
QC	Quality Control
RER	Relative Error Ratio (Radiochemistry)
RL	Reporting Limit or Requested Limit (Radiochemistry)
RPD	Relative Percent Difference, a measure of the relative difference between two points
TEF	Toxicity Equivalent Factor (Dioxin)
TEQ	Toxicity Equivalent Quotient (Dioxin)
TNTC	Too Numerous To Count

Case Narrative

Client: Messer LLC
Project: Messer Gas ASU Permit Renewal 4-9-24

Job ID: 860-71662-1

Job ID: 860-71662-1

Eurofins Houston

Job Narrative 860-71662-1

Analytical test results meet all requirements of the associated regulatory program listed on the Accreditation/Certification Summary Page unless otherwise noted under the individual analysis. Data qualifiers are applied to indicate exceptions. Noncompliant quality control (QC) is further explained in narrative comments.

- Matrix QC may not be reported if insufficient sample or site-specific QC samples were not submitted. In these situations, to demonstrate precision and accuracy at a batch level, a LCS/LCSD may be performed, unless otherwise specified in the method.
- Surrogate and/or isotope dilution analyte recoveries (if applicable) which are outside of the QC window are confirmed unless attributed to a dilution or otherwise noted in the narrative.

Regulated compliance samples (e.g. SDWA, NPDES) must comply with the associated agency requirements/permits.

Receipt

The sample was received on 4/9/2024 3:06 PM. Unless otherwise noted below, the sample arrived in good condition, and, where required, properly preserved and on ice.

Subcontract Work

Method Surfactants: This method was subcontracted to Envirodyne Laboratories. The subcontract laboratory certification is different from that of the facility issuing the final report. The subcontract report is appended in its entirety.

GC/MS VOA

No additional analytical or quality issues were noted, other than those described above or in the Definitions/ Glossary page.

GC/MS Semi VOA

Method 625.1: Six surrogates are used for this analysis. The laboratory's SOP allows one acid and one base of these surrogates to be outside acceptance criteria without performing re-extraction/re-analysis. The following sample contained an allowable number of surrogate compounds outside limits: Outfall Samples (860-71662-1). These results have been reported and qualified.

Method 625.1: The laboratory control sample and the laboratory control sample duplicate (LCS/LCSD) for preparation batch 860-154889 and analytical batch 860-155030 recovered outside control limits for the following analyte: Benzidine. Benzidine has been identified as a poor performing analyte when analyzed using this method; therefore, re-extraction/re-analysis was not performed. Batch precision also exceeded control limits for this analyte. These results have been reported and qualified.

Method 625.1: The RPD of the laboratory control sample (LCS) and laboratory control sample duplicate (LCSD) for preparation batch 860-154889 and analytical batch 860-155030 recovered outside control limits for the following analyte: Pyridine.

No additional analytical or quality issues were noted, other than those described above or in the Definitions/ Glossary page.

PCBs

No additional analytical or quality issues were noted, other than those described above or in the Definitions/ Glossary page.

HPLC/IC

Method 300_ORGFM_28D: The instrument blank/CCB for analytical batch 860-153949 contained Chloride greater than the method detection limit (MDL), and were not reanalyzed because associated sample(s) results were greater than 10X the value found in the instrument blank/CCB. The data have been reported.

Method 300_ORGFM_28D: The instrument blank/CCB for analytical batch 860-155395 contained Chloride greater than the method detection limit (MDL), and were not reanalyzed because associated sample(s) results were greater than 10X the value found in the instrument blank/CCB. The data have been reported.

No additional analytical or quality issues were noted, other than those described above or in the Definitions/ Glossary page.

Metals

Method 200.8 - Total Recoverable: The method blank for preparation batch 860-154494 and analytical batch 860-154594 contained Silver, Magnesium, Manganese, Nickel, Boron and Chromium above the method detection limit. This target analyte concentration was less than the reporting limit (RL) in the method blank; therefore, re-extraction and/or re-analysis of samples was not performed.

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Case Narrative

Client: Messer LLC
Project: Messer Gas ASU Permit Renewal 4-9-24

Job ID: 860-71662-1

Job ID: 860-71662-1 (Continued)

Eurofins Houston

Method 200.8 - Total Recoverable: The following sample was diluted to bring the concentration of target analytes within the calibration range: Outfall Samples (860-71662-1). Elevated reporting limits (RLs) are provided.

No additional analytical or quality issues were noted, other than those described above or in the Definitions/ Glossary page.

General Chemistry

Method 2540D: Insufficient sample volume was available to perform a sample duplicate (DUP) associated with analytical batch 860-154860.

Method SM5210B_CBODCal: The following sample underdepleted: Outfall Samples (860-71662-1). Results have been reported and may be biased high.

No additional analytical or quality issues were noted, other than those described above or in the Definitions/ Glossary page.

Eurofins Houston

Detection Summary

Client: Messer LLC

Job ID: 860-71662-1

Project/Site: Messer Gas ASU Permit Renewal 4-9-24

Client Sample ID: Outfall Samples

Lab Sample ID: 860-71662-1

Analyte	Result	Qualifier	RL	MDL	Unit	Dil	Fac	D	Method	Prep Type
Chloroform	0.059		0.0010	0.00046	mg/L	1			624.1	Total/NA
Bromodichloromethane	0.0050		0.0010	0.00055	mg/L	1			624.1	Total/NA
Trihalomethanes, Total	0.064		0.0050	0.00063	mg/L	1			624.1	Total/NA
Nitrate as N	5.1		0.10	0.039	mg/L	1			300.0	Total/NA
Chloride	320		0.50	0.25	mg/L	1			300.0	Total/NA
Fluoride	2.6		0.50	0.10	mg/L	1			300.0	Total/NA
Nitrate Nitrite as N	5.1		0.10	0.039	mg/L	1			300.0	Total/NA
Sulfate	320		0.50	0.20	mg/L	1			300.0	Total/NA
Mercury	18		0.50	0.20	ng/L	1			1631E	Total/NA
Aluminum	0.19		0.020	0.0030	mg/L	1			200.8	Total
Arsenic	0.0052		0.0040	0.00034	mg/L	1			200.8	Total Recoverable
Barium	0.19		0.0040	0.00029	mg/L	1			200.8	Total Recoverable
Boron	0.32	B	0.010	0.0025	mg/L	1			200.8	Total Recoverable
Chromium	0.0031	J B	0.0040	0.00033	mg/L	1			200.8	Total Recoverable
Cobalt	0.00085	J	0.0020	0.00026	mg/L	1			200.8	Total Recoverable
Copper	0.036		0.0040	0.00069	mg/L	1			200.8	Total Recoverable
Iron	0.61		0.020	0.0020	mg/L	1			200.8	Total Recoverable
Lead	0.00039	J	0.0020	0.00014	mg/L	1			200.8	Total Recoverable
Magnesium	17	B	2.0	0.18	mg/L	20			200.8	Total Recoverable
Manganese	0.024	B	0.0020	0.00016	mg/L	1			200.8	Total Recoverable
Molybdenum	0.0078		0.0020	0.00016	mg/L	1			200.8	Total Recoverable
Nickel	0.018	B	0.0020	0.00049	mg/L	1			200.8	Total Recoverable
Selenium	0.0020		0.0020	0.00069	mg/L	1			200.8	Total Recoverable
Silver	0.00022	J B	0.0020	0.00012	mg/L	1			200.8	Total Recoverable
Titanium	0.0026	J	0.0040	0.00042	mg/L	1			200.8	Total Recoverable
Zinc	0.018		0.0040	0.00089	mg/L	1			200.8	Total Recoverable
HEM	2.6	J	5.0	1.6	mg/L	1			1664B	Total/NA
Nitrogen, Kjeldahl	3.0		0.20	0.089	mg/L	1			351.2	Total/NA
Oxygen, Dissolved	9.4	HF	1.0	1.0	mg/L	1			360.1	Total/NA
Phosphorus Total	3.4		0.10	0.072	mg/L	5			365.1	Total/NA
Chemical Oxygen Demand	86		20	3.4	mg/L	1			8000	Total/NA
Nitrogen, Organic	3.0		0.20	0.061	mg/L	1			Nitrogen,Org	Total/NA
Cyanide, Available	0.0061		0.0060	0.0050	mg/L	1			OIA-1677	Total/NA
Color, Apparent	30		10	10	Color Units	2			SM 2120B	Total/NA
Color, True	na		10	10	Color Units	2			SM 2120B	Total/NA
pH	8.6		0.10	0.10	S.U.	2			SM 2120B	Total/NA
Alkalinity	210		4.0	4.0	mg/L	1			SM 2320B	Total/NA
Bicarbonate Alkalinity as CaCO3	210		4.0	4.0	mg/L	1			SM 2320B	Total/NA

This Detection Summary does not include radiochemical test results.

Eurofins Houston

Detection Summary

Client: Messer LLC

Project/Site: Messer Gas ASU Permit Renewal 4-9-24

Job ID: 860-71662-1

Client Sample ID: Outfall Samples (Continued)							Lab Sample ID: 860-71662-1		
Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Total Dissolved Solids	1300		20	20	mg/L	1		SM 2540C	Total/NA
Total Suspended Solids	9.8		4.0	4.0	mg/L	1		SM 2540D	Total/NA
Chlorine, Total Residual	1.1	HF	0.10	0.10	mg/L	2		SM 4500 Cl G	Total/NA
Total Organic Carbon	13		1.0	0.50	mg/L	1		SM 5310C	Total/NA

Client Sample Results

Client: Messer LLC
Project/Site: Messer Gas ASU Permit Renewal 4-9-24

Job ID: 860-71662-1

Client Sample ID: Outfall Samples

Lab Sample ID: 860-71662-1

Date Collected: 04/09/24 09:00

Matrix: Water

Date Received: 04/09/24 15:06

Method: EPA 624.1 - Volatile Organic Compounds (GC/MS)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Acrolein	0.011	U	0.050	0.011	mg/L			04/10/24 12:56	1
Acrylonitrile	0.014	U	0.050	0.014	mg/L			04/10/24 12:56	1
Benzene	0.00046	U	0.0010	0.00046	mg/L			04/10/24 12:56	1
Carbon tetrachloride	0.00090	U	0.0050	0.00090	mg/L			04/10/24 12:56	1
Chlorobenzene	0.00046	U	0.0010	0.00046	mg/L			04/10/24 12:56	1
1,2,4-Trichlorobenzene	0.0018	U	0.0050	0.0018	mg/L			04/10/24 12:56	1
1,2-Dichloroethane	0.00037	U	0.0010	0.00037	mg/L			04/10/24 12:56	1
1,1,1-Trichloroethane	0.00059	U	0.0050	0.00059	mg/L			04/10/24 12:56	1
1,1-Dichloroethane	0.00064	U	0.0010	0.00064	mg/L			04/10/24 12:56	1
1,1,2-Trichloroethane	0.00041	U	0.0010	0.00041	mg/L			04/10/24 12:56	1
1,2-Dibromoethane	0.0010	U	0.0050	0.0010	mg/L			04/10/24 12:56	1
1,1,2,2-Tetrachloroethane	0.00047	U	0.0010	0.00047	mg/L			04/10/24 12:56	1
Chloroethane	0.0020	U	0.010	0.0020	mg/L			04/10/24 12:56	1
2-Chloroethyl vinyl ether	0.00075	U	0.0050	0.00075	mg/L			04/10/24 12:56	1
Chloroform	0.059		0.0010	0.00046	mg/L			04/10/24 12:56	1
1,2-Dichlorobenzene	0.00043	U	0.0010	0.00043	mg/L			04/10/24 12:56	1
1,3-Dichlorobenzene	0.00041	U	0.0010	0.00041	mg/L			04/10/24 12:56	1
1,4-Dichlorobenzene	0.00045	U	0.0010	0.00045	mg/L			04/10/24 12:56	1
1,1-Dichloroethene	0.00074	U	0.0010	0.00074	mg/L			04/10/24 12:56	1
trans-1,2-Dichloroethene	0.00037	U	0.0010	0.00037	mg/L			04/10/24 12:56	1
1,2-Dichloropropane	0.00056	U	0.0050	0.00056	mg/L			04/10/24 12:56	1
Ethylbenzene	0.00039	U	0.0010	0.00039	mg/L			04/10/24 12:56	1
2-Butanone	0.0083	U	0.050	0.0083	mg/L			04/10/24 12:56	1
Methylene Chloride	0.0017	U	0.0050	0.0017	mg/L			04/10/24 12:56	1
Chloromethane	0.0020	U	0.010	0.0020	mg/L			04/10/24 12:56	1
Bromomethane	0.0014	U	0.0050	0.0014	mg/L			04/10/24 12:56	1
Bromoform	0.00063	U	0.0050	0.00063	mg/L			04/10/24 12:56	1
Bromodichloromethane	0.0050		0.0010	0.00055	mg/L			04/10/24 12:56	1
Chlorodibromomethane	0.00055	U	0.0050	0.00055	mg/L			04/10/24 12:56	1
Hexachlorobutadiene	0.00063	U	0.0050	0.00063	mg/L			04/10/24 12:56	1
Naphthalene	0.0014	U	0.010	0.0014	mg/L			04/10/24 12:56	1
Tetrachloroethene	0.00066	U	0.0010	0.00066	mg/L			04/10/24 12:56	1
Toluene	0.00048	U	0.0010	0.00048	mg/L			04/10/24 12:56	1
Trichloroethene	0.0015	U	0.0050	0.0015	mg/L			04/10/24 12:56	1
Vinyl chloride	0.00043	U	0.0020	0.00043	mg/L			04/10/24 12:56	1
1,3-Dichloropropylene	0.0013	U	0.0050	0.0013	mg/L			04/10/24 12:56	1
cis-1,3-Dichloropropene	0.0011	U	0.0050	0.0011	mg/L			04/10/24 12:56	1
Trihalomethanes, Total	0.064		0.0050	0.00063	mg/L			04/10/24 12:56	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
1,2-Dichloroethane-d4 (Surr)	105		63 - 144		04/10/24 12:56	1
4-Bromofluorobenzene (Surr)	98		74 - 124		04/10/24 12:56	1
Dibromofluoromethane (Surr)	114		75 - 131		04/10/24 12:56	1
Toluene-d8 (Surr)	100		80 - 120		04/10/24 12:56	1

Method: EPA 625.1 - Semivolatile Organic Compounds (GC/MS)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,2,4,5-Tetrachlorobenzene	0.0013	U	0.010	0.0013	mg/L		04/15/24 15:37	04/16/24 21:44	1
1,2-Dichlorobenzene	0.0016	U	0.010	0.0016	mg/L		04/15/24 15:37	04/16/24 21:44	1
1,3-Dichlorobenzene	0.0014	U	0.010	0.0014	mg/L		04/15/24 15:37	04/16/24 21:44	1

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Client Sample Results

Client: Messer LLC
Project/Site: Messer Gas ASU Permit Renewal 4-9-24

Job ID: 860-71662-1

Client Sample ID: Outfall Samples

Lab Sample ID: 860-71662-1

Date Collected: 04/09/24 09:00

Matrix: Water

Date Received: 04/09/24 15:06

Method: EPA 625.1 - Semivolatile Organic Compounds (GC/MS) (Continued)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,4-Dichlorobenzene	0.0016	U	0.010	0.0016	mg/L		04/15/24 15:37	04/16/24 21:44	1
Acenaphthene	0.0014	U	0.0057	0.0014	mg/L		04/15/24 15:37	04/16/24 21:44	1
Benzidine	0.0048	U *- *1	0.020	0.0048	mg/L		04/15/24 15:37	04/16/24 21:44	1
1,2,4-Trichlorobenzene	0.0016	U	0.0050	0.0016	mg/L		04/15/24 15:37	04/16/24 21:44	1
Hexachlorobenzene	0.00031	U	0.0050	0.00031	mg/L		04/15/24 15:37	04/16/24 21:44	1
Hexachloroethane	0.00053	U	0.0048	0.00053	mg/L		04/15/24 15:37	04/16/24 21:44	1
2,4,5-Trichlorophenol	0.0020	U	0.010	0.0020	mg/L		04/15/24 15:37	04/16/24 21:44	1
Bis(2-chloroethyl)ether	0.0022	U	0.010	0.0022	mg/L		04/15/24 15:37	04/16/24 21:44	1
2-Chloronaphthalene	0.00046	U	0.0050	0.00046	mg/L		04/15/24 15:37	04/16/24 21:44	1
2,4,6-Trichlorophenol	0.0014	U	0.0050	0.0014	mg/L		04/15/24 15:37	04/16/24 21:44	1
p-Chloro-m-cresol	0.0016	U	0.0050	0.0016	mg/L		04/15/24 15:37	04/16/24 21:44	1
2-Chlorophenol	0.00065	U	0.0050	0.00065	mg/L		04/15/24 15:37	04/16/24 21:44	1
3,3'-Dichlorobenzidine	0.00034	U	0.0050	0.00034	mg/L		04/15/24 15:37	04/16/24 21:44	1
2,4-Dichlorophenol	0.00031	U	0.0050	0.00031	mg/L		04/15/24 15:37	04/16/24 21:44	1
2,4-Dimethylphenol	0.00065	U	0.0050	0.00065	mg/L		04/15/24 15:37	04/16/24 21:44	1
2,4-Dinitrotoluene	0.0013	U	0.010	0.0013	mg/L		04/15/24 15:37	04/16/24 21:44	1
1,2-Diphenylhydrazine	0.0015	U	0.010	0.0015	mg/L		04/15/24 15:37	04/16/24 21:44	1
Fluoranthene	0.0016	U	0.0050	0.0016	mg/L		04/15/24 15:37	04/16/24 21:44	1
4-Bromophenyl phenyl ether	0.00026	U	0.0050	0.00026	mg/L		04/15/24 15:37	04/16/24 21:44	1
4-Chlorophenyl phenyl ether	0.0013	U	0.010	0.0013	mg/L		04/15/24 15:37	04/16/24 21:44	1
o-Cresol	0.0016	U	0.010	0.0016	mg/L		04/15/24 15:37	04/16/24 21:44	1
Bis(2-chloroethoxy)methane	0.0018	U	0.010	0.0018	mg/L		04/15/24 15:37	04/16/24 21:44	1
m & p - Cresol	0.0026	U	0.010	0.0026	mg/L		04/15/24 15:37	04/16/24 21:44	1
bis (2-chloroisopropyl) ether	0.0018	U	0.010	0.0018	mg/L		04/15/24 15:37	04/16/24 21:44	1
Hexachlorobutadiene	0.00024	U	0.0010	0.00024	mg/L		04/15/24 15:37	04/16/24 21:44	1
Hexachlorocyclopentadiene	0.0046	U	0.010	0.0046	mg/L		04/15/24 15:37	04/16/24 21:44	1
Isophorone	0.0016	U	0.0050	0.0016	mg/L		04/15/24 15:37	04/16/24 21:44	1
Naphthalene	0.00054	U	0.0025	0.00054	mg/L		04/15/24 15:37	04/16/24 21:44	1
Nitrobenzene	0.0017	U	0.0050	0.0017	mg/L		04/15/24 15:37	04/16/24 21:44	1
4-Nitrophenol	0.0049	U	0.0072	0.0049	mg/L		04/15/24 15:37	04/16/24 21:44	1
2-Nitrophenol	0.0017	U	0.010	0.0017	mg/L		04/15/24 15:37	04/16/24 21:44	1
4,6-Dinitro-o-cresol	0.0014	U	0.010	0.0014	mg/L		04/15/24 15:37	04/16/24 21:44	1
N-Nitrosodimethylamine	0.0020	U	0.010	0.0020	mg/L		04/15/24 15:37	04/16/24 21:44	1
N-Nitrosodiphenylamine	0.0018	U	0.010	0.0018	mg/L		04/15/24 15:37	04/16/24 21:44	1
N-Nitrosodi-n-propylamine	0.0029	U	0.010	0.0029	mg/L		04/15/24 15:37	04/16/24 21:44	1
Pentachlorophenol	0.00023	U	0.010	0.00023	mg/L		04/15/24 15:37	04/16/24 21:44	1
Phenol	0.00042	U	0.0045	0.00042	mg/L		04/15/24 15:37	04/16/24 21:44	1
Bis(2-ethylhexyl) phthalate	0.00028	U	0.0050	0.00028	mg/L		04/15/24 15:37	04/16/24 21:44	1
Butyl benzyl phthalate	0.00034	U	0.0050	0.00034	mg/L		04/15/24 15:37	04/16/24 21:44	1
Di-n-butyl phthalate	0.00025	U	0.0050	0.00025	mg/L		04/15/24 15:37	04/16/24 21:44	1
Di-n-octyl phthalate	0.00037	U	0.0050	0.00037	mg/L		04/15/24 15:37	04/16/24 21:44	1
Diethyl phthalate	0.0016	U	0.0050	0.0016	mg/L		04/15/24 15:37	04/16/24 21:44	1
Dimethyl phthalate	0.00030	U	0.0025	0.00030	mg/L		04/15/24 15:37	04/16/24 21:44	1
Benzo[a]anthracene	0.00017	U	0.0050	0.00017	mg/L		04/15/24 15:37	04/16/24 21:44	1
Benzo[a]pyrene	0.00036	U	0.0050	0.00036	mg/L		04/15/24 15:37	04/16/24 21:44	1
Benzo[b]fluoranthene	0.0020	U	0.010	0.0020	mg/L		04/15/24 15:37	04/16/24 21:44	1
Benzo[k]fluoranthene	0.00038	U	0.0050	0.00038	mg/L		04/15/24 15:37	04/16/24 21:44	1
Chrysene	0.00022	U	0.0050	0.00022	mg/L		04/15/24 15:37	04/16/24 21:44	1
Acenaphthylene	0.0014	U	0.010	0.0014	mg/L		04/15/24 15:37	04/16/24 21:44	1

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Client Sample Results

Client: Messer LLC

Job ID: 860-71662-1

Project/Site: Messer Gas ASU Permit Renewal 4-9-24

Client Sample ID: Outfall Samples

Lab Sample ID: 860-71662-1

Date Collected: 04/09/24 09:00

Matrix: Water

Date Received: 04/09/24 15:06

Method: EPA 625.1 - Semivolatile Organic Compounds (GC/MS) (Continued)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Anthracene	0.0015	U	0.0057	0.0015	mg/L		04/15/24 15:37	04/16/24 21:44	1
Benzo[g,h,i]perylene	0.0027	U	0.010	0.0027	mg/L		04/15/24 15:37	04/16/24 21:44	1
Fluorene	0.0016	U	0.0050	0.0016	mg/L		04/15/24 15:37	04/16/24 21:44	1
Phenanthrene	0.0014	U	0.010	0.0014	mg/L		04/15/24 15:37	04/16/24 21:44	1
Dibenz[a,h]anthracene	0.00025	U	0.0050	0.00025	mg/L		04/15/24 15:37	04/16/24 21:44	1
Indeno[1,2,3-cd]pyrene	0.0023	U	0.010	0.0023	mg/L		04/15/24 15:37	04/16/24 21:44	1
Pyrene	0.00018	U	0.0050	0.00018	mg/L		04/15/24 15:37	04/16/24 21:44	1
2,4-Dinitrophenol	0.0016	U	0.010	0.0016	mg/L		04/15/24 15:37	04/16/24 21:44	1
2,6-Dinitrotoluene	0.0016	U	0.0050	0.0016	mg/L		04/15/24 15:37	04/16/24 21:44	1
N-Nitrosodi-n-butylamine	0.0015	U	0.010	0.0015	mg/L		04/15/24 15:37	04/16/24 21:44	1
N-Nitrosodiethylamine	0.0018	U	0.010	0.0018	mg/L		04/15/24 15:37	04/16/24 21:44	1
Nonylphenol	0.010	U	0.010	0.010	mg/L		04/15/24 15:37	04/16/24 21:44	1
Pentachlorobenzene	0.0011	U	0.010	0.0011	mg/L		04/15/24 15:37	04/16/24 21:44	1
Pyridine	0.0026	U *1	0.010	0.0026	mg/L		04/15/24 15:37	04/16/24 21:44	1
Total Cresols	0.0026	U	0.010	0.0026	mg/L		04/15/24 15:37	04/16/24 21:44	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
2,4,6-Tribromophenol (Surr)	78		31 - 132	04/15/24 15:37	04/16/24 21:44	1
2-Fluorobiphenyl (Surr)	58		29 - 112	04/15/24 15:37	04/16/24 21:44	1
2-Fluorophenol (Surr)	19	S1-	28 - 114	04/15/24 15:37	04/16/24 21:44	1
Nitrobenzene-d5 (Surr)	50		15 - 314	04/15/24 15:37	04/16/24 21:44	1
p-Terphenyl-d14 (Surr)	83		20 - 141	04/15/24 15:37	04/16/24 21:44	1
Phenol-d5 (Surr)	14		8 - 424	04/15/24 15:37	04/16/24 21:44	1

Method: EPA 608.3 - Polychlorinated Biphenyls (PCBs) (GC)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
PCB-1016	0.000013	U	0.00010	0.000013	mg/L		04/13/24 06:30	04/15/24 12:27	1
PCB-1221	0.000013	U	0.00010	0.000013	mg/L		04/13/24 06:30	04/15/24 12:27	1
PCB-1232	0.000013	U	0.00010	0.000013	mg/L		04/13/24 06:30	04/15/24 12:27	1
PCB-1242	0.000013	U	0.00010	0.000013	mg/L		04/13/24 06:30	04/15/24 12:27	1
PCB-1248	0.000013	U	0.00010	0.000013	mg/L		04/13/24 06:30	04/15/24 12:27	1
PCB-1254	0.0000078	U	0.00010	0.0000078	mg/L		04/13/24 06:30	04/15/24 12:27	1
PCB-1260	0.0000078	U	0.00010	0.0000078	mg/L		04/13/24 06:30	04/15/24 12:27	1
Polychlorinated biphenyls, Total	0.00010	U	0.00010	0.00010	mg/L		04/13/24 06:30	04/15/24 12:27	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
Tetrachloro-m-xylene (Surr)	63		18 - 126	04/13/24 06:30	04/15/24 12:27	1
DCB Decachlorobiphenyl (Surr)	124		15 - 136	04/13/24 06:30	04/15/24 12:27	1

Method: EPA 300.0 - Anions, Ion Chromatography

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Bromide	0.071	U	0.50	0.071	mg/L			04/10/24 12:48	1
Nitrate as N	5.1		0.10	0.039	mg/L			04/10/24 12:48	1
Chloride	320		0.50	0.25	mg/L			04/10/24 12:48	1
Nitrite as N	0.029	U	0.10	0.029	mg/L			04/10/24 12:48	1
Fluoride	2.6		0.50	0.10	mg/L			04/18/24 20:36	1
Nitrate Nitrite as N	5.1		0.10	0.039	mg/L			04/10/24 12:48	1
Sulfate	320		0.50	0.20	mg/L			04/10/24 12:48	1

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Client Sample Results

Client: Messer LLC
Project/Site: Messer Gas ASU Permit Renewal 4-9-24

Job ID: 860-71662-1

Client Sample ID: Outfall Samples

Lab Sample ID: 860-71662-1

Date Collected: 04/09/24 09:00

Matrix: Water

Date Received: 04/09/24 15:06

Method: EPA 1631E - Mercury, Low Level (CVAFS)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Mercury	18		0.50	0.20	ng/L		04/14/24 14:30	04/16/24 12:08	1

Method: EPA 200.8 - Metals (ICP/MS) - Total Recoverable

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Aluminum	0.19		0.020	0.0030	mg/L		04/12/24 11:00	04/12/24 19:26	1
Antimony	0.0011	U	0.0020	0.0011	mg/L		04/12/24 11:00	04/12/24 19:26	1
Arsenic	0.0052		0.0040	0.00034	mg/L		04/12/24 11:00	04/12/24 19:26	1
Barium	0.19		0.0040	0.00029	mg/L		04/12/24 11:00	04/12/24 19:26	1
Beryllium	0.00015	U	0.0020	0.00015	mg/L		04/12/24 11:00	04/12/24 19:26	1
Boron	0.32	B	0.010	0.0025	mg/L		04/12/24 11:00	04/12/24 19:26	1
Cadmium	0.00026	U	0.0020	0.00026	mg/L		04/12/24 11:00	04/12/24 19:26	1
Chromium	0.0031	J B	0.0040	0.00033	mg/L		04/12/24 11:00	04/12/24 19:26	1
Cobalt	0.00085	J	0.0020	0.00026	mg/L		04/12/24 11:00	04/12/24 19:26	1
Copper	0.036		0.0040	0.00069	mg/L		04/12/24 11:00	04/12/24 19:26	1
Iron	0.61		0.020	0.0020	mg/L		04/12/24 11:00	04/12/24 19:26	1
Lead	0.00039	J	0.0020	0.00014	mg/L		04/12/24 11:00	04/12/24 19:26	1
Magnesium	17	B	2.0	0.18	mg/L		04/12/24 11:00	04/12/24 19:31	20
Manganese	0.024	B	0.0020	0.00016	mg/L		04/12/24 11:00	04/12/24 19:26	1
Molybdenum	0.0078		0.0020	0.00016	mg/L		04/12/24 11:00	04/12/24 19:26	1
Nickel	0.018	B	0.0020	0.00049	mg/L		04/12/24 11:00	04/12/24 19:26	1
Selenium	0.0020		0.0020	0.00069	mg/L		04/12/24 11:00	04/12/24 19:26	1
Silver	0.00022	J B	0.0020	0.00012	mg/L		04/12/24 11:00	04/12/24 19:26	1
Thallium	0.00022	U	0.0020	0.00022	mg/L		04/12/24 11:00	04/12/24 19:26	1
Tin	0.00033	U	0.0020	0.00033	mg/L		04/12/24 11:00	04/12/24 19:26	1
Titanium	0.0026	J	0.0040	0.00042	mg/L		04/12/24 11:00	04/12/24 19:26	1
Zinc	0.018		0.0040	0.00089	mg/L		04/12/24 11:00	04/12/24 19:26	1

General Chemistry

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
HEM (1664B)	2.6	J	5.0	1.6	mg/L			04/15/24 10:04	1
Ammonia (EPA 350.1)	0.051	U	0.10	0.051	mg/L			04/15/24 13:17	1
Nitrogen, Kjeldahl (EPA 351.2)	3.0		0.20	0.089	mg/L		04/11/24 22:39	04/12/24 18:35	1
Oxygen, Dissolved (EPA 360.1)	9.4	HF	1.0	1.0	mg/L			04/17/24 11:00	1
Phosphorus Total (EPA 365.1)	3.4		0.10	0.072	mg/L			04/12/24 22:15	5
Sulfite (SM 4500 SO3 B-2011)	1.5	U HF	5.0	1.5	mg/L			04/25/24 09:40	1
Cr (VI) (SW846 7196A)	0.0034	U	0.010	0.0034	mg/L			04/09/24 16:40	1
Cr (III) (SW846 7196A)	0.0034	U	0.010	0.0034	mg/L			04/19/24 15:47	1
Chemical Oxygen Demand (Hach 8000)	86		20	3.4	mg/L			04/16/24 18:03	1
Nitrogen, Organic (EPA Nitrogen,Org)	3.0		0.20	0.061	mg/L			04/18/24 09:10	1
Cyanide, Available (OI CORP OIA-1677)	0.0061		0.0060	0.0050	mg/L			04/16/24 10:38	1
Color, Apparent (SM 2120B)	30		10	10	Color Units			04/10/24 16:00	2
Color, True (SM 2120B)	na		10	10	Color Units			04/10/24 16:00	2
pH (SM 2120B)	8.6		0.10	0.10	S.U.			04/10/24 16:00	2
Alkalinity (SM 2320B)	210		4.0	4.0	mg/L			04/17/24 01:51	1
Bicarbonate Alkalinity as CaCO3 (SM 2320B)	210		4.0	4.0	mg/L			04/17/24 01:51	1
Carbonate Alkalinity as CaCO3 (SM 2320B)	4.0	U	4.0	4.0	mg/L			04/17/24 01:51	1

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Client Sample Results

Client: Messer LLC
Project/Site: Messer Gas ASU Permit Renewal 4-9-24

Job ID: 860-71662-1

Client Sample ID: Outfall Samples

Lab Sample ID: 860-71662-1

Date Collected: 04/09/24 09:00

Matrix: Water

Date Received: 04/09/24 15:06

General Chemistry (Continued)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Hydroxide Alkalinity (SM 2320B)	4.0	U	4.0	4.0	mg/L			04/17/24 01:51	1
Phenolphthalein Alkalinity (SM 2320B)	4.0	U	4.0	4.0	mg/L			04/17/24 01:51	1
Total Dissolved Solids (SM 2540C)	1300		20	20	mg/L			04/16/24 18:30	1
Total Suspended Solids (SM 2540D)	9.8		4.0	4.0	mg/L			04/15/24 13:51	1
Chlorine, Total Residual (SM 4500 Cl G)	1.1	HF	0.10	0.10	mg/L			04/12/24 16:27	2
Sulfide (SM 4500 S2 D)	0.040	U	0.10	0.040	mg/L			04/16/24 15:46	1
Biochemical Oxygen Demand (SM 5210B)	12	U	12	12	mg/L		04/09/24 19:00	04/09/24 22:15	1
Total Organic Carbon (SM 5310C)	13		1.0	0.50	mg/L			04/16/24 16:39	1
Carbonaceous Biochemical Oxygen Demand (SM5210B CBOD)	30	U	30	30	mg/L		04/09/24 17:09	04/09/24 17:50	1

Surrogate Summary

Client: Messer LLC

Job ID: 860-71662-1

Project/Site: Messer Gas ASU Permit Renewal 4-9-24

Method: 624.1 - Volatile Organic Compounds (GC/MS)

Matrix: Water

Prep Type: Total/NA

Lab Sample ID	Client Sample ID	Percent Surrogate Recovery (Acceptance Limits)			
		DCA (63-144)	BFB (74-124)	DBFM (75-131)	TOL (80-120)
860-71662-1	Outfall Samples	105	98	114	100
LCS 860-154047/3	Lab Control Sample	94	99	94	96
LCSD 860-154047/4	Lab Control Sample Dup	90	100	92	97
MB 860-154047/10	Method Blank	100	100	104	100

Surrogate Legend

DCA = 1,2-Dichloroethane-d4 (Surr)

BFB = 4-Bromofluorobenzene (Surr)

DBFM = Dibromofluoromethane (Surr)

TOL = Toluene-d8 (Surr)

Method: 625.1 - Semivolatile Organic Compounds (GC/MS)

Matrix: Water

Prep Type: Total/NA

Lab Sample ID	Client Sample ID	Percent Surrogate Recovery (Acceptance Limits)					
		TBP (31-132)	FBP (29-112)	2FP (28-114)	NBZ (15-314)	TPHd14 (20-141)	PHL (8-424)
860-71662-1	Outfall Samples	78	58	19 S1-	50	83	14
LCS 860-154889/2-A	Lab Control Sample	102	86	53	87	91	35
LCSD 860-154889/3-A	Lab Control Sample Dup	108	97	54	93	98	36
MB 860-154889/1-A	Method Blank	101	95	45	101	103	30

Surrogate Legend

TBP = 2,4,6-Tribromophenol (Surr)

FBP = 2-Fluorobiphenyl (Surr)

2FP = 2-Fluorophenol (Surr)

NBZ = Nitrobenzene-d5 (Surr)

TPHd14 = p-Terphenyl-d14 (Surr)

PHL = Phenol-d5 (Surr)

Method: 608.3 - Polychlorinated Biphenyls (PCBs) (GC)

Matrix: Water

Prep Type: Total/NA

Lab Sample ID	Client Sample ID	Percent Surrogate Recovery (Acceptance Limits)	
		TCX1 (18-126)	DCB1 (15-136)
860-71662-1	Outfall Samples	63	124
LCS 860-154669/4-A	Lab Control Sample	95	136
LCSD 860-154669/5-A	Lab Control Sample Dup	83	132
MB 860-154669/1-A	Method Blank	87	128

Surrogate Legend

TCX = Tetrachloro-m-xylene (Surr)

DCB = DCB Decachlorobiphenyl (Surr)

QC Sample Results

Client: Messer LLC

Job ID: 860-71662-1

Project/Site: Messer Gas ASU Permit Renewal 4-9-24

Method: 624.1 - Volatile Organic Compounds (GC/MS)

Lab Sample ID: MB 860-154047/10

Matrix: Water

Analysis Batch: 154047

Client Sample ID: Method Blank

Prep Type: Total/NA

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Acrolein	0.011	U	0.050	0.011	mg/L			04/10/24 09:28	1
Acrylonitrile	0.014	U	0.050	0.014	mg/L			04/10/24 09:28	1
Benzene	0.00046	U	0.0010	0.00046	mg/L			04/10/24 09:28	1
Carbon tetrachloride	0.00090	U	0.0050	0.00090	mg/L			04/10/24 09:28	1
Chlorobenzene	0.00046	U	0.0010	0.00046	mg/L			04/10/24 09:28	1
1,2,4-Trichlorobenzene	0.0018	U	0.0050	0.0018	mg/L			04/10/24 09:28	1
1,2-Dichloroethane	0.00037	U	0.0010	0.00037	mg/L			04/10/24 09:28	1
1,1,1-Trichloroethane	0.00059	U	0.0050	0.00059	mg/L			04/10/24 09:28	1
1,1-Dichloroethane	0.00064	U	0.0010	0.00064	mg/L			04/10/24 09:28	1
1,1,2-Trichloroethane	0.00041	U	0.0010	0.00041	mg/L			04/10/24 09:28	1
1,2-Dibromoethane	0.0010	U	0.0050	0.0010	mg/L			04/10/24 09:28	1
1,1,1,2,2-Tetrachloroethane	0.00047	U	0.0010	0.00047	mg/L			04/10/24 09:28	1
Chloroethane	0.0020	U	0.010	0.0020	mg/L			04/10/24 09:28	1
2-Chloroethyl vinyl ether	0.00075	U	0.0050	0.00075	mg/L			04/10/24 09:28	1
Chloroform	0.00046	U	0.0010	0.00046	mg/L			04/10/24 09:28	1
1,2-Dichlorobenzene	0.00043	U	0.0010	0.00043	mg/L			04/10/24 09:28	1
1,3-Dichlorobenzene	0.00041	U	0.0010	0.00041	mg/L			04/10/24 09:28	1
1,4-Dichlorobenzene	0.00045	U	0.0010	0.00045	mg/L			04/10/24 09:28	1
1,1-Dichloroethene	0.00074	U	0.0010	0.00074	mg/L			04/10/24 09:28	1
trans-1,2-Dichloroethene	0.00037	U	0.0010	0.00037	mg/L			04/10/24 09:28	1
1,2-Dichloropropane	0.00056	U	0.0050	0.00056	mg/L			04/10/24 09:28	1
Ethylbenzene	0.00039	U	0.0010	0.00039	mg/L			04/10/24 09:28	1
2-Butanone	0.0083	U	0.050	0.0083	mg/L			04/10/24 09:28	1
Methylene Chloride	0.0017	U	0.0050	0.0017	mg/L			04/10/24 09:28	1
Chloromethane	0.0020	U	0.010	0.0020	mg/L			04/10/24 09:28	1
Bromomethane	0.0014	U	0.0050	0.0014	mg/L			04/10/24 09:28	1
Bromoform	0.00063	U	0.0050	0.00063	mg/L			04/10/24 09:28	1
Bromodichloromethane	0.00055	U	0.0010	0.00055	mg/L			04/10/24 09:28	1
Chlorodibromomethane	0.00055	U	0.0050	0.00055	mg/L			04/10/24 09:28	1
Hexachlorobutadiene	0.00063	U	0.0050	0.00063	mg/L			04/10/24 09:28	1
Naphthalene	0.0014	U	0.010	0.0014	mg/L			04/10/24 09:28	1
Tetrachloroethene	0.00066	U	0.0010	0.00066	mg/L			04/10/24 09:28	1
Toluene	0.00048	U	0.0010	0.00048	mg/L			04/10/24 09:28	1
Trichloroethene	0.0015	U	0.0050	0.0015	mg/L			04/10/24 09:28	1
Vinyl chloride	0.00043	U	0.0020	0.00043	mg/L			04/10/24 09:28	1
1,3-Dichloropropylene	0.0013	U	0.0050	0.0013	mg/L			04/10/24 09:28	1
cis-1,3-Dichloropropene	0.0011	U	0.0050	0.0011	mg/L			04/10/24 09:28	1
Trihalomethanes, Total	0.00063	U	0.0050	0.00063	mg/L			04/10/24 09:28	1

Surrogate	MB %Recovery	MB Qualifier	Limits	Prepared	Analyzed	Dil Fac
1,2-Dichloroethane-d4 (Surr)	100		63 - 144		04/10/24 09:28	1
4-Bromofluorobenzene (Surr)	100		74 - 124		04/10/24 09:28	1
Dibromofluoromethane (Surr)	104		75 - 131		04/10/24 09:28	1
Toluene-d8 (Surr)	100		80 - 120		04/10/24 09:28	1

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QC Sample Results

Client: Messer LLC
Project/Site: Messer Gas ASU Permit Renewal 4-9-24

Job ID: 860-71662-1

Method: 624.1 - Volatile Organic Compounds (GC/MS) (Continued)

Lab Sample ID: LCS 860-154047/3

Matrix: Water

Analysis Batch: 154047

Client Sample ID: Lab Control Sample

Prep Type: Total/NA

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits
Acrolein	0.250	0.280		mg/L		112	60 - 140
Acrylonitrile	0.500	0.456		mg/L		91	60 - 140
Benzene	0.0500	0.0487		mg/L		97	75 - 125
Carbon tetrachloride	0.0500	0.0539		mg/L		108	70 - 125
Chlorobenzene	0.0500	0.0512		mg/L		102	82 - 135
1,2,4-Trichlorobenzene	0.0500	0.0503		mg/L		101	75 - 135
1,2-Dichloroethane	0.0500	0.0475		mg/L		95	72 - 130
1,1,1-Trichloroethane	0.0500	0.0499		mg/L		100	70 - 130
1,1-Dichloroethane	0.0500	0.0481		mg/L		96	71 - 130
1,1,2-Trichloroethane	0.0500	0.0506		mg/L		101	75 - 130
1,2-Dibromoethane	0.0500	0.0530		mg/L		106	73 - 125
1,1,2,2-Tetrachloroethane	0.0500	0.0483		mg/L		97	74 - 125
Chloroethane	0.0500	0.0427		mg/L		85	60 - 140
2-Chloroethyl vinyl ether	0.0500	0.0560		mg/L		112	50 - 150
Chloroform	0.0500	0.0457		mg/L		91	70 - 121
1,2-Dichlorobenzene	0.0500	0.0544		mg/L		109	75 - 125
1,3-Dichlorobenzene	0.0500	0.0544		mg/L		109	75 - 125
1,4-Dichlorobenzene	0.0500	0.0512		mg/L		102	75 - 125
1,1-Dichloroethene	0.0500	0.0560		mg/L		112	50 - 150
trans-1,2-Dichloroethene	0.0500	0.0536		mg/L		107	75 - 125
1,2-Dichloropropane	0.0500	0.0501		mg/L		100	74 - 125
Ethylbenzene	0.0500	0.0546		mg/L		109	75 - 125
2-Butanone	0.250	0.247		mg/L		99	60 - 140
Methylene Chloride	0.0500	0.0448		mg/L		90	71 - 125
Chloromethane	0.0500	0.0443		mg/L		89	60 - 140
Bromomethane	0.0500	0.0559		mg/L		112	60 - 140
Bromoform	0.0500	0.0526		mg/L		105	70 - 130
Bromodichloromethane	0.0500	0.0521		mg/L		104	75 - 125
Chlorodibromomethane	0.0500	0.0543		mg/L		109	73 - 125
Hexachlorobutadiene	0.0500	0.0576		mg/L		115	75 - 125
Naphthalene	0.0500	0.0501		mg/L		100	70 - 130
Tetrachloroethene	0.0500	0.0560		mg/L		112	71 - 125
Toluene	0.0500	0.0518		mg/L		104	75 - 130
Trichloroethene	0.0500	0.0541		mg/L		108	75 - 135
Vinyl chloride	0.0500	0.0466		mg/L		93	60 - 140
cis-1,3-Dichloropropene	0.0500	0.0555		mg/L		111	74 - 125

Surrogate	LCS LCS		Limits
	%Recovery	Qualifier	
1,2-Dichloroethane-d4 (Surr)	94		63 - 144
4-Bromofluorobenzene (Surr)	99		74 - 124
Dibromofluoromethane (Surr)	94		75 - 131
Toluene-d8 (Surr)	96		80 - 120

QC Sample Results

Client: Messer LLC
Project/Site: Messer Gas ASU Permit Renewal 4-9-24

Job ID: 860-71662-1

Method: 624.1 - Volatile Organic Compounds (GC/MS) (Continued)

Lab Sample ID: LCSD 860-154047/4

Matrix: Water

Analysis Batch: 154047

Client Sample ID: Lab Control Sample Dup

Prep Type: Total/NA

Analyte	Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec Limits	RPD	RPD Limit
Acrolein	0.250	0.265		mg/L		106	60 - 140	6	25
Acrylonitrile	0.500	0.431		mg/L		86	60 - 140	6	25
Benzene	0.0500	0.0452		mg/L		90	75 - 125	7	25
Carbon tetrachloride	0.0500	0.0513		mg/L		103	70 - 125	5	25
Chlorobenzene	0.0500	0.0493		mg/L		99	82 - 135	4	25
1,2,4-Trichlorobenzene	0.0500	0.0487		mg/L		97	75 - 135	3	25
1,2-Dichloroethane	0.0500	0.0456		mg/L		91	72 - 130	4	25
1,1,1-Trichloroethane	0.0500	0.0475		mg/L		95	70 - 130	5	25
1,1-Dichloroethane	0.0500	0.0451		mg/L		90	71 - 130	6	25
1,1,2-Trichloroethane	0.0500	0.0480		mg/L		96	75 - 130	5	25
1,2-Dibromoethane	0.0500	0.0528		mg/L		106	73 - 125	0	25
1,1,2,2-Tetrachloroethane	0.0500	0.0469		mg/L		94	74 - 125	3	25
Chloroethane	0.0500	0.0403		mg/L		81	60 - 140	6	25
2-Chloroethyl vinyl ether	0.0500	0.0533		mg/L		107	50 - 150	5	25
Chloroform	0.0500	0.0430		mg/L		86	70 - 121	6	25
1,2-Dichlorobenzene	0.0500	0.0532		mg/L		106	75 - 125	2	25
1,3-Dichlorobenzene	0.0500	0.0529		mg/L		106	75 - 125	3	25
1,4-Dichlorobenzene	0.0500	0.0499		mg/L		100	75 - 125	2	25
1,1-Dichloroethene	0.0500	0.0537		mg/L		107	50 - 150	4	25
trans-1,2-Dichloroethene	0.0500	0.0492		mg/L		98	75 - 125	9	25
1,2-Dichloropropane	0.0500	0.0469		mg/L		94	74 - 125	7	25
Ethylbenzene	0.0500	0.0522		mg/L		104	75 - 125	5	25
2-Butanone	0.250	0.236		mg/L		94	60 - 140	5	25
Methylene Chloride	0.0500	0.0432		mg/L		86	71 - 125	4	25
Chloromethane	0.0500	0.0416		mg/L		83	60 - 140	6	25
Bromomethane	0.0500	0.0532		mg/L		106	60 - 140	5	25
Bromoform	0.0500	0.0523		mg/L		105	70 - 130	1	25
Bromodichloromethane	0.0500	0.0497		mg/L		99	75 - 125	5	25
Chlorodibromomethane	0.0500	0.0529		mg/L		106	73 - 125	3	25
Hexachlorobutadiene	0.0500	0.0544		mg/L		109	75 - 125	6	25
Naphthalene	0.0500	0.0506		mg/L		101	70 - 130	1	25
Tetrachloroethene	0.0500	0.0536		mg/L		107	71 - 125	4	25
Toluene	0.0500	0.0499		mg/L		100	75 - 130	4	25
Trichloroethene	0.0500	0.0514		mg/L		103	75 - 135	5	25
Vinyl chloride	0.0500	0.0432		mg/L		86	60 - 140	8	25
cis-1,3-Dichloropropene	0.0500	0.0526		mg/L		105	74 - 125	5	25

Surrogate	LCSD		Limits
	%Recovery	Qualifier	
1,2-Dichloroethane-d4 (Surr)	90		63 - 144
4-Bromofluorobenzene (Surr)	100		74 - 124
Dibromofluoromethane (Surr)	92		75 - 131
Toluene-d8 (Surr)	97		80 - 120

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QC Sample Results

Client: Messer LLC

Job ID: 860-71662-1

Project/Site: Messer Gas ASU Permit Renewal 4-9-24

Method: 625.1 - Semivolatile Organic Compounds (GC/MS)

Lab Sample ID: MB 860-154889/1-A

Matrix: Water

Analysis Batch: 155030

Client Sample ID: Method Blank

Prep Type: Total/NA

Prep Batch: 154889

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,2,4,5-Tetrachlorobenzene	0.0013	U	0.010	0.0013	mg/L		04/15/24 15:37	04/16/24 13:18	1
1,2-Dichlorobenzene	0.0016	U	0.010	0.0016	mg/L		04/15/24 15:37	04/16/24 13:18	1
1,3-Dichlorobenzene	0.0014	U	0.010	0.0014	mg/L		04/15/24 15:37	04/16/24 13:18	1
1,4-Dichlorobenzene	0.0016	U	0.010	0.0016	mg/L		04/15/24 15:37	04/16/24 13:18	1
Acenaphthene	0.0014	U	0.0057	0.0014	mg/L		04/15/24 15:37	04/16/24 13:18	1
Benzidine	0.0048	U	0.020	0.0048	mg/L		04/15/24 15:37	04/16/24 13:18	1
1,2,4-Trichlorobenzene	0.0016	U	0.0050	0.0016	mg/L		04/15/24 15:37	04/16/24 13:18	1
Hexachlorobenzene	0.00031	U	0.0050	0.00031	mg/L		04/15/24 15:37	04/16/24 13:18	1
Hexachloroethane	0.00053	U	0.0048	0.00053	mg/L		04/15/24 15:37	04/16/24 13:18	1
2,4,5-Trichlorophenol	0.0020	U	0.010	0.0020	mg/L		04/15/24 15:37	04/16/24 13:18	1
Bis(2-chloroethyl)ether	0.0022	U	0.010	0.0022	mg/L		04/15/24 15:37	04/16/24 13:18	1
2-Chloronaphthalene	0.00046	U	0.0050	0.00046	mg/L		04/15/24 15:37	04/16/24 13:18	1
2,4,6-Trichlorophenol	0.0014	U	0.0050	0.0014	mg/L		04/15/24 15:37	04/16/24 13:18	1
p-Chloro-m-cresol	0.0016	U	0.0050	0.0016	mg/L		04/15/24 15:37	04/16/24 13:18	1
2-Chlorophenol	0.00065	U	0.0050	0.00065	mg/L		04/15/24 15:37	04/16/24 13:18	1
3,3'-Dichlorobenzidine	0.00034	U	0.0050	0.00034	mg/L		04/15/24 15:37	04/16/24 13:18	1
2,4-Dichlorophenol	0.00031	U	0.0050	0.00031	mg/L		04/15/24 15:37	04/16/24 13:18	1
2,4-Dimethylphenol	0.00065	U	0.0050	0.00065	mg/L		04/15/24 15:37	04/16/24 13:18	1
2,4-Dinitrotoluene	0.0013	U	0.010	0.0013	mg/L		04/15/24 15:37	04/16/24 13:18	1
1,2-Diphenylhydrazine	0.0015	U	0.010	0.0015	mg/L		04/15/24 15:37	04/16/24 13:18	1
Fluoranthene	0.0016	U	0.0050	0.0016	mg/L		04/15/24 15:37	04/16/24 13:18	1
4-Bromophenyl phenyl ether	0.00026	U	0.0050	0.00026	mg/L		04/15/24 15:37	04/16/24 13:18	1
4-Chlorophenyl phenyl ether	0.0013	U	0.010	0.0013	mg/L		04/15/24 15:37	04/16/24 13:18	1
o-Cresol	0.0016	U	0.010	0.0016	mg/L		04/15/24 15:37	04/16/24 13:18	1
Bis(2-chloroethoxy)methane	0.0018	U	0.010	0.0018	mg/L		04/15/24 15:37	04/16/24 13:18	1
m & p - Cresol	0.0026	U	0.010	0.0026	mg/L		04/15/24 15:37	04/16/24 13:18	1
bis (2-chloroisopropyl) ether	0.0018	U	0.010	0.0018	mg/L		04/15/24 15:37	04/16/24 13:18	1
Hexachlorobutadiene	0.00024	U	0.0010	0.00024	mg/L		04/15/24 15:37	04/16/24 13:18	1
Hexachlorocyclopentadiene	0.0046	U	0.010	0.0046	mg/L		04/15/24 15:37	04/16/24 13:18	1
Isophorone	0.0016	U	0.0050	0.0016	mg/L		04/15/24 15:37	04/16/24 13:18	1
Naphthalene	0.00054	U	0.0025	0.00054	mg/L		04/15/24 15:37	04/16/24 13:18	1
Nitrobenzene	0.0017	U	0.0050	0.0017	mg/L		04/15/24 15:37	04/16/24 13:18	1
4-Nitrophenol	0.0049	U	0.0072	0.0049	mg/L		04/15/24 15:37	04/16/24 13:18	1
2-Nitrophenol	0.0017	U	0.010	0.0017	mg/L		04/15/24 15:37	04/16/24 13:18	1
4,6-Dinitro-o-cresol	0.0014	U	0.010	0.0014	mg/L		04/15/24 15:37	04/16/24 13:18	1
N-Nitrosodimethylamine	0.0020	U	0.010	0.0020	mg/L		04/15/24 15:37	04/16/24 13:18	1
N-Nitrosodiphenylamine	0.0018	U	0.010	0.0018	mg/L		04/15/24 15:37	04/16/24 13:18	1
N-Nitrosodi-n-propylamine	0.0029	U	0.010	0.0029	mg/L		04/15/24 15:37	04/16/24 13:18	1
Pentachlorophenol	0.00023	U	0.010	0.00023	mg/L		04/15/24 15:37	04/16/24 13:18	1
Phenol	0.00042	U	0.0045	0.00042	mg/L		04/15/24 15:37	04/16/24 13:18	1
Bis(2-ethylhexyl) phthalate	0.00028	U	0.0050	0.00028	mg/L		04/15/24 15:37	04/16/24 13:18	1
Butyl benzyl phthalate	0.00034	U	0.0050	0.00034	mg/L		04/15/24 15:37	04/16/24 13:18	1
Di-n-butyl phthalate	0.00025	U	0.0050	0.00025	mg/L		04/15/24 15:37	04/16/24 13:18	1
Di-n-octyl phthalate	0.00037	U	0.0050	0.00037	mg/L		04/15/24 15:37	04/16/24 13:18	1
Diethyl phthalate	0.0016	U	0.0050	0.0016	mg/L		04/15/24 15:37	04/16/24 13:18	1
Dimethyl phthalate	0.00030	U	0.0025	0.00030	mg/L		04/15/24 15:37	04/16/24 13:18	1
Benzo[a]anthracene	0.00017	U	0.0050	0.00017	mg/L		04/15/24 15:37	04/16/24 13:18	1
Benzo[a]pyrene	0.00036	U	0.0050	0.00036	mg/L		04/15/24 15:37	04/16/24 13:18	1

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QC Sample Results

Client: Messer LLC
Project/Site: Messer Gas ASU Permit Renewal 4-9-24

Job ID: 860-71662-1

Method: 625.1 - Semivolatile Organic Compounds (GC/MS) (Continued)

Lab Sample ID: MB 860-154889/1-A

Matrix: Water

Analysis Batch: 155030

Client Sample ID: Method Blank

Prep Type: Total/NA

Prep Batch: 154889

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Benzo[b]fluoranthene	0.0020	U	0.010	0.0020	mg/L		04/15/24 15:37	04/16/24 13:18	1
Benzo[k]fluoranthene	0.00038	U	0.0050	0.00038	mg/L		04/15/24 15:37	04/16/24 13:18	1
Chrysene	0.00022	U	0.0050	0.00022	mg/L		04/15/24 15:37	04/16/24 13:18	1
Acenaphthylene	0.0014	U	0.010	0.0014	mg/L		04/15/24 15:37	04/16/24 13:18	1
Anthracene	0.0015	U	0.0057	0.0015	mg/L		04/15/24 15:37	04/16/24 13:18	1
Benzo[g,h,i]perylene	0.0027	U	0.010	0.0027	mg/L		04/15/24 15:37	04/16/24 13:18	1
Fluorene	0.0016	U	0.0050	0.0016	mg/L		04/15/24 15:37	04/16/24 13:18	1
Phenanthrene	0.0014	U	0.010	0.0014	mg/L		04/15/24 15:37	04/16/24 13:18	1
Dibenz(a,h)anthracene	0.00025	U	0.0050	0.00025	mg/L		04/15/24 15:37	04/16/24 13:18	1
Indeno[1,2,3-cd]pyrene	0.0023	U	0.010	0.0023	mg/L		04/15/24 15:37	04/16/24 13:18	1
Pyrene	0.00018	U	0.0050	0.00018	mg/L		04/15/24 15:37	04/16/24 13:18	1
2,4-Dinitrophenol	0.0016	U	0.010	0.0016	mg/L		04/15/24 15:37	04/16/24 13:18	1
2,6-Dinitrotoluene	0.0016	U	0.0050	0.0016	mg/L		04/15/24 15:37	04/16/24 13:18	1
N-Nitrosodi-n-butylamine	0.0015	U	0.010	0.0015	mg/L		04/15/24 15:37	04/16/24 13:18	1
N-Nitrosodiethylamine	0.0018	U	0.010	0.0018	mg/L		04/15/24 15:37	04/16/24 13:18	1
Nonylphenol	0.010	U	0.010	0.010	mg/L		04/15/24 15:37	04/16/24 13:18	1
Pentachlorobenzene	0.0011	U	0.010	0.0011	mg/L		04/15/24 15:37	04/16/24 13:18	1
Pyridine	0.0026	U	0.010	0.0026	mg/L		04/15/24 15:37	04/16/24 13:18	1
Total Cresols	0.0026	U	0.010	0.0026	mg/L		04/15/24 15:37	04/16/24 13:18	1

Surrogate	MB %Recovery	MB Qualifier	Limits	Prepared	Analyzed	Dil Fac
2,4,6-Tribromophenol (Surr)	101		31 - 132	04/15/24 15:37	04/16/24 13:18	1
2-Fluorobiphenyl (Surr)	95		29 - 112	04/15/24 15:37	04/16/24 13:18	1
2-Fluorophenol (Surr)	45		28 - 114	04/15/24 15:37	04/16/24 13:18	1
Nitrobenzene-d5 (Surr)	101		15 - 314	04/15/24 15:37	04/16/24 13:18	1
p-Terphenyl-d14 (Surr)	103		20 - 141	04/15/24 15:37	04/16/24 13:18	1
Phenol-d5 (Surr)	30		8 - 424	04/15/24 15:37	04/16/24 13:18	1

Lab Sample ID: LCS 860-154889/2-A

Matrix: Water

Analysis Batch: 155030

Client Sample ID: Lab Control Sample

Prep Type: Total/NA

Prep Batch: 154889

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits
1,2,4,5-Tetrachlorobenzene	0.0400	0.0326		mg/L		82	41 - 125
1,2-Dichlorobenzene	0.0400	0.0295		mg/L		74	60 - 140
1,3-Dichlorobenzene	0.0400	0.0286		mg/L		72	60 - 140
1,4-Dichlorobenzene	0.0400	0.0290		mg/L		72	19 - 121
Acenaphthene	0.0400	0.0353		mg/L		88	60 - 132
Benzidine	0.0400	0.00511	J +	mg/L		13	25 - 125
1,2,4-Trichlorobenzene	0.0400	0.0306		mg/L		77	57 - 130
Hexachlorobenzene	0.0400	0.0367		mg/L		92	8 - 142
Hexachloroethane	0.0400	0.0254		mg/L		64	55 - 120
2,4,5-Trichlorophenol	0.0400	0.0354		mg/L		89	35 - 111
Bis(2-chloroethyl)ether	0.0400	0.0363		mg/L		91	43 - 126
2-Chloronaphthalene	0.0400	0.0342		mg/L		85	65 - 120
2,4,6-Trichlorophenol	0.0400	0.0362		mg/L		90	52 - 129
p-Chloro-m-cresol	0.0400	0.0331		mg/L		83	41 - 128
2-Chlorophenol	0.0400	0.0298		mg/L		75	36 - 120

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QC Sample Results

Client: Messer LLC

Job ID: 860-71662-1

Project/Site: Messer Gas ASU Permit Renewal 4-9-24

Method: 625.1 - Semivolatile Organic Compounds (GC/MS) (Continued)

Lab Sample ID: LCS 860-154889/2-A

Matrix: Water

Analysis Batch: 155030

Client Sample ID: Lab Control Sample

Prep Type: Total/NA

Prep Batch: 154889

Analyte	Spike	LCS	LCS	Unit	D	%Rec	%Rec
	Added	Result	Qualifier				Limits
3,3'-Dichlorobenzidine	0.0400	0.0280		mg/L		70	18 - 213
2,4-Dichlorophenol	0.0400	0.0359		mg/L		90	53 - 122
2,4-Dimethylphenol	0.0400	0.0418		mg/L		105	42 - 120
2,4-Dinitrotoluene	0.0400	0.0378		mg/L		94	48 - 127
1,2-Diphenylhydrazine	0.0400	0.0350		mg/L		87	28 - 136
Fluoranthene	0.0400	0.0396		mg/L		99	43 - 121
4-Bromophenyl phenyl ether	0.0400	0.0370		mg/L		92	65 - 120
4-Chlorophenyl phenyl ether	0.0400	0.0371		mg/L		93	38 - 145
o-Cresol	0.0400	0.0256		mg/L		64	14 - 176
Bis(2-chloroethoxy)methane	0.0400	0.0328		mg/L		82	49 - 165
m & p - Cresol	0.0400	0.0246		mg/L		62	14 - 176
bis (2-chloroisopropyl) ether	0.0400	0.0327		mg/L		82	63 - 139
Hexachlorobutadiene	0.0400	0.0289		mg/L		72	38 - 120
Hexachlorocyclopentadiene	0.0400	0.0274		mg/L		68	41 - 125
Isophorone	0.0400	0.0336		mg/L		84	47 - 180
Naphthalene	0.0400	0.0335		mg/L		84	36 - 120
Nitrobenzene	0.0400	0.0342		mg/L		85	54 - 158
4-Nitrophenol	0.0400	0.0131		mg/L		33	13 - 129
2-Nitrophenol	0.0400	0.0347		mg/L		87	45 - 167
4,6-Dinitro-o-cresol	0.0400	0.0414		mg/L		104	53 - 130
N-Nitrosodimethylamine	0.0400	0.0192		mg/L		48	20 - 125
N-Nitrosodiphenylamine	0.0400	0.0362		mg/L		91	2 - 196
N-Nitrosodi-n-propylamine	0.0400	0.0325		mg/L		81	14 - 198
Pentachlorophenol	0.0400	0.0288		mg/L		72	38 - 152
Phenol	0.0400	0.0155		mg/L		39	17 - 120
Bis(2-ethylhexyl) phthalate	0.0400	0.0386		mg/L		97	29 - 137
Butyl benzyl phthalate	0.0400	0.0377		mg/L		94	12 - 140
Di-n-butyl phthalate	0.0400	0.0392		mg/L		98	8 - 120
Di-n-octyl phthalate	0.0400	0.0459		mg/L		115	19 - 132
Diethyl phthalate	0.0400	0.0362		mg/L		91	17 - 120
Dimethyl phthalate	0.0400	0.0350		mg/L		88	25 - 120
Benzo[a]anthracene	0.0400	0.0353		mg/L		88	42 - 133
Benzo[a]pyrene	0.0400	0.0407		mg/L		102	32 - 148
Benzo[b]fluoranthene	0.0400	0.0384		mg/L		96	42 - 140
Benzo[k]fluoranthene	0.0400	0.0383		mg/L		96	25 - 146
Chrysene	0.0400	0.0339		mg/L		85	44 - 140
Acenaphthylene	0.0400	0.0336		mg/L		84	54 - 126
Anthracene	0.0400	0.0383		mg/L		96	43 - 120
Benzo[g,h,i]perylene	0.0400	0.0359		mg/L		90	13 - 195
Fluorene	0.0400	0.0374		mg/L		93	70 - 120
Phenanthrene	0.0400	0.0368		mg/L		92	65 - 120
Dibenz(a,h)anthracene	0.0400	0.0382		mg/L		95	16 - 200
Indeno[1,2,3-cd]pyrene	0.0400	0.0382		mg/L		95	13 - 151
Pyrene	0.0400	0.0373		mg/L		93	70 - 120
2,4-Dinitrophenol	0.0400	0.0260		mg/L		65	12 - 173
2,6-Dinitrotoluene	0.0400	0.0359		mg/L		90	68 - 137
N-Nitrosodi-n-butylamine	0.0400	0.0308		mg/L		77	33 - 141
N-Nitrosodiethylamine	0.0400	0.0409		mg/L		102	30 - 160
Pentachlorobenzene	0.0400	0.0342		mg/L		86	25 - 131

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QC Sample Results

Client: Messer LLC

Job ID: 860-71662-1

Project/Site: Messer Gas ASU Permit Renewal 4-9-24

Method: 625.1 - Semivolatile Organic Compounds (GC/MS) (Continued)

Lab Sample ID: LCS 860-154889/2-A

Matrix: Water

Analysis Batch: 155030

Client Sample ID: Lab Control Sample

Prep Type: Total/NA

Prep Batch: 154889

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits
Pyridine	0.0800	0.0230		mg/L		29	5 - 94
Surrogate	LCS %Recovery	LCS Qualifier	Limits				
2,4,6-Tribromophenol (Surr)	102		31 - 132				
2-Fluorobiphenyl (Surr)	86		29 - 112				
2-Fluorophenol (Surr)	53		28 - 114				
Nitrobenzene-d5 (Surr)	87		15 - 314				
p-Terphenyl-d14 (Surr)	91		20 - 141				
Phenol-d5 (Surr)	35		8 - 424				

Lab Sample ID: LCSD 860-154889/3-A

Matrix: Water

Analysis Batch: 155030

Client Sample ID: Lab Control Sample Dup

Prep Type: Total/NA

Prep Batch: 154889

Analyte	Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec Limits	RPD	Limit
1,2,4,5-Tetrachlorobenzene	0.0400	0.0368		mg/L		92	41 - 125	12	30
1,2-Dichlorobenzene	0.0400	0.0327		mg/L		82	60 - 140	10	30
1,3-Dichlorobenzene	0.0400	0.0313		mg/L		78	60 - 140	9	30
1,4-Dichlorobenzene	0.0400	0.0321		mg/L		80	19 - 121	10	30
Acenaphthene	0.0400	0.0398		mg/L		100	60 - 132	12	29
Benzidine	0.0400	0.0048	U * - *1	mg/L		8	25 - 125	45	30
1,2,4-Trichlorobenzene	0.0400	0.0335		mg/L		84	57 - 130	9	30
Hexachlorobenzene	0.0400	0.0406		mg/L		101	8 - 142	10	30
Hexachloroethane	0.0400	0.0289		mg/L		72	55 - 120	13	30
2,4,5-Trichlorophenol	0.0400	0.0391		mg/L		98	35 - 111	10	30
Bis(2-chloroethyl)ether	0.0400	0.0389		mg/L		97	43 - 126	7	30
2-Chloronaphthalene	0.0400	0.0385		mg/L		96	65 - 120	12	15
2,4,6-Trichlorophenol	0.0400	0.0409		mg/L		102	52 - 129	12	30
p-Chloro-m-cresol	0.0400	0.0368		mg/L		92	41 - 128	11	30
2-Chlorophenol	0.0400	0.0325		mg/L		81	36 - 120	9	30
3,3'-Dichlorobenzidine	0.0400	0.0297		mg/L		74	18 - 213	6	30
2,4-Dichlorophenol	0.0400	0.0397		mg/L		99	53 - 122	10	30
2,4-Dimethylphenol	0.0400	0.0480		mg/L		120	42 - 120	14	30
2,4-Dinitrotoluene	0.0400	0.0415		mg/L		104	48 - 127	9	25
1,2-Diphenylhydrazine	0.0400	0.0392		mg/L		98	28 - 136	11	30
Fluoranthene	0.0400	0.0424		mg/L		106	43 - 121	7	30
4-Bromophenyl phenyl ether	0.0400	0.0405		mg/L		101	65 - 120	9	26
4-Chlorophenyl phenyl ether	0.0400	0.0417		mg/L		104	38 - 145	12	30
o-Cresol	0.0400	0.0275		mg/L		69	14 - 176	7	30
Bis(2-chloroethoxy)methane	0.0400	0.0369		mg/L		92	49 - 165	12	30
m & p - Cresol	0.0400	0.0270		mg/L		67	14 - 176	9	30
bis (2-chloroisopropyl) ether	0.0400	0.0366		mg/L		92	63 - 139	11	30
Hexachlorobutadiene	0.0400	0.0332		mg/L		83	38 - 120	14	30
Hexachlorocyclopentadiene	0.0400	0.0353		mg/L		88	41 - 125	25	30
Isophorone	0.0400	0.0379		mg/L		95	47 - 180	12	30
Naphthalene	0.0400	0.0374		mg/L		94	36 - 120	11	30
Nitrobenzene	0.0400	0.0379		mg/L		95	54 - 158	10	30
4-Nitrophenol	0.0400	0.0133		mg/L		33	13 - 129	2	30

Eurofins Houston

QC Sample Results

Client: Messer LLC
Project/Site: Messer Gas ASU Permit Renewal 4-9-24

Job ID: 860-71662-1

Method: 625.1 - Semivolatile Organic Compounds (GC/MS) (Continued)

Lab Sample ID: LCSD 860-154889/3-A

Matrix: Water

Analysis Batch: 155030

Client Sample ID: Lab Control Sample Dup

Prep Type: Total/NA

Prep Batch: 154889

Analyte	Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec Limits	RPD	RPD Limit
2-Nitrophenol	0.0400	0.0395		mg/L		99	45 - 167	13	30
4,6-Dinitro-o-cresol	0.0400	0.0458		mg/L		114	53 - 130	10	30
N-Nitrosodimethylamine	0.0400	0.0192		mg/L		48	20 - 125	0	30
N-Nitrosodiphenylamine	0.0400	0.0390		mg/L		98	2 - 196	7	30
N-Nitrosodi-n-propylamine	0.0400	0.0367		mg/L		92	14 - 198	12	30
Pentachlorophenol	0.0400	0.0304		mg/L		76	38 - 152	5	30
Phenol	0.0400	0.0162		mg/L		40	17 - 120	4	30
Bis(2-ethylhexyl) phthalate	0.0400	0.0428		mg/L		107	29 - 137	10	30
Butyl benzyl phthalate	0.0400	0.0419		mg/L		105	12 - 140	11	30
Di-n-butyl phthalate	0.0400	0.0431		mg/L		108	8 - 120	10	28
Di-n-octyl phthalate	0.0400	0.0495		mg/L		124	19 - 132	8	30
Diethyl phthalate	0.0400	0.0395		mg/L		99	17 - 120	9	30
Dimethyl phthalate	0.0400	0.0387		mg/L		97	25 - 120	10	30
Benzo[a]anthracene	0.0400	0.0382		mg/L		96	42 - 133	8	30
Benzo[a]pyrene	0.0400	0.0442		mg/L		110	32 - 148	8	30
Benzo[b]fluoranthene	0.0400	0.0421		mg/L		105	42 - 140	9	30
Benzo[k]fluoranthene	0.0400	0.0406		mg/L		101	25 - 146	6	30
Chrysene	0.0400	0.0371		mg/L		93	44 - 140	9	30
Acenaphthylene	0.0400	0.0377		mg/L		94	54 - 126	11	30
Anthracene	0.0400	0.0414		mg/L		104	43 - 120	8	30
Benzo[g,h,i]perylene	0.0400	0.0396		mg/L		99	13 - 195	10	30
Fluorene	0.0400	0.0423		mg/L		106	70 - 120	12	23
Phenanthrene	0.0400	0.0399		mg/L		100	65 - 120	8	30
Dibenz(a,h)anthracene	0.0400	0.0423		mg/L		106	16 - 200	10	30
Indeno[1,2,3-cd]pyrene	0.0400	0.0419		mg/L		105	13 - 151	9	30
Pyrene	0.0400	0.0410		mg/L		103	70 - 120	10	30
2,4-Dinitrophenol	0.0400	0.0288		mg/L		72	12 - 173	10	30
2,6-Dinitrotoluene	0.0400	0.0396		mg/L		99	68 - 137	10	29
N-Nitrosodi-n-butylamine	0.0400	0.0342		mg/L		85	33 - 141	10	30
N-Nitrosodiethylamine	0.0400	0.0445		mg/L		111	30 - 160	8	30
Pentachlorobenzene	0.0400	0.0383		mg/L		96	25 - 131	11	30
Pyridine	0.0800	0.0126	*1	mg/L		16	5 - 94	58	30

Surrogate	LCSD %Recovery	LCSD Qualifier	Limits
2,4,6-Tribromophenol (Surr)	108		31 - 132
2-Fluorobiphenyl (Surr)	97		29 - 112
2-Fluorophenol (Surr)	54		28 - 114
Nitrobenzene-d5 (Surr)	93		15 - 314
p-Terphenyl-d14 (Surr)	98		20 - 141
Phenol-d5 (Surr)	36		8 - 424

Method: 608.3 - Polychlorinated Biphenyls (PCBs) (GC)

Lab Sample ID: MB 860-154669/1-A

Matrix: Water

Analysis Batch: 154783

Client Sample ID: Method Blank

Prep Type: Total/NA

Prep Batch: 154669

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
PCB-1016	0.000013	U	0.00010	0.000013	mg/L		04/13/24 06:30	04/15/24 09:59	1

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QC Sample Results

Client: Messer LLC

Job ID: 860-71662-1

Project/Site: Messer Gas ASU Permit Renewal 4-9-24

Method: 608.3 - Polychlorinated Biphenyls (PCBs) (GC) (Continued)

Lab Sample ID: MB 860-154669/1-A

Matrix: Water

Analysis Batch: 154783

Client Sample ID: Method Blank

Prep Type: Total/NA

Prep Batch: 154669

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
PCB-1221	0.000013	U	0.00010	0.000013	mg/L		04/13/24 06:30	04/15/24 09:59	1
PCB-1232	0.000013	U	0.00010	0.000013	mg/L		04/13/24 06:30	04/15/24 09:59	1
PCB-1242	0.000013	U	0.00010	0.000013	mg/L		04/13/24 06:30	04/15/24 09:59	1
PCB-1248	0.000013	U	0.00010	0.000013	mg/L		04/13/24 06:30	04/15/24 09:59	1
PCB-1254	0.0000078	U	0.00010	0.0000078	mg/L		04/13/24 06:30	04/15/24 09:59	1
PCB-1260	0.0000078	U	0.00010	0.0000078	mg/L		04/13/24 06:30	04/15/24 09:59	1
Polychlorinated biphenyls, Total	0.00010	U	0.00010	0.00010	mg/L		04/13/24 06:30	04/15/24 09:59	1

Surrogate	MB %Recovery	MB Qualifier	Limits	Prepared	Analyzed	Dil Fac
Tetrachloro-m-xylene (Surr)	87		18 - 126	04/13/24 06:30	04/15/24 09:59	1
DCB Decachlorobiphenyl (Surr)	128		15 - 136	04/13/24 06:30	04/15/24 09:59	1

Lab Sample ID: LCS 860-154669/4-A

Matrix: Water

Analysis Batch: 154783

Client Sample ID: Lab Control Sample

Prep Type: Total/NA

Prep Batch: 154669

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits
PCB-1016	0.00100	0.000951		mg/L		95	61 - 103
PCB-1260	0.00100	0.00112		mg/L		112	37 - 130

Surrogate	LCS %Recovery	LCS Qualifier	Limits
Tetrachloro-m-xylene (Surr)	95		18 - 126
DCB Decachlorobiphenyl (Surr)	136		15 - 136

Lab Sample ID: LCSD 860-154669/5-A

Matrix: Water

Analysis Batch: 154783

Client Sample ID: Lab Control Sample Dup

Prep Type: Total/NA

Prep Batch: 154669

Analyte	Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec Limits	RPD	RPD Limit
PCB-1016	0.00100	0.000849		mg/L		85	61 - 103	11	24
PCB-1260	0.00100	0.00110		mg/L		110	37 - 130	1	28

Surrogate	LCSD %Recovery	LCSD Qualifier	Limits
Tetrachloro-m-xylene (Surr)	83		18 - 126
DCB Decachlorobiphenyl (Surr)	132		15 - 136

Method: 300.0 - Anions, Ion Chromatography

Lab Sample ID: MB 860-153949/3

Matrix: Water

Analysis Batch: 153949

Client Sample ID: Method Blank

Prep Type: Total/NA

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Bromide	0.071	U	0.50	0.071	mg/L			04/09/24 21:36	1
Chloride	0.25	U	0.50	0.25	mg/L			04/09/24 21:36	1
Fluoride	0.10	U	0.50	0.10	mg/L			04/09/24 21:36	1
Sulfate	0.20	U	0.50	0.20	mg/L			04/09/24 21:36	1

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QC Sample Results

Client: Messer LLC

Job ID: 860-71662-1

Project/Site: Messer Gas ASU Permit Renewal 4-9-24

Method: 300.0 - Anions, Ion Chromatography (Continued)

Lab Sample ID: LCS 860-153949/4

Matrix: Water

Analysis Batch: 153949

Client Sample ID: Lab Control Sample

Prep Type: Total/NA

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits	
							90 - 110	90 - 110
Bromide	10.0	10.6		mg/L		106		
Chloride	10.0	9.51		mg/L		95		
Fluoride	10.0	10.9		mg/L		109		
Sulfate	10.0	10.4		mg/L		104		

Lab Sample ID: LLCS 860-153949/7

Matrix: Water

Analysis Batch: 153949

Client Sample ID: Lab Control Sample

Prep Type: Total/NA

Analyte	Spike Added	LLCS Result	LLCS Qualifier	Unit	D	%Rec	%Rec Limits	
							50 - 150	50 - 150
Bromide	0.500	0.544		mg/L		109		
Chloride	0.500	0.616		mg/L		123		
Fluoride	0.500	0.458	J	mg/L		92		
Sulfate	0.500	0.366	J	mg/L		73		

Lab Sample ID: MB 860-153950/3

Matrix: Water

Analysis Batch: 153950

Client Sample ID: Method Blank

Prep Type: Total/NA

Analyte	MB MB		RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
	Result	Qualifier							
Nitrate as N	0.039	U	0.10	0.039	mg/L			04/09/24 21:36	1
Nitrite as N	0.029	U	0.10	0.029	mg/L			04/09/24 21:36	1
Nitrate Nitrite as N	0.039	U	0.10	0.039	mg/L			04/09/24 21:36	1

Lab Sample ID: LCS 860-153950/4

Matrix: Water

Analysis Batch: 153950

Client Sample ID: Lab Control Sample

Prep Type: Total/NA

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits	
							80 - 120	80 - 120
Nitrate as N	10.0	10.6		mg/L		106		
Nitrite as N	10.0	10.6		mg/L		106		

Lab Sample ID: LCSD 860-153950/5

Matrix: Water

Analysis Batch: 153950

Client Sample ID: Lab Control Sample Dup

Prep Type: Total/NA

Analyte	Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec	RPD	RPD
							Limits		
Nitrate as N	10.0	10.7		mg/L		107	80 - 120	1	20
Nitrite as N	10.0	10.5		mg/L		105	80 - 120	1	20

Lab Sample ID: MB 860-154575/3

Matrix: Water

Analysis Batch: 154575

Client Sample ID: Method Blank

Prep Type: Total/NA

Analyte	MB MB		RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
	Result	Qualifier							
Bromide	0.071	U	0.50	0.071	mg/L			04/12/24 15:31	1
Chloride	0.25	U	0.50	0.25	mg/L			04/12/24 15:31	1
Fluoride	0.10	U	0.50	0.10	mg/L			04/12/24 15:31	1
Sulfate	0.20	U	0.50	0.20	mg/L			04/12/24 15:31	1

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QC Sample Results

Client: Messer LLC

Job ID: 860-71662-1

Project/Site: Messer Gas ASU Permit Renewal 4-9-24

Method: 300.0 - Anions, Ion Chromatography (Continued)

Lab Sample ID: LCS 860-154575/4

Matrix: Water

Analysis Batch: 154575

Client Sample ID: Lab Control Sample

Prep Type: Total/NA

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits
Bromide	10.0	10.7		mg/L		107	90 - 110
Chloride	10.0	9.53		mg/L		95	90 - 110
Fluoride	10.0	10.9		mg/L		109	90 - 110
Sulfate	10.0	10.0		mg/L		100	90 - 110

Lab Sample ID: LCSD 860-154575/5

Matrix: Water

Analysis Batch: 154575

Client Sample ID: Lab Control Sample Dup

Prep Type: Total/NA

Analyte	Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec Limits	RPD	RPD Limit
Bromide	10.0	10.7		mg/L		107	90 - 110	0	20
Chloride	10.0	9.57		mg/L		96	90 - 110	0	20
Fluoride	10.0	10.9		mg/L		109	90 - 110	0	20
Sulfate	10.0	10.0		mg/L		100	90 - 110	0	20

Lab Sample ID: LLCS 860-154575/7

Matrix: Water

Analysis Batch: 154575

Client Sample ID: Lab Control Sample

Prep Type: Total/NA

Analyte	Spike Added	LLCS Result	LLCS Qualifier	Unit	D	%Rec	%Rec Limits
Bromide	0.500	0.537		mg/L		107	50 - 150
Chloride	0.500	0.605		mg/L		121	50 - 150
Fluoride	0.500	0.463	J	mg/L		93	50 - 150
Sulfate	0.500	0.330	J	mg/L		66	50 - 150

Lab Sample ID: MB 860-154576/3

Matrix: Water

Analysis Batch: 154576

Client Sample ID: Method Blank

Prep Type: Total/NA

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Nitrate as N	0.039	U	0.10	0.039	mg/L			04/12/24 15:31	1
Nitrite as N	0.029	U	0.10	0.029	mg/L			04/12/24 15:31	1
Nitrate Nitrite as N	0.039	U	0.10	0.039	mg/L			04/12/24 15:31	1

Lab Sample ID: LCS 860-154576/4

Matrix: Water

Analysis Batch: 154576

Client Sample ID: Lab Control Sample

Prep Type: Total/NA

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits
Nitrate as N	10.0	10.6		mg/L		106	80 - 120
Nitrite as N	10.0	10.5		mg/L		105	80 - 120

Lab Sample ID: LCSD 860-154576/5

Matrix: Water

Analysis Batch: 154576

Client Sample ID: Lab Control Sample Dup

Prep Type: Total/NA

Analyte	Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec Limits	RPD	RPD Limit
Nitrate as N	10.0	10.6		mg/L		106	80 - 120	0	20
Nitrite as N	10.0	10.5		mg/L		105	80 - 120	0	20

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QC Sample Results

Client: Messer LLC

Job ID: 860-71662-1

Project/Site: Messer Gas ASU Permit Renewal 4-9-24

Method: 300.0 - Anions, Ion Chromatography (Continued)

Lab Sample ID: MB 860-155395/3

Matrix: Water

Analysis Batch: 155395

Client Sample ID: Method Blank

Prep Type: Total/NA

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Bromide	0.071	U	0.50	0.071	mg/L			04/17/24 23:46	1
Chloride	0.25	U	0.50	0.25	mg/L			04/17/24 23:46	1
Fluoride	0.10	U	0.50	0.10	mg/L			04/17/24 23:46	1
Sulfate	0.20	U	0.50	0.20	mg/L			04/17/24 23:46	1

Lab Sample ID: MB 860-155395/62

Matrix: Water

Analysis Batch: 155395

Client Sample ID: Method Blank

Prep Type: Total/NA

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Bromide	0.071	U	0.50	0.071	mg/L			04/18/24 09:26	1
Chloride	0.25	U	0.50	0.25	mg/L			04/18/24 09:26	1
Fluoride	0.10	U	0.50	0.10	mg/L			04/18/24 09:26	1
Sulfate	0.20	U	0.50	0.20	mg/L			04/18/24 09:26	1

Lab Sample ID: LCS 860-155395/63

Matrix: Water

Analysis Batch: 155395

Client Sample ID: Lab Control Sample

Prep Type: Total/NA

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits
Bromide	10.0	10.0		mg/L		100	90 - 110
Chloride	10.0	9.07		mg/L		91	90 - 110
Fluoride	10.0	10.4		mg/L		104	90 - 110
Sulfate	10.0	9.95		mg/L		99	90 - 110

Lab Sample ID: LCSD 860-155395/64

Matrix: Water

Analysis Batch: 155395

Client Sample ID: Lab Control Sample Dup

Prep Type: Total/NA

Analyte	Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec Limits	RPD	RPD Limit
Bromide	10.0	10.0		mg/L		100	90 - 110	0	20
Chloride	10.0	9.05		mg/L		91	90 - 110	0	20
Fluoride	10.0	10.4		mg/L		104	90 - 110	0	20
Sulfate	10.0	9.91		mg/L		99	90 - 110	0	20

Lab Sample ID: LLCS 860-155395/7

Matrix: Water

Analysis Batch: 155395

Client Sample ID: Lab Control Sample

Prep Type: Total/NA

Analyte	Spike Added	LLCS Result	LLCS Qualifier	Unit	D	%Rec	%Rec Limits
Bromide	0.500	0.545		mg/L		109	50 - 150
Chloride	0.500	0.617		mg/L		123	50 - 150
Fluoride	0.500	0.469	J	mg/L		94	50 - 150
Sulfate	0.500	0.371	J	mg/L		74	50 - 150

QC Sample Results

Client: Messer LLC

Job ID: 860-71662-1

Project/Site: Messer Gas ASU Permit Renewal 4-9-24

Method: 1631E - Mercury, Low Level (CVAFS)

Lab Sample ID: MB 400-668082/3-A

Matrix: Water

Analysis Batch: 668339

Client Sample ID: Method Blank

Prep Type: Total/NA

Prep Batch: 668082

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Mercury	0.20	U	0.50	0.20	ng/L		04/14/24 16:00	04/16/24 10:21	1

Lab Sample ID: LCS 400-668082/4-A

Matrix: Water

Analysis Batch: 668339

Client Sample ID: Lab Control Sample

Prep Type: Total/NA

Prep Batch: 668082

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits
Mercury	5.00	4.72		ng/L		94	79 - 121

Lab Sample ID: LCSD 400-668082/5-A

Matrix: Water

Analysis Batch: 668339

Client Sample ID: Lab Control Sample Dup

Prep Type: Total/NA

Prep Batch: 668082

Analyte	Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec Limits	RPD	RPD Limit
Mercury	5.00	4.57		ng/L		91	79 - 121	3	20

Method: 200.8 - Metals (ICP/MS)

Lab Sample ID: MB 860-154494/1-A

Matrix: Water

Analysis Batch: 154594

Client Sample ID: Method Blank

Prep Type: Total Recoverable

Prep Batch: 154494

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Aluminum	0.0030	U	0.020	0.0030	mg/L		04/12/24 11:00	04/12/24 18:38	1
Antimony	0.0011	U	0.0020	0.0011	mg/L		04/12/24 11:00	04/12/24 18:38	1
Arsenic	0.00034	U	0.0040	0.00034	mg/L		04/12/24 11:00	04/12/24 18:38	1
Barium	0.00029	U	0.0040	0.00029	mg/L		04/12/24 11:00	04/12/24 18:38	1
Beryllium	0.00015	U	0.0020	0.00015	mg/L		04/12/24 11:00	04/12/24 18:38	1
Boron	0.00305	J	0.010	0.0025	mg/L		04/12/24 11:00	04/12/24 18:38	1
Cadmium	0.00026	U	0.0020	0.00026	mg/L		04/12/24 11:00	04/12/24 18:38	1
Chromium	0.00104	J	0.0040	0.00033	mg/L		04/12/24 11:00	04/12/24 18:38	1
Cobalt	0.00026	U	0.0020	0.00026	mg/L		04/12/24 11:00	04/12/24 18:38	1
Copper	0.00069	U	0.0040	0.00069	mg/L		04/12/24 11:00	04/12/24 18:38	1
Iron	0.0020	U	0.020	0.0020	mg/L		04/12/24 11:00	04/12/24 18:38	1
Lead	0.00014	U	0.0020	0.00014	mg/L		04/12/24 11:00	04/12/24 18:38	1
Magnesium	0.0139	J	0.10	0.0092	mg/L		04/12/24 11:00	04/12/24 18:38	1
Manganese	0.000303	J	0.0020	0.00016	mg/L		04/12/24 11:00	04/12/24 18:38	1
Molybdenum	0.00016	U	0.0020	0.00016	mg/L		04/12/24 11:00	04/12/24 18:38	1
Nickel	0.000709	J	0.0020	0.00049	mg/L		04/12/24 11:00	04/12/24 18:38	1
Selenium	0.00069	U	0.0020	0.00069	mg/L		04/12/24 11:00	04/12/24 18:38	1
Silver	0.000216	J	0.0020	0.00012	mg/L		04/12/24 11:00	04/12/24 18:38	1
Thallium	0.00022	U	0.0020	0.00022	mg/L		04/12/24 11:00	04/12/24 18:38	1
Tin	0.00033	U	0.0020	0.00033	mg/L		04/12/24 11:00	04/12/24 18:38	1
Titanium	0.00042	U	0.0040	0.00042	mg/L		04/12/24 11:00	04/12/24 18:38	1
Zinc	0.00089	U	0.0040	0.00089	mg/L		04/12/24 11:00	04/12/24 18:38	1

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QC Sample Results

Client: Messer LLC

Job ID: 860-71662-1

Project/Site: Messer Gas ASU Permit Renewal 4-9-24

Method: 200.8 - Metals (ICP/MS) (Continued)

Lab Sample ID: LCS 860-154494/2-A

Matrix: Water

Analysis Batch: 154594

Client Sample ID: Lab Control Sample

Prep Type: Total Recoverable

Prep Batch: 154494

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits
Aluminum	0.500	0.496		mg/L		99	85 - 115
Antimony	0.100	0.0924		mg/L		92	85 - 115
Arsenic	0.100	0.0993		mg/L		99	85 - 115
Barium	0.100	0.0975		mg/L		98	85 - 115
Beryllium	0.100	0.0939		mg/L		94	85 - 115
Boron	0.100	0.0982		mg/L		98	85 - 115
Cadmium	0.100	0.0966		mg/L		97	85 - 115
Chromium	0.100	0.103		mg/L		103	85 - 115
Cobalt	0.100	0.100		mg/L		100	85 - 115
Copper	0.100	0.0962		mg/L		96	85 - 115
Iron	0.500	0.493		mg/L		99	85 - 115
Lead	0.100	0.0975		mg/L		97	85 - 115
Magnesium	2.50	2.54		mg/L		102	85 - 115
Manganese	0.100	0.102		mg/L		102	85 - 115
Molybdenum	0.100	0.0962		mg/L		96	85 - 115
Nickel	0.100	0.0990		mg/L		99	85 - 115
Selenium	0.100	0.0950		mg/L		95	85 - 115
Silver	0.0500	0.0474		mg/L		95	85 - 115
Thallium	0.100	0.0991		mg/L		99	85 - 115
Tin	0.100	0.0959		mg/L		96	85 - 115
Titanium	0.100	0.0983		mg/L		98	85 - 115
Zinc	0.100	0.0971		mg/L		97	85 - 115

Lab Sample ID: LCSD 860-154494/3-A

Matrix: Water

Analysis Batch: 154594

Client Sample ID: Lab Control Sample Dup

Prep Type: Total Recoverable

Prep Batch: 154494

Analyte	Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec Limits	RPD	RPD Limit
Aluminum	0.500	0.496		mg/L		99	85 - 115	0	20
Antimony	0.100	0.0942		mg/L		94	85 - 115	2	20
Arsenic	0.100	0.0987		mg/L		99	85 - 115	1	20
Barium	0.100	0.0975		mg/L		97	85 - 115	0	20
Beryllium	0.100	0.0939		mg/L		94	85 - 115	0	20
Boron	0.100	0.0986		mg/L		99	85 - 115	0	20
Cadmium	0.100	0.0959		mg/L		96	85 - 115	1	20
Chromium	0.100	0.103		mg/L		103	85 - 115	0	20
Cobalt	0.100	0.0996		mg/L		100	85 - 115	1	20
Copper	0.100	0.0961		mg/L		96	85 - 115	0	20
Iron	0.500	0.488		mg/L		98	85 - 115	1	20
Lead	0.100	0.0973		mg/L		97	85 - 115	0	20
Magnesium	2.50	2.53		mg/L		101	85 - 115	1	20
Manganese	0.100	0.102		mg/L		102	85 - 115	0	20
Molybdenum	0.100	0.0960		mg/L		96	85 - 115	0	20
Nickel	0.100	0.0981		mg/L		98	85 - 115	1	20
Selenium	0.100	0.0982		mg/L		98	85 - 115	3	20
Silver	0.0500	0.0471		mg/L		94	85 - 115	1	20
Thallium	0.100	0.0984		mg/L		98	85 - 115	1	20
Tin	0.100	0.0953		mg/L		95	85 - 115	1	20
Titanium	0.100	0.0946		mg/L		95	85 - 115	4	20

Eurofins Houston

QC Sample Results

Client: Messer LLC

Job ID: 860-71662-1

Project/Site: Messer Gas ASU Permit Renewal 4-9-24

Method: 200.8 - Metals (ICP/MS) (Continued)

Lab Sample ID: LCSD 860-154494/3-A

Matrix: Water

Analysis Batch: 154594

Client Sample ID: Lab Control Sample Dup

Prep Type: Total Recoverable

Prep Batch: 154494

Analyte	Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec Limits	RPD	RPD Limit
Zinc	0.100	0.0965		mg/L		97	85 - 115	1	20

Method: 1664B - HEM and SGT-HEM

Lab Sample ID: MB 860-154810/1

Matrix: Water

Analysis Batch: 154810

Client Sample ID: Method Blank

Prep Type: Total/NA

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
HEM	1.6	U	5.0	1.6	mg/L			04/15/24 10:04	1

Lab Sample ID: LCS 860-154810/2

Matrix: Water

Analysis Batch: 154810

Client Sample ID: Lab Control Sample

Prep Type: Total/NA

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits
HEM	40.0	38.5		mg/L		96	78 - 114

Lab Sample ID: LCSD 860-154810/3

Matrix: Water

Analysis Batch: 154810

Client Sample ID: Lab Control Sample Dup

Prep Type: Total/NA

Analyte	Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec Limits	RPD	RPD Limit
HEM	40.0	41.3		mg/L		103	78 - 114	7	18

Method: 350.1 - Nitrogen, Ammonia

Lab Sample ID: MB 860-154980/139

Matrix: Water

Analysis Batch: 154980

Client Sample ID: Method Blank

Prep Type: Total/NA

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Ammonia	0.051	U	0.10	0.051	mg/L			04/15/24 18:54	1

Lab Sample ID: MB 860-154980/16

Matrix: Water

Analysis Batch: 154980

Client Sample ID: Method Blank

Prep Type: Total/NA

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Ammonia	0.051	U	0.10	0.051	mg/L			04/15/24 12:04	1

Lab Sample ID: LCS 860-154980/17

Matrix: Water

Analysis Batch: 154980

Client Sample ID: Lab Control Sample

Prep Type: Total/NA

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits
Ammonia	1.00	0.906		mg/L		91	90 - 110

Eurofins Houston

QC Sample Results

Client: Messer LLC

Job ID: 860-71662-1

Project/Site: Messer Gas ASU Permit Renewal 4-9-24

Method: 350.1 - Nitrogen, Ammonia (Continued)

Lab Sample ID: LCSD 860-154980/18

Matrix: Water

Analysis Batch: 154980

Client Sample ID: Lab Control Sample Dup

Prep Type: Total/NA

Analyte	Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec Limits	RPD	RPD Limit
Ammonia	1.00	0.925		mg/L		93	90 - 110	2	20

Lab Sample ID: LLCS 860-154980/142

Matrix: Water

Analysis Batch: 154980

Client Sample ID: Lab Control Sample

Prep Type: Total/NA

Analyte	Spike Added	LLCS Result	LLCS Qualifier	Unit	D	%Rec	%Rec Limits		
Ammonia	0.100	0.103		mg/L		103	50 - 150		

Method: 351.2 - Nitrogen, Total Kjeldahl

Lab Sample ID: MB 860-154420/4-A

Matrix: Water

Analysis Batch: 154826

Client Sample ID: Method Blank

Prep Type: Total/NA

Prep Batch: 154420

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Nitrogen, Kjeldahl	0.089	U	0.20	0.089	mg/L		04/11/24 22:39	04/12/24 18:30	1

Lab Sample ID: MB 860-154420/4-A

Matrix: Water

Analysis Batch: 155063

Client Sample ID: Method Blank

Prep Type: Total/NA

Prep Batch: 154420

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Nitrogen, Kjeldahl	0.089	U	0.20	0.089	mg/L		04/11/24 22:39	04/16/24 11:00	1

Lab Sample ID: LCS 860-154420/6-A

Matrix: Water

Analysis Batch: 154826

Client Sample ID: Lab Control Sample

Prep Type: Total/NA

Prep Batch: 154420

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits		
Nitrogen, Kjeldahl	2.00	2.02		mg/L		101	90 - 110		

Lab Sample ID: LCS 860-154420/6-A

Matrix: Water

Analysis Batch: 155063

Client Sample ID: Lab Control Sample

Prep Type: Total/NA

Prep Batch: 154420

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits		
Nitrogen, Kjeldahl	2.00	1.93		mg/L		96	90 - 110		

Lab Sample ID: LCSD 860-154420/7-A

Matrix: Water

Analysis Batch: 154826

Client Sample ID: Lab Control Sample Dup

Prep Type: Total/NA

Prep Batch: 154420

Analyte	Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec Limits	RPD	RPD Limit
Nitrogen, Kjeldahl	2.00	2.00		mg/L		100	90 - 110	1	20

Eurofins Houston

QC Sample Results

Client: Messer LLC

Job ID: 860-71662-1

Project/Site: Messer Gas ASU Permit Renewal 4-9-24

Method: 351.2 - Nitrogen, Total Kjeldahl (Continued)

Lab Sample ID: LCSD 860-154420/7-A

Matrix: Water

Analysis Batch: 155063

Client Sample ID: Lab Control Sample Dup

Prep Type: Total/NA

Prep Batch: 154420

Analyte	Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec Limits	RPD	RPD Limit
Nitrogen, Kjeldahl	2.00	2.03		mg/L		102	90 - 110	5	20

Lab Sample ID: LLCS 860-154420/5-A

Matrix: Water

Analysis Batch: 154826

Client Sample ID: Lab Control Sample

Prep Type: Total/NA

Prep Batch: 154420

Analyte	Spike Added	LLCS Result	LLCS Qualifier	Unit	D	%Rec	%Rec Limits		
Nitrogen, Kjeldahl	0.200	0.234		mg/L		117	50 - 150		

Lab Sample ID: LLCS 860-154420/5-A

Matrix: Water

Analysis Batch: 155063

Client Sample ID: Lab Control Sample

Prep Type: Total/NA

Prep Batch: 154420

Analyte	Spike Added	LLCS Result	LLCS Qualifier	Unit	D	%Rec	%Rec Limits		
Nitrogen, Kjeldahl	0.200	0.181	J	mg/L		91	50 - 150		

Method: 365.1 - Phosphorus, Total

Lab Sample ID: MB 860-154825/7

Matrix: Water

Analysis Batch: 154825

Client Sample ID: Method Blank

Prep Type: Total/NA

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Phosphorus Total	0.014	U	0.020	0.014	mg/L			04/12/24 21:05	1

Lab Sample ID: LCS 860-154825/8

Matrix: Water

Analysis Batch: 154825

Client Sample ID: Lab Control Sample

Prep Type: Total/NA

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits		
Phosphorus Total	0.250	0.265		mg/L		106	90 - 110		

Lab Sample ID: LCSD 860-154825/9

Matrix: Water

Analysis Batch: 154825

Client Sample ID: Lab Control Sample Dup

Prep Type: Total/NA

Analyte	Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec Limits	RPD	RPD Limit
Phosphorus Total	0.250	0.265		mg/L		106	90 - 110	0	20

Method: 4500 SO3 B-2011 - Sulfite

Lab Sample ID: MB 410-498478/1

Matrix: Water

Analysis Batch: 498478

Client Sample ID: Method Blank

Prep Type: Total/NA

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Sulfite	1.5	U	5.0	1.5	mg/L			04/25/24 09:40	1

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QC Sample Results

Client: Messer LLC

Job ID: 860-71662-1

Project/Site: Messer Gas ASU Permit Renewal 4-9-24

Method: 4500 SO3 B-2011 - Sulfite (Continued)

Lab Sample ID: LCS 410-498478/2

Matrix: Water

Analysis Batch: 498478

Client Sample ID: Lab Control Sample

Prep Type: Total/NA

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits
Sulfite	49.9	45.5		mg/L		91	90 - 110

Lab Sample ID: LCSD 410-498478/3

Matrix: Water

Analysis Batch: 498478

Client Sample ID: Lab Control Sample Dup

Prep Type: Total/NA

Analyte	Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec Limits	RPD	RPD Limit
Sulfite	49.9	45.0		mg/L		90	90 - 110	1	10

Method: 7196A - Chromium, Hexavalent

Lab Sample ID: MB 860-153952/3

Matrix: Water

Analysis Batch: 153952

Client Sample ID: Method Blank

Prep Type: Total/NA

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Cr (VI)	0.0034	U	0.010	0.0034	mg/L			04/09/24 13:02	1

Lab Sample ID: LCS 860-153952/4

Matrix: Water

Analysis Batch: 153952

Client Sample ID: Lab Control Sample

Prep Type: Total/NA

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits
Cr (VI)	0.200	0.189		mg/L		94	85 - 115

Lab Sample ID: LCSD 860-153952/5

Matrix: Water

Analysis Batch: 153952

Client Sample ID: Lab Control Sample Dup

Prep Type: Total/NA

Analyte	Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec Limits	RPD	RPD Limit
Cr (VI)	0.200	0.189		mg/L		94	85 - 115	0	20

Method: 8000 - COD

Lab Sample ID: MB 860-155176/3

Matrix: Water

Analysis Batch: 155176

Client Sample ID: Method Blank

Prep Type: Total/NA

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Chemical Oxygen Demand	3.4	U	20	3.4	mg/L			04/16/24 18:03	1

Lab Sample ID: LCS 860-155176/4

Matrix: Water

Analysis Batch: 155176

Client Sample ID: Lab Control Sample

Prep Type: Total/NA

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits
Chemical Oxygen Demand	100	98.0		mg/L		98	90 - 110

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QC Sample Results

Client: Messer LLC

Job ID: 860-71662-1

Project/Site: Messer Gas ASU Permit Renewal 4-9-24

Method: OIA-1677 - Cyanide, Available (Flow Injection)

Lab Sample ID: MB 410-494838/18

Matrix: Water

Analysis Batch: 494838

Client Sample ID: Method Blank

Prep Type: Total/NA

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Cyanide, Available	0.0050	U	0.0060	0.0050	mg/L			04/16/24 10:06	1

Lab Sample ID: LCS 410-494838/16

Matrix: Water

Analysis Batch: 494838

Client Sample ID: Lab Control Sample

Prep Type: Total/NA

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits
Cyanide, Available	0.0500	0.0473		mg/L		95	82 - 132

Lab Sample ID: LCSD 410-494838/17

Matrix: Water

Analysis Batch: 494838

Client Sample ID: Lab Control Sample Dup

Prep Type: Total/NA

Analyte	Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec Limits	RPD	RPD Limit
Cyanide, Available	0.0500	0.0470		mg/L		94	82 - 132	1	11

Method: SM 2120B - Color, Colorimetric

Lab Sample ID: MB 860-154628/3

Matrix: Water

Analysis Batch: 154628

Client Sample ID: Method Blank

Prep Type: Total/NA

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Color, Apparent	5.0	U	5.0	5.0	Color Units			04/10/24 16:00	1
Color, True	5.0	U	5.0	5.0	Color Units			04/10/24 16:00	1
pH	na		0.10	0.10	S.U.			04/10/24 16:00	1

Method: SM 2320B - Alkalinity

Lab Sample ID: MB 860-155576/17

Matrix: Water

Analysis Batch: 155576

Client Sample ID: Method Blank

Prep Type: Total/NA

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Alkalinity	4.0	U	4.0	4.0	mg/L			04/16/24 23:20	1
Bicarbonate Alkalinity as CaCO3	4.0	U	4.0	4.0	mg/L			04/16/24 23:20	1
Carbonate Alkalinity as CaCO3	4.0	U	4.0	4.0	mg/L			04/16/24 23:20	1
Hydroxide Alkalinity	4.0	U	4.0	4.0	mg/L			04/16/24 23:20	1
Phenolphthalein Alkalinity	4.0	U	4.0	4.0	mg/L			04/16/24 23:20	1

Lab Sample ID: LCS 860-155576/18

Matrix: Water

Analysis Batch: 155576

Client Sample ID: Lab Control Sample

Prep Type: Total/NA

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits
Alkalinity	250	248		mg/L		99	85 - 115

Eurofins Houston

QC Sample Results

Client: Messer LLC
Project/Site: Messer Gas ASU Permit Renewal 4-9-24

Job ID: 860-71662-1

Method: SM 2320B - Alkalinity (Continued)

Lab Sample ID: LCSD 860-155576/19
Matrix: Water
Analysis Batch: 155576

Client Sample ID: Lab Control Sample Dup
Prep Type: Total/NA

Analyte	Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec Limits	RPD	RPD Limit
Alkalinity	250	241		mg/L		96	85 - 115	3	20

Method: SM 2540C - Solids, Total Dissolved (TDS)

Lab Sample ID: MB 860-155184/1
Matrix: Water
Analysis Batch: 155184

Client Sample ID: Method Blank
Prep Type: Total/NA

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Total Dissolved Solids	5.0	U	5.0	5.0	mg/L			04/16/24 18:30	1

Lab Sample ID: LCS 860-155184/2
Matrix: Water
Analysis Batch: 155184

Client Sample ID: Lab Control Sample
Prep Type: Total/NA

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits		
Total Dissolved Solids	1000	988		mg/L		99	80 - 120		

Lab Sample ID: LCSD 860-155184/3
Matrix: Water
Analysis Batch: 155184

Client Sample ID: Lab Control Sample Dup
Prep Type: Total/NA

Analyte	Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec Limits	RPD	RPD Limit
Total Dissolved Solids	1000	988		mg/L		99	80 - 120	0	10

Lab Sample ID: LLCS 860-155184/4
Matrix: Water
Analysis Batch: 155184

Client Sample ID: Lab Control Sample
Prep Type: Total/NA

Analyte	Spike Added	LLCS Result	LLCS Qualifier	Unit	D	%Rec	%Rec Limits		
Total Dissolved Solids	5.00	6.50		mg/L		130	50 - 150		

Method: SM 2540D - Solids, Total Suspended (TSS)

Lab Sample ID: MB 860-154860/1
Matrix: Water
Analysis Batch: 154860

Client Sample ID: Method Blank
Prep Type: Total/NA

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Total Suspended Solids	4.0	U	4.0	4.0	mg/L			04/15/24 13:51	1

Lab Sample ID: LCS 860-154860/2
Matrix: Water
Analysis Batch: 154860

Client Sample ID: Lab Control Sample
Prep Type: Total/NA

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits		
Total Suspended Solids	100	101		mg/L		101	80 - 120		

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QC Sample Results

Client: Messer LLC
Project/Site: Messer Gas ASU Permit Renewal 4-9-24

Job ID: 860-71662-1

Method: SM 2540D - Solids, Total Suspended (TSS) (Continued)

Lab Sample ID: LCSD 860-154860/3

Matrix: Water

Analysis Batch: 154860

Client Sample ID: Lab Control Sample Dup

Prep Type: Total/NA

Analyte	Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec Limits	RPD	RPD Limit
Total Suspended Solids	100	112		mg/L		112	80 - 120	10	10

Method: SM 4500 Cl G - Chlorine, Residual

Lab Sample ID: MB 860-154593/3

Matrix: Water

Analysis Batch: 154593

Client Sample ID: Method Blank

Prep Type: Total/NA

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Chlorine, Total Residual	0.050	U	0.050	0.050	mg/L			04/12/24 16:27	1

Lab Sample ID: LCS 860-154593/4

Matrix: Water

Analysis Batch: 154593

Client Sample ID: Lab Control Sample

Prep Type: Total/NA

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits		
Chlorine, Total Residual	0.250	0.238		mg/L		95	85 - 115		

Lab Sample ID: LCSD 860-154593/5

Matrix: Water

Analysis Batch: 154593

Client Sample ID: Lab Control Sample Dup

Prep Type: Total/NA

Analyte	Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec Limits	RPD	RPD Limit
Chlorine, Total Residual	0.250	0.238		mg/L		95	85 - 115	0	20

Method: SM 4500 S2 D - Sulfide, Total

Lab Sample ID: MB 860-155125/3

Matrix: Water

Analysis Batch: 155125

Client Sample ID: Method Blank

Prep Type: Total/NA

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Sulfide	0.040	U	0.10	0.040	mg/L			04/16/24 15:46	1

Lab Sample ID: LCS 860-155125/4

Matrix: Water

Analysis Batch: 155125

Client Sample ID: Lab Control Sample

Prep Type: Total/NA

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits		
Sulfide	1.00	1.06		mg/L		106	90 - 110		

Lab Sample ID: LCSD 860-155125/5

Matrix: Water

Analysis Batch: 155125

Client Sample ID: Lab Control Sample Dup

Prep Type: Total/NA

Analyte	Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec Limits	RPD	RPD Limit
Sulfide	1.00	1.06		mg/L		106	90 - 110	0	20

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QC Sample Results

Client: Messer LLC
Project/Site: Messer Gas ASU Permit Renewal 4-9-24

Job ID: 860-71662-1

Method: SM 5210B - BOD, 5-Day

Lab Sample ID: SCB 860-154902/2

Matrix: Water

Analysis Batch: 154902

Client Sample ID: Method Blank

Prep Type: Total/NA

Analyte	SCB Result	SCB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Biochemical Oxygen Demand	0.999		0.0000020	0.0000020	mg/L			04/09/24 19:24	1

Lab Sample ID: USB 860-154902/1

Matrix: Water

Analysis Batch: 154902

Client Sample ID: Method Blank

Prep Type: Total/NA

Analyte	USB Result	USB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Biochemical Oxygen Demand	0.0000020	U	0.0000020	0.0000020	mg/L			04/09/24 19:22	1

Lab Sample ID: LCS 860-154902/3

Matrix: Water

Analysis Batch: 154902

Client Sample ID: Lab Control Sample

Prep Type: Total/NA

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits
Biochemical Oxygen Demand	198	203		mg/L		102	85 - 115

Method: SM 5310C - TOC

Lab Sample ID: MB 860-155277/3

Matrix: Water

Analysis Batch: 155277

Client Sample ID: Method Blank

Prep Type: Total/NA

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Total Organic Carbon	0.50	U	1.0	0.50	mg/L			04/16/24 12:22	1

Lab Sample ID: LCS 860-155277/4

Matrix: Water

Analysis Batch: 155277

Client Sample ID: Lab Control Sample

Prep Type: Total/NA

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits
Total Organic Carbon	5.00	4.86		mg/L		97	90 - 110

Lab Sample ID: LCSD 860-155277/5

Matrix: Water

Analysis Batch: 155277

Client Sample ID: Lab Control Sample Dup

Prep Type: Total/NA

Analyte	Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec Limits	RPD	RPD Limit
Total Organic Carbon	5.00	4.81		mg/L		96	90 - 110	1	15

Lab Sample ID: LLCS 860-155277/6

Matrix: Water

Analysis Batch: 155277

Client Sample ID: Lab Control Sample

Prep Type: Total/NA

Analyte	Spike Added	LLCS Result	LLCS Qualifier	Unit	D	%Rec	%Rec Limits
Total Organic Carbon	1.00	0.875	J	mg/L		87	50 - 150

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QC Sample Results

Client: Messer LLC

Job ID: 860-71662-1

Project/Site: Messer Gas ASU Permit Renewal 4-9-24

Method: SM5210B CBOD - Carbonaceous BOD, 5 Day

Lab Sample ID: SCB 860-154901/2

Matrix: Water

Analysis Batch: 154901

Client Sample ID: Method Blank

Prep Type: Total/NA

Analyte	SCB Result	SCB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Carbonaceous Biochemical Oxygen Demand	0.816		0.0000020	0.0000020	mg/L			04/09/24 17:11	1

Lab Sample ID: USB 860-154901/1

Matrix: Water

Analysis Batch: 154901

Client Sample ID: Method Blank

Prep Type: Total/NA

Analyte	USB Result	USB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Carbonaceous Biochemical Oxygen Demand	0.0400		0.0000020	0.0000020	mg/L			04/09/24 17:08	1

Lab Sample ID: LCS 860-154901/3

Matrix: Water

Analysis Batch: 154901

Client Sample ID: Lab Control Sample

Prep Type: Total/NA

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits
Carbonaceous Biochemical Oxygen Demand	198	202		mg/L		102	85 - 115

QC Association Summary

Client: Messer LLC

Job ID: 860-71662-1

Project/Site: Messer Gas ASU Permit Renewal 4-9-24

GC/MS VOA

Analysis Batch: 154047

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
860-71662-1	Outfall Samples	Total/NA	Water	624.1	
MB 860-154047/10	Method Blank	Total/NA	Water	624.1	
LCS 860-154047/3	Lab Control Sample	Total/NA	Water	624.1	
LCSD 860-154047/4	Lab Control Sample Dup	Total/NA	Water	624.1	

GC/MS Semi VOA

Prep Batch: 154889

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
860-71662-1	Outfall Samples	Total/NA	Water	625	
MB 860-154889/1-A	Method Blank	Total/NA	Water	625	
LCS 860-154889/2-A	Lab Control Sample	Total/NA	Water	625	
LCSD 860-154889/3-A	Lab Control Sample Dup	Total/NA	Water	625	

Analysis Batch: 155030

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
860-71662-1	Outfall Samples	Total/NA	Water	625.1	154889
MB 860-154889/1-A	Method Blank	Total/NA	Water	625.1	154889
LCS 860-154889/2-A	Lab Control Sample	Total/NA	Water	625.1	154889
LCSD 860-154889/3-A	Lab Control Sample Dup	Total/NA	Water	625.1	154889

GC Semi VOA

Prep Batch: 154669

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
860-71662-1	Outfall Samples	Total/NA	Water	608	
MB 860-154669/1-A	Method Blank	Total/NA	Water	608	
LCS 860-154669/4-A	Lab Control Sample	Total/NA	Water	608	
LCSD 860-154669/5-A	Lab Control Sample Dup	Total/NA	Water	608	

Analysis Batch: 154783

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
860-71662-1	Outfall Samples	Total/NA	Water	608.3	154669
MB 860-154669/1-A	Method Blank	Total/NA	Water	608.3	154669
LCS 860-154669/4-A	Lab Control Sample	Total/NA	Water	608.3	154669
LCSD 860-154669/5-A	Lab Control Sample Dup	Total/NA	Water	608.3	154669

HPLC/IC

Analysis Batch: 153949

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
860-71662-1	Outfall Samples	Total/NA	Water	300.0	
MB 860-153949/3	Method Blank	Total/NA	Water	300.0	
LCS 860-153949/4	Lab Control Sample	Total/NA	Water	300.0	
LLCS 860-153949/7	Lab Control Sample	Total/NA	Water	300.0	

Analysis Batch: 153950

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
860-71662-1	Outfall Samples	Total/NA	Water	300.0	
MB 860-153950/3	Method Blank	Total/NA	Water	300.0	
LCS 860-153950/4	Lab Control Sample	Total/NA	Water	300.0	
LCSD 860-153950/5	Lab Control Sample Dup	Total/NA	Water	300.0	

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QC Association Summary

Client: Messer LLC

Job ID: 860-71662-1

HPLC/IC

Analysis Batch: 154575

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
MB 860-154575/3	Method Blank	Total/NA	Water	300.0	
LCS 860-154575/4	Lab Control Sample	Total/NA	Water	300.0	
LCSD 860-154575/5	Lab Control Sample Dup	Total/NA	Water	300.0	
LLCS 860-154575/7	Lab Control Sample	Total/NA	Water	300.0	

Analysis Batch: 154576

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
MB 860-154576/3	Method Blank	Total/NA	Water	300.0	
LCS 860-154576/4	Lab Control Sample	Total/NA	Water	300.0	
LCSD 860-154576/5	Lab Control Sample Dup	Total/NA	Water	300.0	

Analysis Batch: 155395

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
860-71662-1	Outfall Samples	Total/NA	Water	300.0	
MB 860-155395/3	Method Blank	Total/NA	Water	300.0	
MB 860-155395/62	Method Blank	Total/NA	Water	300.0	
LCS 860-155395/63	Lab Control Sample	Total/NA	Water	300.0	
LCSD 860-155395/64	Lab Control Sample Dup	Total/NA	Water	300.0	
LLCS 860-155395/7	Lab Control Sample	Total/NA	Water	300.0	

Metals

Prep Batch: 154494

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
860-71662-1	Outfall Samples	Total Recoverable	Water	200.8	
MB 860-154494/1-A	Method Blank	Total Recoverable	Water	200.8	
LCS 860-154494/2-A	Lab Control Sample	Total Recoverable	Water	200.8	
LCSD 860-154494/3-A	Lab Control Sample Dup	Total Recoverable	Water	200.8	

Analysis Batch: 154594

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
860-71662-1	Outfall Samples	Total Recoverable	Water	200.8	154494
860-71662-1	Outfall Samples	Total Recoverable	Water	200.8	154494
MB 860-154494/1-A	Method Blank	Total Recoverable	Water	200.8	154494
LCS 860-154494/2-A	Lab Control Sample	Total Recoverable	Water	200.8	154494
LCSD 860-154494/3-A	Lab Control Sample Dup	Total Recoverable	Water	200.8	154494

Prep Batch: 668082

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
860-71662-1	Outfall Samples	Total/NA	Water	1631E	
MB 400-668082/3-A	Method Blank	Total/NA	Water	1631E	
LCS 400-668082/4-A	Lab Control Sample	Total/NA	Water	1631E	
LCSD 400-668082/5-A	Lab Control Sample Dup	Total/NA	Water	1631E	

Analysis Batch: 668339

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
860-71662-1	Outfall Samples	Total/NA	Water	1631E	668082
MB 400-668082/3-A	Method Blank	Total/NA	Water	1631E	668082
LCS 400-668082/4-A	Lab Control Sample	Total/NA	Water	1631E	668082
LCSD 400-668082/5-A	Lab Control Sample Dup	Total/NA	Water	1631E	668082

Eurofins Houston

QC Association Summary

Client: Messer LLC

Job ID: 860-71662-1

Project/Site: Messer Gas ASU Permit Renewal 4-9-24

General Chemistry

Analysis Batch: 151048

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
860-71662-1	Outfall Samples	Total/NA	Water	7196A	

Analysis Batch: 152166

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
860-71662-1	Outfall Samples	Total/NA	Water	Nitrogen,Org	

Analysis Batch: 153952

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
860-71662-1	Outfall Samples	Total/NA	Water	7196A	
MB 860-153952/3	Method Blank	Total/NA	Water	7196A	
LCS 860-153952/4	Lab Control Sample	Total/NA	Water	7196A	
LCSD 860-153952/5	Lab Control Sample Dup	Total/NA	Water	7196A	

Prep Batch: 154003

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
860-71662-1	Outfall Samples	Total/NA	Water	BOD Prep	

Prep Batch: 154032

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
860-71662-1	Outfall Samples	Total/NA	Water	BOD Prep	

Prep Batch: 154420

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
860-71662-1	Outfall Samples	Total/NA	Water	351.2	
MB 860-154420/4-A	Method Blank	Total/NA	Water	351.2	
LCS 860-154420/6-A	Lab Control Sample	Total/NA	Water	351.2	
LCSD 860-154420/7-A	Lab Control Sample Dup	Total/NA	Water	351.2	
LLCS 860-154420/5-A	Lab Control Sample	Total/NA	Water	351.2	

Analysis Batch: 154593

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
860-71662-1	Outfall Samples	Total/NA	Water	SM 4500 CI G	
MB 860-154593/3	Method Blank	Total/NA	Water	SM 4500 CI G	
LCS 860-154593/4	Lab Control Sample	Total/NA	Water	SM 4500 CI G	
LCSD 860-154593/5	Lab Control Sample Dup	Total/NA	Water	SM 4500 CI G	

Analysis Batch: 154628

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
860-71662-1	Outfall Samples	Total/NA	Water	SM 2120B	
MB 860-154628/3	Method Blank	Total/NA	Water	SM 2120B	
LCS 860-154628/4	Lab Control Sample	Total/NA	Water	SM 2120B	
LCSD 860-154628/5	Lab Control Sample Dup	Total/NA	Water	SM 2120B	

Analysis Batch: 154810

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
860-71662-1	Outfall Samples	Total/NA	Water	1664B	
MB 860-154810/1	Method Blank	Total/NA	Water	1664B	
LCS 860-154810/2	Lab Control Sample	Total/NA	Water	1664B	
LCSD 860-154810/3	Lab Control Sample Dup	Total/NA	Water	1664B	

Eurofins Houston

QC Association Summary

Client: Messer LLC

Job ID: 860-71662-1

Project/Site: Messer Gas ASU Permit Renewal 4-9-24

General Chemistry

Analysis Batch: 154825

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
860-71662-1	Outfall Samples	Total/NA	Water	365.1	
MB 860-154825/7	Method Blank	Total/NA	Water	365.1	
LCS 860-154825/8	Lab Control Sample	Total/NA	Water	365.1	
LCSD 860-154825/9	Lab Control Sample Dup	Total/NA	Water	365.1	

Analysis Batch: 154826

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
860-71662-1	Outfall Samples	Total/NA	Water	351.2	154420
MB 860-154420/4-A	Method Blank	Total/NA	Water	351.2	154420
LCS 860-154420/6-A	Lab Control Sample	Total/NA	Water	351.2	154420
LCSD 860-154420/7-A	Lab Control Sample Dup	Total/NA	Water	351.2	154420
LLCS 860-154420/5-A	Lab Control Sample	Total/NA	Water	351.2	154420

Analysis Batch: 154860

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
860-71662-1	Outfall Samples	Total/NA	Water	SM 2540D	
MB 860-154860/1	Method Blank	Total/NA	Water	SM 2540D	
LCS 860-154860/2	Lab Control Sample	Total/NA	Water	SM 2540D	
LCSD 860-154860/3	Lab Control Sample Dup	Total/NA	Water	SM 2540D	

Analysis Batch: 154901

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
860-71662-1	Outfall Samples	Total/NA	Water	SM5210B CBOD	154003
SCB 860-154901/2	Method Blank	Total/NA	Water	SM5210B CBOD	
USB 860-154901/1	Method Blank	Total/NA	Water	SM5210B CBOD	
LCS 860-154901/3	Lab Control Sample	Total/NA	Water	SM5210B CBOD	

Analysis Batch: 154902

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
860-71662-1	Outfall Samples	Total/NA	Water	SM 5210B	154032
SCB 860-154902/2	Method Blank	Total/NA	Water	SM 5210B	
USB 860-154902/1	Method Blank	Total/NA	Water	SM 5210B	
LCS 860-154902/3	Lab Control Sample	Total/NA	Water	SM 5210B	

Analysis Batch: 154980

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
860-71662-1	Outfall Samples	Total/NA	Water	350.1	
MB 860-154980/139	Method Blank	Total/NA	Water	350.1	
MB 860-154980/16	Method Blank	Total/NA	Water	350.1	
LCS 860-154980/17	Lab Control Sample	Total/NA	Water	350.1	
LCSD 860-154980/18	Lab Control Sample Dup	Total/NA	Water	350.1	
LLCS 860-154980/142	Lab Control Sample	Total/NA	Water	350.1	

Analysis Batch: 155063

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
MB 860-154420/4-A	Method Blank	Total/NA	Water	351.2	154420
LCS 860-154420/6-A	Lab Control Sample	Total/NA	Water	351.2	154420
LCSD 860-154420/7-A	Lab Control Sample Dup	Total/NA	Water	351.2	154420
LLCS 860-154420/5-A	Lab Control Sample	Total/NA	Water	351.2	154420

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QC Association Summary

Client: Messer LLC

Job ID: 860-71662-1

General Chemistry

Analysis Batch: 155125

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
860-71662-1	Outfall Samples	Total/NA	Water	SM 4500 S2 D	
MB 860-155125/3	Method Blank	Total/NA	Water	SM 4500 S2 D	
LCS 860-155125/4	Lab Control Sample	Total/NA	Water	SM 4500 S2 D	
LCSD 860-155125/5	Lab Control Sample Dup	Total/NA	Water	SM 4500 S2 D	

Analysis Batch: 155176

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
860-71662-1	Outfall Samples	Total/NA	Water	8000	
MB 860-155176/3	Method Blank	Total/NA	Water	8000	
LCS 860-155176/4	Lab Control Sample	Total/NA	Water	8000	

Analysis Batch: 155184

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
860-71662-1	Outfall Samples	Total/NA	Water	SM 2540C	
MB 860-155184/1	Method Blank	Total/NA	Water	SM 2540C	
LCS 860-155184/2	Lab Control Sample	Total/NA	Water	SM 2540C	
LCSD 860-155184/3	Lab Control Sample Dup	Total/NA	Water	SM 2540C	
LLCS 860-155184/4	Lab Control Sample	Total/NA	Water	SM 2540C	

Analysis Batch: 155270

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
860-71662-1	Outfall Samples	Total/NA	Water	360.1	

Analysis Batch: 155277

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
860-71662-1	Outfall Samples	Total/NA	Water	SM 5310C	
MB 860-155277/3	Method Blank	Total/NA	Water	SM 5310C	
LCS 860-155277/4	Lab Control Sample	Total/NA	Water	SM 5310C	
LCSD 860-155277/5	Lab Control Sample Dup	Total/NA	Water	SM 5310C	
LLCS 860-155277/6	Lab Control Sample	Total/NA	Water	SM 5310C	

Analysis Batch: 155576

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
860-71662-1	Outfall Samples	Total/NA	Water	SM 2320B	
MB 860-155576/17	Method Blank	Total/NA	Water	SM 2320B	
LCS 860-155576/18	Lab Control Sample	Total/NA	Water	SM 2320B	
LCSD 860-155576/19	Lab Control Sample Dup	Total/NA	Water	SM 2320B	

Analysis Batch: 494838

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
860-71662-1	Outfall Samples	Total/NA	Water	OIA-1677	
MB 410-494838/18	Method Blank	Total/NA	Water	OIA-1677	
LCS 410-494838/16	Lab Control Sample	Total/NA	Water	OIA-1677	
LCSD 410-494838/17	Lab Control Sample Dup	Total/NA	Water	OIA-1677	

Analysis Batch: 498478

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
860-71662-1	Outfall Samples	Total/NA	Water	4500 SO3 B-2011	
MB 410-498478/1	Method Blank	Total/NA	Water	4500 SO3 B-2011	

Eurofins Houston

QC Association Summary

Client: Messer LLC
Project/Site: Messer Gas ASU Permit Renewal 4-9-24

Job ID: 860-71662-1

General Chemistry (Continued)

Analysis Batch: 498478 (Continued)

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
LCS 410-498478/2	Lab Control Sample	Total/NA	Water	4500 SO3 B-2011	
LCSD 410-498478/3	Lab Control Sample Dup	Total/NA	Water	4500 SO3 B-2011	

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Lab Chronicle

Client: Messer LLC
Project/Site: Messer Gas ASU Permit Renewal 4-9-24

Job ID: 860-71662-1

Client Sample ID: Outfall Samples

Lab Sample ID: 860-71662-1

Date Collected: 04/09/24 09:00

Matrix: Water

Date Received: 04/09/24 15:06

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	624.1		1	5 mL	5 mL	154047	04/10/24 12:56	NA	EET HOU
Total/NA	Prep	625			1000 mL	1.00 mL	154889	04/15/24 15:37	DR	EET HOU
Total/NA	Analysis	625.1		1	1 mL	1 mL	155030	04/16/24 21:44	PXS	EET HOU
Total/NA	Prep	608			1000 mL	1 mL	154669	04/13/24 06:30	BH	EET HOU
Total/NA	Analysis	608.3		1			154783	04/15/24 12:27	KM	EET HOU
Total/NA	Analysis	300.0		1			153949	04/10/24 12:48	AK1	EET HOU
Total/NA	Analysis	300.0		1			153950	04/10/24 12:48	AK1	EET HOU
Total/NA	Analysis	300.0		1			155395	04/18/24 20:36	WP	EET HOU
Total/NA	Prep	1631E			40 mL	40 mL	668082	04/14/24 14:30	VLC	EET PEN
Completed:								04/16/24 09:25 ¹		
Total/NA	Analysis	1631E		1			668339	04/16/24 12:08	VLC	EET PEN
Total Recoverable	Prep	200.8			50 mL	50 mL	154494	04/12/24 11:00	MD	EET HOU
Total Recoverable	Analysis	200.8		1			154594	04/12/24 19:26	DP	EET HOU
Total Recoverable	Prep	200.8			50 mL	50 mL	154494	04/12/24 11:00	MD	EET HOU
Total Recoverable	Analysis	200.8		20			154594	04/12/24 19:31	DP	EET HOU
Total/NA	Analysis	1664B		1	1000 mL	1000 mL	154810	04/15/24 10:04	TB	EET HOU
Total/NA	Analysis	350.1		1	10 mL	10 mL	154980	04/15/24 13:17	ADL	EET HOU
Total/NA	Prep	351.2			20 mL	20 mL	154420	04/11/24 22:39	SA	EET HOU
Total/NA	Analysis	351.2		1			154826	04/12/24 18:35	LD	EET HOU
Total/NA	Analysis	360.1		1			155270	04/17/24 11:00	HN	EET HOU
Total/NA	Analysis	365.1		5	10 mL	10 mL	154825	04/12/24 22:15	HN	EET HOU
Total/NA	Analysis	4500 SO3 B-2011		1	50 mL	50 mL	498478	04/25/24 09:40	UML5	ELLE
Total/NA	Analysis	7196A		1	25 mL	25 mL	153952	04/09/24 16:40	SCI	EET HOU
Total/NA	Analysis	7196A		1			151048	04/19/24 15:47	SC	EET HOU
Total/NA	Analysis	8000		1	2 mL	2 mL	155176	04/16/24 18:03	HN	EET HOU
Total/NA	Analysis	Nitrogen,Org		1			152166	04/18/24 09:10	SC	EET HOU
Total/NA	Analysis	OIA-1677		1			494838	04/16/24 10:38	UJE2	ELLE
Total/NA	Analysis	SM 2120B		2	50 mL	50 mL	154628	04/10/24 16:00	YG	EET HOU
Total/NA	Analysis	SM 2320B		1			155576	04/17/24 01:51	RY	EET HOU
Total/NA	Analysis	SM 2540C		1	50 mL	200 mL	155184	04/16/24 18:30	YG	EET HOU
Total/NA	Analysis	SM 2540D		1	1000 mL	1000 mL	154860	04/15/24 13:51	FN	EET HOU
Total/NA	Analysis	SM 4500 CI G		2	10 mL	10 mL	154593	04/12/24 16:27	SCI	EET HOU
Total/NA	Analysis	SM 4500 S2 D		1	7.5 mL	7.5 mL	155125	04/16/24 15:46	SCI	EET HOU
Total/NA	Prep	BOD Prep					154032	04/09/24 19:00	ALL	EET HOU
Total/NA	Analysis	SM 5210B		1	50 mL	300 mL	154902	04/09/24 22:15	ALL	EET HOU
Total/NA	Analysis	SM 5310C		1	40 mL	40 mL	155277	04/16/24 16:39	YG	EET HOU
Total/NA	Prep	BOD Prep					154003	04/09/24 17:09	ALL	EET HOU
Total/NA	Analysis	SM5210B CBOD		1	20 mL	300 mL	154901	04/09/24 17:50	ALL	EET HOU

¹ This procedure uses a method stipulated length of time for the process. Both start and end times are displayed.

Eurofins Houston

Lab Chronicle

Client: Messer LLC
Project/Site: Messer Gas ASU Permit Renewal 4-9-24

Job ID: 860-71662-1

Laboratory References:
EET HOU = Eurofins Houston, 4145 Greenbriar Dr, Stafford, TX 77477, TEL (281)240-4200
EET PEN = Eurofins Pensacola, 3355 McLemore Drive, Pensacola, FL 32514, TEL (850)474-1001
ELLE = Eurofins Lancaster Laboratories Environment Testing, LLC, 2425 New Holland Pike, Lancaster, PA 17601, TEL (717)656-2300
Envirodyne = Envirodyne Laboratories, 11011 Brooklet Street Suite 230, Houston, TX 77099

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Accreditation/Certification Summary

Client: Messer LLC

Job ID: 860-71662-1

Laboratory: Eurofins Houston

All accreditations/certifications held by this laboratory are listed. Not all accreditations/certifications are applicable to this report.

Authority	Program	Identification Number	Expiration Date
Arkansas DEQ	State	88-00759	08-03-24
Florida	NELAP	E871002	06-30-24
Louisiana (All)	NELAP	03054	06-30-24
Oklahoma	NELAP	1306	08-31-24
Oklahoma	State	2023-139	08-31-24
Texas	NELAP	T104704215	06-30-24
Texas	TCEQ Water Supply	T104704215	12-28-25
USDA	US Federal Programs	525-23-79-79507	03-20-26

Laboratory: Eurofins Lancaster Laboratories Environment Testing, LLC

All accreditations/certifications held by this laboratory are listed. Not all accreditations/certifications are applicable to this report.

Authority	Program	Identification Number	Expiration Date
A2LA	Dept. of Defense ELAP	0001.01	11-30-24
A2LA	ISO/IEC 17025	0001.01	11-30-24
Alabama	State	43200	01-31-25
Alaska	State	PA00009	06-30-24
Alaska (UST)	State	17-027	02-28-25
Arizona	State	AZ0780	03-12-25
Arkansas DEQ	State	88-00660	08-09-24
California	State	2792	11-30-24
Colorado	State	PA00009	06-30-24
Connecticut	State	PH-0746	06-30-25
DE Haz. Subst. Cleanup Act (HSCA)	State	019-006 (PA cert)	01-31-25
Delaware (DW)	State	N/A	01-31-25
Florida	NELAP	E87997	06-30-24
Georgia (DW)	State	C048	01-31-25
Hawaii	State	N/A	01-31-25
Illinois	NELAP	200027	01-31-25
Iowa	State	361	03-01-24 *
Kansas	NELAP	E-10151	10-31-24
Kentucky (DW)	State	KY90088	12-31-24
Kentucky (UST)	State	0001.01	11-30-24
Kentucky (WW)	State	KY90088	12-31-23 *
Louisiana (All)	NELAP	02055	06-30-24
Maine	State	2019012	03-12-25
Maryland	State	100	06-30-25
Massachusetts	State	M-PA009	06-30-24
Michigan	State	9930	01-31-25
Minnesota	NELAP	042-999-487	12-31-24
Mississippi	State	023	01-31-25
Missouri	State	450	01-31-25
Montana (DW)	State	0098	01-01-25
Nebraska	State	NE-OS-32-17	01-31-25
New Hampshire	NELAP	2730	01-10-25
New Jersey	NELAP	PA011	06-30-24
New York	NELAP	10670	04-01-25
North Carolina (DW)	State	42705	07-31-24
North Carolina (WW/SW)	State	521	12-31-24
Oklahoma	NELAP	9804	08-31-24

* Accreditation/Certification renewal pending - accreditation/certification considered valid.

Eurofins Houston

Accreditation/Certification Summary

Client: Messer LLC

Job ID: 860-71662-1

Project/Site: Messer Gas ASU Permit Renewal 4-9-24

Laboratory: Eurofins Lancaster Laboratories Environment Testing, LLC (Continued)

All accreditations/certifications held by this laboratory are listed. Not all accreditations/certifications are applicable to this report.

Authority	Program	Identification Number	Expiration Date
Oregon	NELAP	PA200001	09-11-24
Pennsylvania	NELAP	36-00037	01-31-25
Quebec Ministry of Environment and Fight against Climate Change	PALA	507	09-16-24
Rhode Island	State	LAO00338	12-30-24
South Carolina	State	89002	01-31-24 *
Tennessee	State	02838	01-31-25
Texas	NELAP	T104704194-23-46	08-31-24
USDA	US Federal Programs	525-22-298-19481	10-25-25
Vermont	State	VT - 36037	10-28-24
Virginia	NELAP	460182	06-14-25
West Virginia (DW)	State	9906 C	01-31-25
West Virginia DEP	State	055	07-31-24
Wyoming	State	8TMS-L	01-31-25
Wyoming (UST)	A2LA	0001.01	11-30-24

Laboratory: Eurofins Pensacola

All accreditations/certifications held by this laboratory are listed. Not all accreditations/certifications are applicable to this report.

Authority	Program	Identification Number	Expiration Date
Alabama	State	40150	06-30-24
ANAB	ISO/IEC 17025	L2471	02-22-26
Arkansas DEQ	State	88-00689	08-01-24
California	State	2510	06-30-24
Florida	NELAP	E81010	06-30-24
Georgia	State	E81010(FL)	06-30-24
Illinois	NELAP	200041	10-09-24
Kansas	NELAP	E-10253	10-31-24
Kentucky (UST)	State	53	06-30-24
Louisiana (All)	NELAP	30976	06-30-24
Louisiana (DW)	State	LA017	12-31-24
North Carolina (WW/SW)	State	314	12-31-24
Oklahoma	NELAP	9810	08-31-24
Pennsylvania	NELAP	68-00467	01-31-25
South Carolina	State	96026	06-30-24
Tennessee	State	TN02907	06-30-24
Texas	NELAP	T104704286	09-30-24
US Fish & Wildlife	US Federal Programs	A22340	06-30-24
USDA	US Federal Programs	FLGNV23001	01-08-26
USDA	US Federal Programs	P330-21-00056	05-17-24
Virginia	NELAP	460166	06-14-24
West Virginia DEP	State	136	03-31-25

* Accreditation/Certification renewal pending - accreditation/certification considered valid.

Eurofins Houston

Method Summary

Client: Messer LLC

Job ID: 860-71662-1

Project/Site: Messer Gas ASU Permit Renewal 4-9-24

Method	Method Description	Protocol	Laboratory
624.1	Volatile Organic Compounds (GC/MS)	EPA	EET HOU
625.1	Semivolatile Organic Compounds (GC/MS)	EPA	EET HOU
608.3	Polychlorinated Biphenyls (PCBs) (GC)	EPA	EET HOU
300.0	Anions, Ion Chromatography	EPA	EET HOU
1631E	Mercury, Low Level (CVAFS)	EPA	EET PEN
200.8	Metals (ICP/MS)	EPA	EET HOU
1664B	HEM and SGT-HEM	1664B	EET HOU
350.1	Nitrogen, Ammonia	EPA	EET HOU
351.2	Nitrogen, Total Kjeldahl	EPA	EET HOU
360.1	Oxygen, Dissolved	EPA	EET HOU
365.1	Phosphorus, Total	EPA	EET HOU
4500 SO3 B-2011	Sulfite	SM	ELLE
7196A	Chromium, Hexavalent	SW846	EET HOU
7196A	Chromium, Trivalent (Colorimetric)	SW846	EET HOU
8000	COD	Hach	EET HOU
Nitrogen,Org	Nitrogen, Organic	EPA	EET HOU
OIA-1677	Cyanide, Available (Flow Injection)	OI CORP	ELLE
SM 2120B	Color, Colorimetric	SM	EET HOU
SM 2320B	Alkalinity	SM	EET HOU
SM 2540C	Solids, Total Dissolved (TDS)	SM	EET HOU
SM 2540D	Solids, Total Suspended (TSS)	SM	EET HOU
SM 4500 Cl G	Chlorine, Residual	SM	EET HOU
SM 4500 S2 D	Sulfide, Total	SM	EET HOU
SM 5210B	BOD, 5-Day	SM	EET HOU
SM 5310C	TOC	SM	EET HOU
SM5210B CBOD	Carbonaceous BOD, 5 Day	SM	EET HOU
Subcontract	Surfactants	None	Envirodyne
1631E	Preparation, Mercury, Low Level	EPA	EET PEN
200.8	Preparation, Total Recoverable Metals	EPA	EET HOU
351.2	Nitrogen, Total Kjeldahl	EPA	EET HOU
608	Liquid-Liquid Extraction (Separatory Funnel)	EPA	EET HOU
625	Liquid-Liquid Extraction	EPA	EET HOU
BOD Prep	Preparation, BOD	SM	EET HOU

Protocol References:

1664B = EPA-821-98-002

EPA = US Environmental Protection Agency

Hach = Hach Company

None = None

OI CORP = OI Corporation Instrument Manual.

SM = "Standard Methods For The Examination Of Water And Wastewater"

SW846 = "Test Methods For Evaluating Solid Waste, Physical/Chemical Methods", Third Edition, November 1986 And Its Updates.

Laboratory References:

EET HOU = Eurofins Houston, 4145 Greenbriar Dr, Stafford, TX 77477, TEL (281)240-4200

EET PEN = Eurofins Pensacola, 3355 McLemore Drive, Pensacola, FL 32514, TEL (850)474-1001

ELLE = Eurofins Lancaster Laboratories Environment Testing, LLC, 2425 New Holland Pike, Lancaster, PA 17601, TEL (717)656-2300

Envirodyne = Envirodyne Laboratories, 11011 Brooklet Street Suite 230, Houston, TX 77099

Eurofins Houston

Sample Summary

Client: Messer LLC
Project/Site: Messer Gas ASU Permit Renewal 4-9-24

Job ID: 860-71662-1

Lab Sample ID	Client Sample ID	Matrix	Collected	Received
860-71662-1	Outfall Samples	Water	04/09/24 09:00	04/09/24 15:06

1
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16



Envirodyne Laboratories, Inc
11011 Brooklet Dr., # 230
Houston, TX 77099
281.568.7880 Phone
www.envirodyne.com

19 April 2024

Eurofins Houston
Lance Tigrett
4147 Greenbriar Dr.
Stafford, TX 77477

Eurofins

Enclosed are the results of analyses for samples received by the laboratory on 10-Apr-24 09:04. The analytical data provided relates only to the samples as received in this laboratory report.

ELI certifies that all results are NELAP compliant and performed in accordance with the referenced method except as noted in the Case Narrative or as noted with a qualifier. Any reproductions of this laboratory report should be in full and only with the written authorization from the client.

The total number of pages in this report is 5

Thank you for selecting ELI for your analytical needs. If you have any questions regarding this report, please contact us.

Sincerely,

Julie Peterson
Client Services Representative



Certificate No: T104704265-22-20



Envirodyne Laboratories, Inc
11011 Brooklet Dr., # 230
Houston, TX 77099
281.568.7880 Phone
www.envirodyne.com

Client: Eurofins Houston
Project: Eurofins
Work Order: 24D1499

Reported:
19-Apr-24 16:30

ANALYTICAL REPORT FOR SAMPLES

Sample ID	Laboratory ID	Matrix	Date Sampled	Date Received
OUTFALL (860-71662-1)	24D1499-01	Water	09-Apr-24 09:00	10-Apr-24 09:04

Envirodyne Laboratories, Inc.

The results in this report apply to the samples analyzed in accordance with the chain of custody document. This analytical report must be reproduced in its entirety.

Julie Peterson, Client Services Representative



Envirodyne Laboratories, Inc
11011 Brooklet Dr., # 230
Houston, TX 77099
281.568.7880 Phone
www.envirodyne.com

Client: Eurofins Houston
Project: Eurofins
Work Order: 24D1499

Reported:
19-Apr-24 16:30

OUTFALL (860-71662-1)
24D1499-01 (Water) Sampled: 09-Apr-24 09:00

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Analyst	Notes
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Envirodyne Laboratories, Inc.

Wet Chemistry

Surfactants	<0.10	0.10	mg/L	1	B4D5162	16-Apr-24	16-Apr-24 16:30	SM5540 C	JMM	H, Q
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Envirodyne Laboratories, Inc.

The results in this report apply to the samples analyzed in accordance with the chain of custody document. This analytical report must be reproduced in its entirety.

Julie Peterson, Client Services Representative



Envirodyne Laboratories, Inc
11011 Brooklet Dr., # 230
Houston, TX 77099
281.568.7880 Phone
www.envirodyne.com

Client: Eurofins Houston
Project: Eurofins
Work Order: 24D1499

Reported:
19-Apr-24 16:30

Wet Chemistry - Quality Control
Envirodyne Laboratories, Inc.

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC Limits	RPD	RPD Limit	Notes
Batch B4D5162 - Inorganics									
Blank (B4D5162-BLK1)				Prepared & Analyzed: 16-Apr-24					
Surfactants	<0.10	0.10	mg/L						Q
LCS (B4D5162-BS1)				Prepared & Analyzed: 16-Apr-24					
Surfactants	0.860		mg/L	1.00		86.0 90-110			Q
Duplicate (B4D5162-DUP1)				Source: 24D2144-02 Prepared & Analyzed: 16-Apr-24					
Surfactants	<0.10	0.10	mg/L		<0.10		0 20		Q
Reference (B4D5162-SRM1)				Prepared & Analyzed: 16-Apr-24					
Surfactants	0.0900		mg/L	0.100		90.0 0-200			Q

Envirodyne Laboratories, Inc.

The results in this report apply to the samples analyzed in accordance with the chain of custody document. This analytical report must be reproduced in its entirety.

Julie Peterson, Client Services Representative



Envirodyne Laboratories, Inc
11011 Brooklet Dr., # 230
Houston, TX 77099
281.568.7880 Phone
www.envirodyne.com

Client: Eurofins Houston
Project: Eurofins
Work Order: 24D1499

Reported:
19-Apr-24 16:30

Notes and Definitions

Q QC did not meet ELI acceptance criteria
H Hold time exceeded
ND Analyte NOT DETECTED at or above the reporting limit
< Result is less than the RL
a Analyte not available for TNI/NELAP accreditation
n Not accredited

Envirodyne Laboratories, Inc.

The results in this report apply to the samples analyzed in accordance with the chain of custody document. This analytical report must be reproduced in its entirety.

A handwritten signature in black ink, appearing to read 'Julie Peterson', is written over a horizontal line.

Julie Peterson, Client Services Representative

Chain of Custody Record

[illegible]

4145 Greenbrier Dr
Stafford TX 77477
Phone (281) 240-4200

Chain of Custody Record



eurofins

Client Information

Client Contact

Rami Qafishen

Phone:

281 667 2282

Lab P#:

Lance Tiggitt@eurofins.com

860-71662 Chain of Custody

JC No: 50-27818-9636.1
Age:

Company

Messer LLC

Due Date Requested:

TAT Requested (days):

City:

La Porte

Compliance Project:

PO #:

State, Zip:

TX, 77571

Phone:

Email:

rami.qafishen@mesher-us.com

Project Name:

Messer Gas ASU Permit Renewal 2024

Site:

Project #:

86006711

SSOW#:

Analysis Requested

Job #:

Preservation Codes:

A HCL
B NaOH
C Zn Acetate
D Nitric Acid
E NaHSO4
F MeOH
G Ammonia
H Ascorbic Acid
I Ice
J DI Water
K EDTA
L EDA
M Hexane
N None
O AsHAc2
P Na2OAS
Q Na2SO3
R Na2S2O3
S H2SO4
T TSP Dodecylhydrate
U Acetone
V MCAA
W pH 4.5
Y Titania
Z other (specify)

Sample Identification

Sample Date

4/9/24

Sample Time

0900

Sample Type (C=Comp, G=grab)

G

Matrix (W=water, S=solid, O=oil, G=gas, L=liquid, A=air)

Water

Field Filtered Sample (Yes or No)

Perform MS/MSD (Yes or No)

1631E Mercury, Low Level (CVAFS)

1677 -Available CN

SM4500_S2_D-Sulfide

350.1 351.2, 365.1 HACH8000_NP COD

5310C Total Organic Carbon (TOC)

2320B, 300_ORGFM_28D, 300_ORGFMS, TON

2120B, 4500_CL_G, 5540C, 7196A, 7196A_CR3

200.8 Custom List 22 Analytes

608.3_PCB, 625.1 624.1 VOCs+ Ac/Ac/2CVE+TTHMs

2540D (TSS), 2540C_Calcd (TDS)

1664B_NP HEM Only

SM4500SO3_B Sulfite

360.1 SM5210B_Calc, SM5210B_CBODCal

Total Number of containers

Special Instructions/Note:

Field pH.

Temp:

Temp: 54.9 IR ID: HOU-368

Corrected Temp: 5.6

Possible Hazard Identification

☐ Non-Hazard ☐ Flammable ☐ Skin Irritant ☐ Poison B ☐ Unknown ☐ Radiological

Deliverable Requested I II III IV Other (specify)

Sample Disposal (A fee may be assessed if samples are retained longer than 1 month)

☐ Return To Client ☐ Disposal By Lab ☐ Archive For Months

Empty Kit Relinquished by:

Relinquished by:

Relinquished by:

Relinquished by:

Custody Seals Intact:

Custody Seal No.

Cooler Temperature(s) °C and Other Remarks:

Ver 01/16/2019

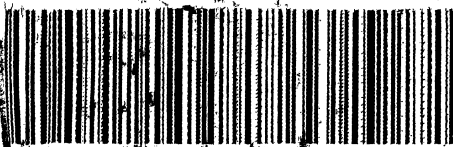
Ver: 06/08/2021

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<https://www.fedex.com/shipping/shipAction.handle?method=doContinue>

2:25 PM

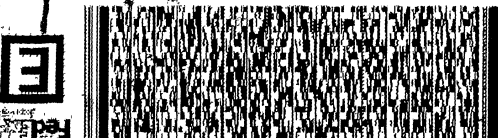
Use Ship Manager - Print Your Label(s)



XS PNSA

3254

THU - 11 APR 10:30A
PRIORITY OVERNIGHT



Handwritten: 70.1 lbs

TO
BENJAMIN WHATLEY
EUROFINS PENSACOLA
3355 MCLEMORE DRIVE
PENSACOLA FL 32514

ORIGIN: 9604 (281) 243-4300
MEMPHIS AIRPORT OFFICES
2200 HOUSTON
4145 GREENHURST DR
STAFFORD, TX 77477
UNITED STATES
DHL 6506th
CAO: 110180707/MET1720
ACTWST: 10 00 0A



14

14

Login Sample Receipt Checklist

Client: Messer LLC

Job Number: 860-71662-1

Login Number: 71662

List Source: Eurofins Houston

List Number: 1

Creator: Torres, Sandra

Question	Answer	Comment
Radioactivity wasn't checked or is \leq background as measured by a survey meter.	True	
The cooler's custody seal, if present, is intact.	True	
Sample custody seals, if present, are intact.	True	
The cooler or samples do not appear to have been compromised or tampered with.	True	
Samples were received on ice.	True	
Cooler Temperature is acceptable.	True	
Cooler Temperature is recorded.	True	
COC is present.	True	
COC is filled out in ink and legible.	True	
COC is filled out with all pertinent information.	True	
Is the Field Sampler's name present on COC?	True	
There are no discrepancies between the containers received and the COC.	True	
Samples are received within Holding Time (excluding tests with immediate HTs)	True	
Sample containers have legible labels.	True	
Containers are not broken or leaking.	True	
Sample collection date/times are provided.	True	
Appropriate sample containers are used.	True	
Sample bottles are completely filled.	True	
Sample Preservation Verified.	True	
There is sufficient vol. for all requested analyses, incl. any requested MS/MSDs	True	
Containers requiring zero headspace have no headspace or bubble is $<6\text{mm}$ (1/4").	True	
Multiphasic samples are not present.	True	
Samples do not require splitting or compositing.	True	
Residual Chlorine Checked.	True	

Login Sample Receipt Checklist

Client: Messer LLC

Job Number: 860-71662-1

Login Number: 71662

List Number: 2

Creator: Arroyo, Haley

List Source: Eurofins Lancaster Laboratories Environment Testing, LLC

List Creation: 04/11/24 11:54 AM

Question	Answer	Comment
The cooler's custody seal is intact.	N/A	
The cooler or samples do not appear to have been compromised or tampered with.	True	
Samples were received on ice.	True	
Cooler Temperature acceptable,where thermal pres is required(</=6C, not frozen).	True	
Cooler Temperature is recorded.	True	
WV:Container Temp acceptable,where thermal pres is required (</=6C, not frozen).	N/A	
WV: Container Temperature is recorded.	N/A	
COC is present.	True	
COC is filled out in ink and legible.	True	
COC is filled out with all pertinent information.	True	
There are no discrepancies between the containers received and the COC.	True	
Sample containers have legible labels.	True	
Containers are not broken or leaking.	True	
Sample collection date/times are provided.	True	
Appropriate sample containers are used.	True	
Sample bottles are completely filled.	True	
There is sufficient vol. for all requested analyses.	True	
Is the Field Sampler's name present on COC?	False	Received project as a subcontract.
Sample custody seals are intact.	N/A	
VOA sample vials do not have headspace >6mm in diameter (none, if from WV)?	N/A	

Login Sample Receipt Checklist

Client: Messer LLC

Job Number: 860-71662-1

Login Number: 71662

List Number: 4

Creator: Santiago, Nathaniel

List Source: Eurofins Lancaster Laboratories Environment Testing, LLC

List Creation: 04/24/24 11:30 AM

Question	Answer	Comment
The cooler's custody seal is intact.	N/A	
The cooler or samples do not appear to have been compromised or tampered with.	True	
Samples were received on ice.	True	
Cooler Temperature acceptable, where thermal pres is required ($\leq 6^{\circ}\text{C}$, not frozen).	True	
Cooler Temperature is recorded.	True	
WV: Container Temp acceptable, where thermal pres is required ($\leq 6^{\circ}\text{C}$, not frozen).	N/A	
WV: Container Temperature is recorded.	N/A	
COC is present.	True	
COC is filled out in ink and legible.	True	
COC is filled out with all pertinent information.	True	
There are no discrepancies between the containers received and the COC.	True	
Sample containers have legible labels.	True	
Containers are not broken or leaking.	True	
Sample collection date/times are provided.	True	
Appropriate sample containers are used.	True	
Sample bottles are completely filled.	True	
There is sufficient vol. for all requested analyses.	True	
Is the Field Sampler's name present on COC?	False	Received project as a subcontract.
Sample custody seals are intact.	N/A	
VOA sample vials do not have headspace $> 6\text{mm}$ in diameter (none, if from WV)?	N/A	

Login Sample Receipt Checklist

Client: Messer LLC

Job Number: 860-71662-1

Login Number: 71662

List Number: 3

Creator: Earnest, Tamantha

List Source: Eurofins Pensacola

List Creation: 04/13/24 02:51 PM

Question	Answer	Comment
Radioactivity wasn't checked or is \leq background as measured by a survey meter.	N/A	
The cooler's custody seal, if present, is intact.	N/A	
Sample custody seals, if present, are intact.	N/A	
The cooler or samples do not appear to have been compromised or tampered with.	True	
Samples were received on ice.	True	
Cooler Temperature is acceptable.	True	
Cooler Temperature is recorded.	True	1.7°C IR8
COC is present.	True	
COC is filled out in ink and legible.	True	
COC is filled out with all pertinent information.	True	
Is the Field Sampler's name present on COC?	True	
There are no discrepancies between the containers received and the COC.	True	
Samples are received within Holding Time (excluding tests with immediate HTs)	True	
Sample containers have legible labels.	True	
Containers are not broken or leaking.	True	
Sample collection date/times are provided.	True	
Appropriate sample containers are used.	True	
Sample bottles are completely filled.	True	
Sample Preservation Verified.	N/A	
There is sufficient vol. for all requested analyses, incl. any requested MS/MSDs	True	
Containers requiring zero headspace have no headspace or bubble is $<6\text{mm}$ (1/4").	N/A	
Multiphasic samples are not present.	True	
Samples do not require splitting or compositing.	True	
Residual Chlorine Checked.	N/A	

TR.1.0.5.b – Chemical Information
Safety Datasheets

Attachment – T.R.1.0-5.b – Cooling Tower and Boiler Chemicals Information

<u>Product</u>	<u>Use</u>	<u>Chemicals listed in SDS</u>	<u>CAS</u>	<u>Toxicity Data in SDS</u>
3DT394	Water treatment	No hazardous ingredient listed	N/A	Yes
71D5 PLUS	Antifoam	Straight run middle distillate	64741-44-2	Yes
		Hdrotreated light distillate	64742-47-8	
		Polypropylene glycol	25322-69-4	
		1-octanol	111-87-5	
		Fatty alkyl polyglycol	N/A	
		Aliphatic alcohol	N/A	
		Paraffin wax	8002-74-2	
3D TRASAR 3DT198	Water treatment	Sodium tolyltriazole	64665-57-2	Yes, high human hazard.
DOD Free Chlorine Reagent	Chlorine analysis	Sodium phosphate, dibasic	7558-79-4	Yes
		N,N-diethyl-p-phenylenediamine, salt	N/A	
		Disodium ethylenediaminetetraacetic acid (EDTA)	139-33-3	
		Carboxylate salt	N/A	
Liquichlor (Sodium hypochlorite)	Biocide	Sodium hypochlorite	7681-52-9	Yes
		Sodium hydroxide	1310-73-2	
Sulfuric acid	pH control	Sulfuric acid	7664-93-9	Yes
3DT TRASAR 3DT175	Water treatment	Inorganic Phosphate	N/A	Yes
		Inorganic Polyphosphate	N/A	
Boilermate 1200S	Boiler water treatment	Silicic acid, sodium salt	1344-09-8	Yes
		Potassium hydroxide	1310-58-3	
		Tetrasodium salt of ethylenediaminetetraacetic acid tetrahydrate	13235-36-4	



SAFETY DATA SHEET

13

PRODUCT

3D TRASAR® 3DT198

EMERGENCY TELEPHONE NUMBER(S)

(800) 424-9300 (24 Hours) CHEMTREC

1. CHEMICAL PRODUCT AND COMPANY IDENTIFICATION

PRODUCT NAME :

3D TRASAR® 3DT198

COMPANY IDENTIFICATION :

Nalco Company
1601 W. Diehl Road
Naperville, Illinois
60563-1198

EMERGENCY TELEPHONE NUMBER(S) :

(800) 424-9300 (24 Hours) CHEMTREC

NFPA 704M/HMIS RATING

HEALTH : 3 / 3 FLAMMABILITY : 1 / 1 INSTABILITY : 0 / 0 OTHER :
0 = Insignificant 1 = Slight 2 = Moderate 3 = High 4 = Extreme * = Chronic Health Hazard

2. COMPOSITION/INFORMATION ON INGREDIENTS

Our hazard evaluation has identified the following chemical substance(s) as hazardous. Consult Section 15 for the nature of the hazard(s).

Hazardous Substance(s)	CAS NO	% (w/w)
Sodium Tolyltriazole	64665-57-2	30.0 - 60.0

3. HAZARDS IDENTIFICATION

EMERGENCY OVERVIEW

DANGER

Corrosive. May cause tissue damage. Harmful if swallowed.

Do not get in eyes, on skin or on clothing. Do not take internally. Use with adequate ventilation. In case of contact with eyes, rinse immediately with plenty of water and seek medical advice. After contact with skin, wash immediately with plenty of water. Use a mild soap if available.

Wear a face shield. Wear chemical resistant apron, chemical splash goggles, impervious gloves and boots.

Not flammable or combustible. May evolve oxides of carbon (COx) under fire conditions. May evolve oxides of nitrogen (NOx) under fire conditions.

PRIMARY ROUTES OF EXPOSURE :

Eye, Skin

HUMAN HEALTH HAZARDS - ACUTE :

EYE CONTACT :

Corrosive. Will cause eye burns and permanent tissue damage.

SKIN CONTACT :

Corrosive; causes permanent skin damage.

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For additional copies of an MSDS visit www.nalco.com and request access.



SAFETY DATA SHEET

PRODUCT

3D TRASAR® 3DT198

EMERGENCY TELEPHONE NUMBER(S)

(800) 424-9300 (24 Hours) CHEMTREC

SPECIAL PROTECTIVE EQUIPMENT FOR FIRE FIGHTING :

In case of fire, wear a full face positive-pressure self contained breathing apparatus and protective suit.

6. ACCIDENTAL RELEASE MEASURES

PERSONAL PRECAUTIONS :

Restrict access to area as appropriate until clean-up operations are complete. Use personal protective equipment recommended in Section 8 (Exposure Controls/Personal Protection). Stop or reduce any leaks if it is safe to do so. Keep people away from and upwind of spill/leak. Ventilate spill area if possible. Ensure clean-up is conducted by trained personnel only. Do not touch spilled material. Have emergency equipment (for fires, spills, leaks, etc.) readily available. Notify appropriate government, occupational health and safety and environmental authorities.

METHODS FOR CLEANING UP :

SMALL SPILLS: Soak up spill with absorbent material. Place residues in a suitable, covered, properly labeled container. Wash affected area. **LARGE SPILLS:** Contain liquid using absorbent material, by digging trenches or by diking. Reclaim into recovery or salvage drums or tank truck for proper disposal. Clean contaminated surfaces with water or aqueous cleaning agents. Contact an approved waste hauler for disposal of contaminated recovered material. Dispose of material in compliance with regulations indicated in Section 13 (Disposal Considerations).

ENVIRONMENTAL PRECAUTIONS :

Prevent material from entering sewers or waterways.

7. HANDLING AND STORAGE

HANDLING :

Do not get in eyes, on skin, on clothing. Do not take internally. Use with adequate ventilation. Do not breathe vapors/gases/dust. Avoid generating aerosols and mists. Have emergency equipment (for fires, spills, leaks, etc.) readily available. Ensure all containers are labeled. Do not mix with acids.

STORAGE CONDITIONS :

Protect product from freezing. Store the containers tightly closed. Store separately from acids. Store in suitable labeled containers.

SUITABLE CONSTRUCTION MATERIAL :

Stainless Steel 304, Compatibility with Plastic Materials can vary; we therefore recommend that compatibility is tested prior to use.

8. EXPOSURE CONTROLS/PERSONAL PROTECTION

OCCUPATIONAL EXPOSURE LIMITS :

This product does not contain any substance that has an established exposure limit.

ENGINEERING MEASURES :

General ventilation is recommended. Use local exhaust ventilation if necessary to control airborne mist and vapor.

**SAFETY DATA SHEET****PRODUCT****3D TRASAR® 3DT198****EMERGENCY TELEPHONE NUMBER(S)****(800) 424-9300 (24 Hours) CHEMTREC****10. STABILITY AND REACTIVITY****STABILITY :**

Stable under normal conditions.

HAZARDOUS POLYMERIZATION :

Hazardous polymerization will not occur.

CONDITIONS TO AVOID :

Freezing temperatures.

MATERIALS TO AVOID :

Contact with strong acids (e.g. sulfuric, phosphoric, nitric, hydrochloric, chromic, sulfonic) may generate heat, splattering or boiling and toxic vapors. Contact with strong oxidizers (e.g. chlorine, peroxides, chromates, nitric acid, perchlorate, concentrated oxygen, permanganate) may generate heat, fires, explosions and/or toxic vapors.

HAZARDOUS DECOMPOSITION PRODUCTS :

Under fire conditions: Oxides of carbon, Oxides of nitrogen

11. TOXICOLOGICAL INFORMATION

The following results are for the product.

ACUTE ORAL TOXICITY :

Species: Rat
LD50: 640 mg/kg
Test Descriptor: Product

ACUTE DERMAL TOXICITY :

Species: Rabbit
LD50: > 2,000 mg/kg
Test Descriptor: Product

SENSITIZATION :

This product is not expected to be a sensitizer.

CARCINOGENICITY :

None of the substances in this product are listed as carcinogens by the International Agency for Research on Cancer (IARC), the National Toxicology Program (NTP) or the American Conference of Governmental Industrial Hygienists (ACGIH).

HUMAN HAZARD CHARACTERIZATION :

Based on our hazard characterization, the potential human hazard is: High

**SAFETY DATA SHEET****PRODUCT****3D TRASAR® 3DT198****EMERGENCY TELEPHONE NUMBER(S)****(800) 424-9300 (24 Hours) CHEMTREC**

The portion in water is expected to be soluble or dispersible.

BIOACCUMULATION POTENTIAL

This preparation or material is not expected to bioaccumulate.

ENVIRONMENTAL HAZARD AND EXPOSURE CHARACTERIZATION

Based on our hazard characterization, the potential environmental hazard is: Moderate

If released into the environment, see CERCLA/SUPERFUND in Section 15.

13. DISPOSAL CONSIDERATIONS

If this product becomes a waste, it is not a hazardous waste as defined by the Resource Conservation and Recovery Act (RCRA) 40 CFR 261, since it does not have the characteristics of Subpart C, nor is it listed under Subpart D.

As a non-hazardous waste, it is not subject to federal regulation. Consult state or local regulation for any additional handling, treatment or disposal requirements. For disposal, contact a properly licensed waste treatment, storage, disposal or recycling facility.

14. TRANSPORT INFORMATION

The information in this section is for reference only and should not take the place of a shipping paper (bill of lading) specific to an order. Please note that the proper Shipping Name / Hazard Class may vary by packaging, properties, and mode of transportation. Typical Proper Shipping Names for this product are as follows.

LAND TRANSPORT :

Proper Shipping Name :	CAUSTIC ALKALI LIQUID, N.O.S.
Technical Name(s) :	SODIUM TOLYLTRIAZOLE
UN/ID No :	UN 1719
Hazard Class - Primary :	8
Packing Group :	II
Flash Point :	Not flammable

AIR TRANSPORT (ICAO/IATA) :

Proper Shipping Name :	CAUSTIC ALKALI LIQUID, N.O.S.
Technical Name(s) :	SODIUM TOLYLTRIAZOLE
UN/ID No :	UN 1719
Hazard Class - Primary :	8
Packing Group :	II

MARINE TRANSPORT (IMDG/IMO) :

Proper Shipping Name :	CAUSTIC ALKALI LIQUID, N.O.S.
Technical Name(s) :	SODIUM TOLYLTRIAZOLE
UN/ID No :	UN 1719

**SAFETY DATA SHEET****PRODUCT****3D TRASAR® 3DT198****EMERGENCY TELEPHONE NUMBER(S)****(800) 424-9300 (24 Hours) CHEMTREC**

FOOD AND DRUG ADMINISTRATION (FDA) Federal Food, Drug and Cosmetic Act :

When use situations necessitate compliance with FDA regulations, this product is acceptable under : 21 CFR 176.170 Components of paper and paperboard in contact with aqueous and fatty foods and 21 CFR 176.180 Components of paper and paperboard in contact with dry foods.

Limitation: For use only as a corrosion inhibitor at the bronze couch roll at a maximum concentration of 5 ppm as product in the spray flow.

This product has been certified as KOSHER/PAREVE for year-round use EXCEPT FOR THE PASSOVER SEASON by the CHICAGO RABBINICAL COUNCIL.

FEDERAL WATER POLLUTION CONTROL ACT, CLEAN WATER ACT, 40 CFR 401.15 / formerly Sec. 307, 40 CFR 116.4 / formerly Sec. 311 :

This product may contain trace levels (<0.1% for carcinogens, <1% all other substances) of the following substance(s) listed under the regulation. Additional components may be unintentionally present at trace levels.

Substance(s)	Citations
• Sodium Hydroxide	Sec. 311

CLEAN AIR ACT, Sec. 112 (Hazardous Air Pollutants, as amended by 40 CFR 63), Sec. 602 (40 CFR 82, Class I and II Ozone Depleting Substances) :

Substances listed under this regulation are not intentionally added or expected to be present in this product. Listed components may be present at trace levels.

CALIFORNIA PROPOSITION 65 :

Substances listed under California Proposition 65 are not intentionally added or expected to be present in this product.

MICHIGAN CRITICAL MATERIALS :

Substances listed under this regulation are not intentionally added or expected to be present in this product. Listed components may be present at trace levels.

STATE RIGHT TO KNOW LAWS :

The following substances are disclosed for compliance with State Right to Know Laws:

Sodium Tolytriazole	64665-57-2
Sodium Hydroxide	1310-73-2

INTERNATIONAL CHEMICAL CONTROL LAWS :

CANADIAN ENVIRONMENTAL PROTECTION ACT (CEPA) :

The substance(s) in this preparation are included in or exempted from the Domestic Substance List (DSL).

**SAFETY DATA SHEET****PRODUCT****3D TRASAR® 3DT198****EMERGENCY TELEPHONE NUMBER(S)****(800) 424-9300 (24 Hours) CHEMTREC**

Integrated Risk Information System, U.S. Environmental Protection Agency, Washington, D.C. (TOMES CPS™ CD-ROM Version),
Micromedex, Inc., Englewood, CO.

Annual Report on Carcinogens, National Toxicology Program, U.S. Department of Health and Human Services, Public Health Service.

Title 29 Code of Federal Regulations, Part 1910, Subpart Z, Toxic and Hazardous Substances, Occupational Safety and Health Administration (OSHA), (Ariel Insight™ CD-ROM Version), Ariel Research Corp., Bethesda, MD.

Registry of Toxic Effects of Chemical Substances, National Institute for Occupational Safety and Health, Cincinnati, OH,
(TOMES CPS™ CD-ROM Version), Micromedex, Inc., Englewood, CO.

Ariel Insight™ (An integrated guide to industrial chemicals covered under major regulatory and advisory programs), North American Module, Western European Module, Chemical Inventories Module and the Generics Module (Ariel Insight™ CD-ROM Version), Ariel Research Corp., Bethesda, MD.

The Teratogen Information System, University of Washington, Seattle, WA (TOMES CPS™ CD-ROM Version),
Micromedex, Inc., Englewood, CO.

Prepared By : Product Safety Department
Date issued : 03/10/2011
Version Number : 1.6

World Headquarters
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Loveland, CO USA 80539
(970) 669-3050

Page 2
Date Printed 7/21/15
MSDS No: M00109

Sodium Phosphate, Dibasic

CAS Number: 7558-79-4

Chemical Formula: Na_2HPO_4

GHS Classification: Skin Irrit. 2, H315; Eye Irrit. 2A, H319

Percent Range (Trade Secret): 30.0 - 40.0

Percent Range Units: weight / weight

PEL: 15 mg/m³ as inhalable dust; 5 mg/m³ as respirable dust

TLV: 10 mg/m³ as inhalable dust; 3 mg/m³ as respirable dust

WHMIS Symbols: Not applicable

Salt of N,N-Diethyl-p-Phenylenediamine

CAS Number: Confidential

Chemical Formula: Confidential

GHS Classification: Acute Tox. 4, H302; Eye Irrit. 2, H319; Aquatic Chrn. 3, H412

Percent Range (Trade Secret): < 5.0

Percent Range Units: weight / weight

PEL: 15 mg/m³ as inhalable dust; 5 mg/m³ as respirable dust

TLV: 10 mg/m³ as inhalable dust; 3 mg/m³ as respirable dust

HMIRC Registry Number 8081 Granted: 12/02/24

WHMIS Symbols: Other Toxic Effects

Disodium EDTA

CAS Number: 139-33-3

WHMIS Symbols: Not applicable

4. FIRST AID MEASURES

General Information: In the event of exposure, show this Material Safety Data Sheet and label (where possible) to a doctor.

Advice to doctor: Treat symptomatically.

Eye Contact: Immediately flush eyes with water for 15 minutes. Call physician if irritation develops.

Skin Contact (First Aid): Wash skin with soap and plenty of water. Call physician if irritation develops. Remove contaminated clothing.

Inhalation: Remove to fresh air. Give artificial respiration if necessary. If you feel unwell, contact a physician

Ingestion (First Aid): Never give anything by mouth to an unconscious person. Call physician immediately. Give large quantities of water or milk. If you feel unwell, contact a physician.

5. FIRE FIGHTING MEASURES

Flammable Properties: Material is not classified as flammable according to GHS criteria. Can burn in fire, releasing toxic vapors.

Fire Fighting Instruction: As in any fire, wear self-contained breathing apparatus pressure-demand and full protective gear.

Extinguishing Media: Use media appropriate to surrounding fire conditions

Extinguishing Media NOT To Be Used: Not applicable

Fire / Explosion Hazards: May react violently with: strong oxidizers

Hazardous Combustion Products: Toxic fumes of: carbon monoxide, carbon dioxide, phosphorus oxides, nitrogen oxides.

6. ACCIDENTAL RELEASE MEASURES

Spill Response Notice:

Only persons properly qualified to respond to an emergency involving hazardous substances may respond to a spill according to federal regulations (OSHA 29 CFR 1910.120(a)(v)) and per your company's emergency response plan and guidelines/procedures. See Section 13, Special Instructions for disposal assistance. Outside of the US, only persons properly qualified according to state or local regulations should respond to a spill involving chemicals.

Containment Technique: Stop spilled material from being released to the environment. Releases of this material may contaminate the environment.

Clean-up Technique: Scoop up spilled material into a large beaker and dissolve with water. Decontaminate the area of the spill with a soap solution. If permitted by regulation, Flush reacted material to the drain with a large excess of water. Otherwise, Dispose of in accordance with local, state and federal regulations or laws.

Evacuation Procedure: Evacuate as needed to perform spill clean-up. If conditions warrant, increase the size of the evacuation.

DOT Emergency Response Guide Number: Not applicable

7. HANDLING AND STORAGE

Handling: Avoid contact with eyes, skin, clothing. Use with adequate ventilation. Do not breathe dust. Wash thoroughly after handling. Maintain general industrial hygiene practices when using this product.

Storage: Store between 10° and 25°C. Protect from: light, moisture, heat. Keep away from: oxidizers

Flammability Class: Not applicable

8. EXPOSURE CONTROLS / PERSONAL PROTECTION

Engineering Controls: Use general ventilation to minimize exposure to mist, vapor or dust. Maintain general industrial hygiene practices when using this product.

Personal Protective Equipment:

Eye Protection: safety glasses with top and side shields

Skin Protection: nitrile gloves. In the EU, the selected gloves must satisfy the specifications of EU Directive 89/686/EEC and standard EN 374 derived from it. lab coat

Hazardous Decomposition: Heating to decomposition releases toxic and/or corrosive fumes of: carbon dioxide carbon monoxide phosphorus oxides nitrogen oxides

Conditions to Avoid: Exposure to light. Excess moisture Heating to decomposition. Contact with oxidizers Poor Ventilation

11. TOXICOLOGICAL INFORMATION

Toxicokinetics, Metabolism and Distribution: No information available for mixture.

Toxicologically Synergistic Products: None reported

Acute Toxicity: Practically Non-toxic Based on classification principles, the classification criteria are not met.

Specific Target Organ Toxicity - Single Exposure (STOT-SE): Based on classification principles, the classification criteria are not met.

Specific Target Organ Toxicity - Repeat Exposure (STOT-RE): Based on classification principles, the classification criteria are not met.

Skin Corrosion/Irritation: Irritating to skin.

Eye Damage: Irritating to eyes.

Sensitization: Based on classification principles, the classification criteria are not met.

CMR Effects/Properties (carcinogenic, mutagenic or toxic to reproduction): Based on classification principles, the classification criteria are not met. Summary of findings reported in the literature follow.

Disodium EDTA: Cytogenetic Analysis - Hamster Lung - 200 mg/L

IARC Listed: No

This product does NOT contain any NTP listed chemicals.

This product does NOT contain any OSHA listed carcinogens.

Symptoms/Effects:

Ingestion: DPD LD50 studies revealed decreased locomotor activity, depressed respiration, muscle spasms, loss of righting reflex and death. Autopsies revealed ulcerated stomach, enteritis, gas and congested lungs. Very large doses may cause: gastrointestinal tract irritation diarrhea nausea vomiting irritation of the mouth and esophagus fever lethargy muscular cramps calcium deficiency in the blood kidney damage

Inhalation: Large doses may cause: irritation of nose and throat

Skin Absorption: No effects anticipated

Chronic Effects: DPD may cause allergic skin reactions in some people causing severe skin rashes and itching.

Chronic overexposure may cause low levels of calcium in the blood kidney damage

Medical Conditions Aggravated: Allergy or sensitivity to salts of N,N-Diethyl-p-phenylenediamine Pre-existing: Eye conditions Skin conditions Respiratory conditions

12. ECOLOGICAL INFORMATION

Product Ecological Information: --

No ecological data available for this product. Based on classification principles, not classified as hazardous to the environment.

Method Used for Estimation of Aquatic Toxicity of Mixture Summation Method M-factor (Multiplier) for highly toxic ingredients: 1

Ingredient Ecological Information: Salt of N,N-Diethyl-p-Phenylenediamine: 48 hr Daphnia magna EC50 = 10.8 mg/L; 24 hr NOEC = 3.1 mg/L; 48 hr NOEC = 3.1 mg/L; EDTA, disodium salt: 96 hr Bluegill LC50 = 159 mg/L; 72 hr Green algae ErC50 = 10-100 mg/L.

CEPA categorization for ingredients are as follows:

EDTA, disodium salt: Not persistent, bioaccumulative or inherently toxic to aquatic organisms.

Sodium Phosphate, Dibasic: Persistent, not bioaccumulative and not inherently toxic to aquatic organisms.

13. DISPOSAL CONSIDERATIONS

EPA Waste ID Number: Not applicable

Special Instructions (Disposal): Dilute to 3 to 5 times the volume with cold water. If permitted by regulation, Open cold water tap completely, slowly pour the material to the drain. Allow cold water to run for 5 minutes to completely flush the system. Otherwise, Check with local municipal and state authorities and waste contractors for pertinent local information regarding the proper disposal of chemicals.

Empty Containers: Working in a well-ventilated area, Rinse three times with an appropriate solvent. Collect rinsate and dispose of according to local, state or federal regulations. In the US, rinsate from empty containers is classified as

California Perchlorate Rule CCR Title 22 Chap 33: Not applicable

Trade Secret Registry: New Jersey Trade Secret Registry Number 80100131-5001 (Carboxylate Salt) New Jersey Trade Secret Registry Number 80100131-5002 (DPD Salt) New York Trade Secret Registry Number 478 (DPD Salt) New York Trade Secret Registry Number 479 (Carboxylate Salt) This product complies with Pennsylvania Trade Secret Regulations. This product is registered as a trade secret in the state of Illinois. This product is registered as a trade secret in the state of Massachusetts. This product is registered as a trade secret in the state of New York.

National Inventories:

U.S. Inventory Status: All ingredients in this product are listed on the TSCA 8(b) Inventory (40 CFR 710).

CAS Number: Not applicable

Canadian Inventory Status: All ingredients of this product are DSL/NDL Listed.

EEC Inventory Status: All ingredients used to make this product are listed on EINECS / ELINCS or are placed on the market in quantities less than 10 kg per year.

Australian Inventory (AICS) Status: Exempt. Annual Report Required.

New Zealand Inventory (NZIoC) Status: All components either listed or exempt.

Korean Inventory (KECI) Status: All components of this product are either listed, listed as the anhydrous compound or exempt.

Japan (ENCS) Inventory Status: All components either listed or exempt.

China (PRC) Inventory (MEP) Status: All components either listed or exempt.

16. OTHER INFORMATION

References: TLV's Threshold Limit Values and Biological Exposure Indices for 1992-1993. American Conference of Governmental Industrial Hygienists, 1992. Air Contaminants, Federal Register, Vol. 54, No. 12. Thursday, January 19, 1989. pp. 2332-2983. In-house information. Technical Judgment. Outside Testing. Sax, N. Irving. Dangerous Properties of Industrial Materials, 7th Ed. New York: Van Nostrand Reinhold Co., 1989.

Complete Text of H phrases referred to in Section 3: H302 Harmful if swallowed. Not applicable H315 Causes skin irritation. H319 Causes serious eye irritation. H401 Toxic to aquatic life. H412 Harmful to aquatic life with long lasting effects.

Revision Summary: Substantial revision to comply with EU Reg 1272/2008, Reg 1907/2006 and UN GHS (ST/SG/AC.10/36/Add.3).

Date of MSDS Preparation:

Day: 04

Month: March

Year: 2014

MSDS Prepared: MSDS prepared by Product Compliance Department extension 3350.

CCOHS Evaluation Note: This product has been classified and labeled in accordance with the requirements of GHS (ST/SG/AC.10/36/Add.3). It is offered under the interim policy that was established by Health Canada permitting use of GHS-formatted safety data sheets in Canada prior to revision of CPR to GHS. It is offered under exemption from WHMIS labeling as specified in the Controlled Products Regulation (CPR) Section 17.

Legend:

NA - Not Applicable

ND - Not Determined

NV - Not Available

w/w - weight/weight

w/v - weight/volume

v/v - volume/volume

USER RESPONSIBILITY: Each user should read and understand this information and incorporate it in individual site safety programs in accordance with applicable hazard communication standards and regulations.

THE INFORMATION CONTAINED HEREIN IS BASED ON DATA CONSIDERED TO BE ACCURATE. HOWEVER, NO WARRANTY IS EXPRESSED OR IMPLIED REGARDING THE ACCURACY OF THESE DATA OR THE RESULTS TO BE OBTAINED FROM THE USE THEREOF.

HACH COMPANY ©2015

COMPANY IDENTITY: Univar
PRODUCT IDENTITY: Liquichlor 10-16% (Sodium Hypochlorite 10-16%)

DATE: 07/22/15
PAGE: 2 OF 8

SECTION 4. FIRST AID MEASURES

EYE CONTACT:

If this product enters the eyes, open eyes while under gently running water. Use sufficient force to open eyelids. "Roll" eyes to expose more surface. Minimum flushing is for 15 minutes. Seek immediate medical attention.

SKIN CONTACT:

If the product contaminates the skin, immediately begin decontamination with running water. Minimum flushing is for 15 minutes. Remove contaminated clothing, taking care not to contaminate eyes. If skin becomes irritated and irritation persists, medical attention may be necessary. Wash contaminated clothing before reuse, discard contaminated shoes.

INHALATION:

After high vapor exposure, remove to fresh air. If it is suspected that fumes are still present, the rescuer should wear an appropriate mask or self-contained breathing apparatus. Keep person warm and at rest. breathing is difficult, give oxygen. If breathing has stopped, trained personnel should immediately begin artificial respiration. It may be dangerous to the person providing aid to give mouth-to-mouth resuscitation. If unconscious, place in recovery position and get medical attention immediately. Maintain an open airway. Loosen tight clothing such as a collar, tie, belt or waistband. If the heart has stopped, trained personnel should immediately begin cardiopulmonary resuscitation (CPR). Seek immediate medical attention. In case of inhalation of decomposition products in a fire, symptoms may be delayed. The exposed person may need to be kept under medical surveillance for 48 hours.

SWALLOWING:

If swallowed, CALL PHYSICIAN OR POISON CONTROL CENTER FOR MOST CURRENT INFORMATION. If professional advice is not available, give two glasses of water to drink. DO NOT INDUCE VOMITING. Never induce vomiting or give liquids to someone who is unconscious, having convulsions, or unable to swallow. Seek immediate medical attention.

NOTES TO PHYSICIAN:

There is no specific antidote. Treatment of overexposure should be directed at the control of symptoms and the clinical condition of the patient. Any material aspirated during vomiting may cause lung injury. Therefore, emesis should not be induced mechanically or pharmacologically. If it is considered necessary to evacuate the stomach contents, this should be done by means least likely to cause aspiration (such as: Gastric lavage after endotracheal intubation).

Victims of chemical exposure must be taken for medical attention. Rescuers should be taken for medical attention, if necessary. Take a copy of label and SDS to physician or health professional with victim.

SECTION 5. FIRE FIGHTING MEASURES

FIRE & EXPLOSION PREVENTIVE MEASURES

Not Applicable.

EXTINGUISHING MEDIA

Use dry powder, foam, carbon dioxide, water spray, halon, or any "ABC" Class extinguisher.

SPECIAL FIRE FIGHTING PROCEDURES

Water spray may be ineffective on fire but can protect fire-fighters & cool closed containers. Use fog nozzles if water is used.
Do not enter confined fire-space without full bunker gear.
(Helmet with face shield, bunker coats, gloves & rubber boots).
Use NIOSH approved positive-pressure self-contained breathing apparatus.

UNUSUAL EXPLOSION AND FIRE PROCEDURES

Noncombustible.
Isolate from reducers, acids, wood, organic materials, and most metals.
Oxidizer fumes damage lungs. Symptoms may be delayed. Do not breathe fumes.

COMPANY IDENTITY: Univar
PRODUCT IDENTITY: Liquichlor 10-16% (Sodium Hypochlorite 10-16%)

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SECTION 7. HANDLING AND STORAGE (CONTINUED)

TANK CAR SHIPMENTS:

Tank cars carrying this product should be loaded and unloaded in strict accordance with tank-car manufacturer's recommendation and all established on-site safety procedures. Appropriate personal protective equipment must be used (see Section 8, Engineering Controls and Personal Protective Equipment.). All loading and unloading equipment must be inspected, prior to each use. Loading and unloading operations must be attended, at all times. Tank cars must be level, brakes must be set or wheels must be locked or blocked prior to loading or unloading. Tank car (for loading) or storage tanks (for unloading) must be verified to be correct for receiving this product and be properly prepared, prior to starting the transfer operations. Hoses must be verified to be in the correct positions, before starting transfer operations. A sample (if required) must be taken and verified (if required) prior to starting transfer operations. All lines must be blown-down and purged before disconnecting them from the tank car or vessel.

PROTECTIVE PRACTICES DURING MAINTENANCE OF CONTAMINATED EQUIPMENT:

Follow practices indicated in Section 6 (Accidental Release Measures). Make certain application equipment is locked and tagged-out safely. Always use this product in areas where adequate ventilation is provided. Collect all rinsates and dispose of according to applicable Federal, State, or local procedures.

SECTION 8. EXPOSURE CONTROLS/PERSONAL PROTECTION

MATERIAL	CAS#	EINECS#	TWA (OSHA)	TLV (ACGIH)
Water	7732-18-5	231-791-2	None Known	None Known
Sodium Hydroxide	1310-73-2	-	2 mg/m3	None Known
Sodium Hypochlorite	7681-52-9	-	None Known	None Known

MATERIAL	CAS#	EINECS#	CEILING	STEL (OSHA/ACGIH)	HAP
Sodium Hydroxide	1310-73-2	-	2 mg/m3	None Known	No

This product contains no EPA Hazardous Air Pollutants (HAP) in amounts > 0.1%.

RESPIRATORY EXPOSURE CONTROLS

Maintain airborne contaminant concentrations below exposure limits given above. If respiratory protection is needed, use only protection authorized in 29 CFR 1910.134, European Standard EN 149, or applicable State regulations. If adequate ventilation is not available or there is potential for airborne exposure above the exposure limits, a respirator may be worn up to the respirator exposure limitations, check with respirator equipment manufacturer's recommendations/limitations. For a higher level of protection, use positive pressure supplied air respiration protection or Self Contained Breathing Apparatus or if oxygen levels are below 19.5% or are unknown.

EMERGENCY OR PLANNED ENTRY INTO UNKNOWN CONCENTRATIONS OR IDLH CONDITIONS

Positive pressure, full-face piece Self Contained Breathing Apparatus; or positive pressure, full-face piece Self Contained Breathing Apparatus with an auxiliary positive pressure Self Contained Breathing Apparatus.

VENTILATION

LOCAL EXHAUST: Necessary MECHANICAL (GENERAL): Necessary
SPECIAL: None OTHER: None
Please refer to ACGIH document, "Industrial Ventilation, A Manual of Recommended Practices", most recent edition, for details.

EYE PROTECTION:

Splash goggles or safety glasses. Face-shields are recommended when the operation can generate splashes, sprays or mists.

HAND PROTECTION:

Wear appropriate impervious gloves for routine industrial use. Use impervious gloves for spill response, as stated in Section 6 of this SDS (Accidental Release Measures).

COMPANY IDENTITY: Univar
PRODUCT IDENTITY: Liquichlor 10-16% (Sodium Hypochlorite 10-16%)

DATE: 07/22/15
PAGE: 6 OF 8

SECTION 10. STABILITY & REACTIVITY (CONTINUED)

HAZARDOUS DECOMPOSITION PRODUCTS

Hydrogen Chloride, Phosgene, Sodium Oxide & Hydroxide from heating.

HAZARDOUS POLYMERIZATION

Will not occur.

SECTION 11. TOXICOLOGICAL INFORMATION

ACUTE HAZARDS

EYE & SKIN CONTACT:

Severe burns to skin, defatting, dermatitis.
Severe burns to eyes, redness, tearing, blurred vision.
Liquid can cause severe skin & eye burns. Wash thoroughly after handling.

INHALATION:

Severe respiratory tract irritation may occur. Vapor harmful. The applicable occupational exposure limit value should not be exceeded during any part of the working exposure.

SWALLOWING:

Harmful or fatal if swallowed.

SUBCHRONIC HAZARDS/CONDITIONS AGGRAVATED

CONDITIONS AGGRAVATED:

Sodium Hypochlorite, a component of this product, is a sensitizer. Prolonged or repeated skin contact can result in the development of rashes, welts, and other allergy-like symptoms.

CHRONIC HAZARDS

CANCER, REPRODUCTIVE & OTHER CHRONIC HAZARDS:

This product has no carcinogens listed by IARC, NTP, NIOSH, OSHA or ACGIH, as of this date, greater or equal to 0.1%.

MUTAGENICITY: This product is not reported to produce mutagenic effects in humans.

Human mutation data are available for Sodium Hypochlorite (a component of this product); these data were obtained during clinical studies involving specific tissues exposed to relatively high concentrations of this substance. Mutation data, obtained during clinical studies on test animal tissues or micro-organisms are available for Potassium Hydroxide.

EMBRYOTOXICITY: This product is not reported to produce embryotoxic effects in humans.

TERATOGENICITY: This product is not reported to produce teratogenic effects in humans.

REPRODUCTIVE TOXICITY: This product is not reported to cause reproductive effects in humans.

A mutagen is a chemical which causes permanent changes to genetic material (DNA) such that the changes will propagate through generational lines. An embryotoxin is a chemical which causes damage to a developing embryo (such as: within the eight weeks of pregnancy in humans), but the damage does not propagate across generational lines. A teratogen is a chemical which causes damage to a developing fetus, but the damage does not propagate across generational lines. A reproductive toxin is any substance which interferes in any way with the reproductive process.

MAMMALIAN TOXICITY INFORMATION

SODIUM HYDROXIDE:

Eye irritancy (monkey):	1%, 24 hours (severe)
Eye irritancy (rabbit):	500 ml, 24 hours (severe)
Eye irritancy (rabbit):	1% solution (severe)
Eye irritancy (rabbit):	1 mg, 24 hours (severe)
Cytogenic analysis system (grasshopper parenteral):	20 mg
LD50 (interperoneal, mouse):	40 mg/kg
LDLo (oral, rabbit):	500 mg/kg

COMPANY IDENTITY: Univar
PRODUCT IDENTITY: OX76685

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SECTION 15. REGULATORY INFORMATION

EPA REGULATION:

SARA SECTION 311/312 HAZARDS: Acute Health

All components of this product are on the TSCA list.
This material contains no known products restricted under SARA Title III,
Section 313 in amounts greater or equal to 1%.

SARA TITLE III INGREDIENTS	CAS#	EINECS#	WT%	(REG.SECTION)	RQ(LBS)
Sodium Hypochlorite	7681-52-9	-	< 16	(311,312)	100
Sodium Hydroxide	1310-73-2	-	<= 1.75	(311,312)	1000

> 625 LB / 284 KG OF THIS PRODUCT IN 1 CONTAINER EXCEEDS THE "RQ" OF SODIUM HYPOCHLORITE.
Any release equal to or exceeding the RQ must be reported to the National
Response Center (800-424-8802) and appropriate state and local regulatory
agencies as described in 40 CFR 302.6 and 40 CFR 355.40 respectively.
Failure to report may result in substantial civil and criminal penalties.
State & local regulations may be more restrictive than federal regulations.

STATE REGULATIONS:

CALIFORNIA PROPOSITION 65: This product contains no chemicals
known to the State of California to cause cancer & reproductive toxicity.

U.S. STATE REGULATED COMPONENTS: (HAZARDOUS SUBSTANCE LISTS):

COMPONENT	AK	CA	FL	IL	KS	MA	MI	MN
Sodium Hypochlorite	No	No	No	Yes	No	No	No	No
Sodium Hydroxide	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
COMPONENT	MO	NJ	ND	PA	RI	TX	WV	WI
Sodium Hypochlorite	No	Yes	Yes	No	No	No	No	No
Sodium Hydroxide	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes

INTERNATIONAL REGULATIONS

The components of this product are listed on the chemical inventories of the
following countries:
Australia (AICS), Canada (DSL, NDSL), China (IECSC), Europe (EINECS, ELINCS),
Japan (METI/CSCL, MHLW/ISHL), South Korea (KECI), New Zealand (NZIoC),
Philippines (PICCS), Switzerland (SWISS), Taiwan (NECSI), USA (TSCA).

CANADA: WORKPLACE HAZARDOUS MATERIALS INFORMATION SYSTEM (WHMIS)

C: Oxidizing Material.
D2B: Irritating to skin / eyes.
E: Corrosive Material.

SECTION 16. OTHER INFORMATION

HAZARD RATINGS:

HEALTH (NFPA): 3, HEALTH (HMIS): 3, FLAMMABILITY: 0, REACTIVITY: 1
(Personal Protection Rating to be supplied by user based on use conditions.)
This information is intended solely for the use of individuals
trained in the NFPA & HMIS hazard rating systems.

EMPLOYEE TRAINING

See Section 2 for Risk & Safety Statements. Employees should be made aware
of all hazards of this material (as stated in this SDS) before handling it.

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Most important symptoms and effects, both acute and delayed : See Section 11 for more detailed information on health effects and symptoms.

Section: 5. FIREFIGHTING MEASURES

Suitable extinguishing media : Use extinguishing measures that are appropriate to local circumstances and the surrounding environment.

Unsuitable extinguishing media : None known.

Specific hazards during firefighting : Not flammable or combustible.

Hazardous combustion products : Carbon oxides

Special protective equipment for firefighters : Use personal protective equipment.

Specific extinguishing methods : Fire residues and contaminated fire extinguishing water must be disposed of in accordance with local regulations.

Section: 6. ACCIDENTAL RELEASE MEASURES

Personal precautions, protective equipment and emergency procedures : Refer to protective measures listed in sections 7 and 8.

Environmental precautions : No special environmental precautions required.

Methods and materials for containment and cleaning up : Stop leak if safe to do so. Contain spillage, and then collect with non-combustible absorbent material, (e.g. sand, earth, diatomaceous earth, vermiculite) and place in container for disposal according to local / national regulations (see section 13). Flush away traces with water. For large spills, dike spilled material or otherwise contain material to ensure runoff does not reach a waterway.

Section: 7. HANDLING AND STORAGE

Advice on safe handling : For personal protection see section 8. Wash hands after handling.

Conditions for safe storage : Keep out of reach of children. Keep container tightly closed. Store in suitable labeled containers. Store separately from oxidizers. Store separately from bases.

Suitable material : Keep in properly labelled containers.

Unsuitable material : not determined

Section: 8. EXPOSURE CONTROLS/PERSONAL PROTECTION

Components with workplace control parameters

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Partition coefficient: n-octanol/water : no data available
Auto-ignition temperature : no data available
Thermal decomposition temperature : no data available
Viscosity, dynamic : 150 - 400 mPa.s (22.2 °C)
Viscosity, kinematic : no data available
VOC : 0 g/l

Section: 10. STABILITY AND REACTIVITY

Chemical stability : Stable under normal conditions.
Possibility of hazardous reactions : No dangerous reaction known under conditions of normal use.
Conditions to avoid : None known.
Hazardous decomposition products : Carbon oxides

Section: 11. TOXICOLOGICAL INFORMATION

Information on likely routes of exposure : Inhalation, Eye contact, Skin contact

Potential Health Effects

Eyes : Health injuries are not known or expected under normal use.
Skin : Health injuries are not known or expected under normal use.
Ingestion : Health injuries are not known or expected under normal use.
Inhalation : Health injuries are not known or expected under normal use.
Chronic Exposure : Health injuries are not known or expected under normal use.

Experience with human exposure

Eye contact : No symptoms known or expected.
Skin contact : No symptoms known or expected.
Ingestion : No symptoms known or expected.
Inhalation : No symptoms known or expected.

Toxicity

Product

Acute oral toxicity : no data available
Acute inhalation toxicity : no data available

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LC50 Ceriodaphnia dubia: 947 mg/l
Exposure time: 48 h
Test substance: Product

Persistence and degradability

Total Organic Carbon (TOC) : 470,000 mg/l

Chemical Oxygen Demand (COD): 230,000 mg/l

Biochemical Oxygen Demand (BOD):

Incubation Period	Value	Test Descriptor
5 d	1,200 mg/l	Product

Mobility

The environmental fate was estimated using a level III fugacity model embedded in the EPI (estimation program interface) Suite TM, provided by the US EPA. The model assumes a steady state condition between the total input and output. The level III model does not require equilibrium between the defined media. The information provided is intended to give the user a general estimate of the environmental fate of this product under the defined conditions of the models.
If released into the environment this material is expected to distribute to the air, water and soil/sediment in the approximate respective percentages;

Air	: <5%
Water	: 10 - 30%
Soil	: 70 - 90%

The portion in water is expected to be soluble or dispersible.

Bioaccumulative potential

no data available

Other information

no data available

Section: 13. DISPOSAL CONSIDERATIONS

Disposal methods	: Where possible recycling is preferred to disposal or incineration. If recycling is not practicable, dispose of in compliance with local regulations. Dispose of wastes in an approved waste disposal facility.
Disposal considerations	: Dispose of as unused product. Empty containers should be taken to an approved waste handling site for recycling or disposal. Do not re-use empty containers.

Section: 14. TRANSPORT INFORMATION

The shipper/consignor/sender is responsible to ensure that the packaging, labeling, and markings are in compliance with the selected mode of transport.

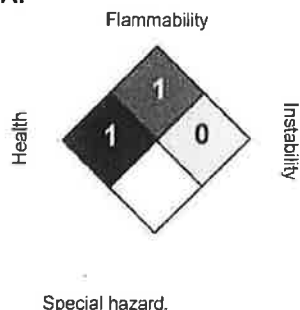
Land transport (DOT)

Proper shipping name : PRODUCT IS NOT REGULATED DURING

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NFPA:



HMIS III:

HEALTH	1
FLAMMABILITY	1
PHYSICAL HAZARD	0

0 = not significant, 1 = Slight,
2 = Moderate, 3 = High
4 = Extreme, * = Chronic

Revision Date : 11/10/2014
Version Number : 1.0
Prepared By : Regulatory Affairs

REVISED INFORMATION: Significant changes to regulatory or health information for this revision is indicated by a bar in the left-hand margin of the SDS.

The information provided in this Safety Data Sheet is correct to the best of our knowledge, information and belief at the date of its publication. The information given is designed only as a guidance for safe handling, use, processing, storage, transportation, disposal and release and is not to be considered a warranty or quality specification. The information relates only to the specific material designated and may not be valid for such material used in combination with any other materials or in any process, unless specified in the text.

For additional copies of an MSDS visit www.nalco.com and request access.

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Store in a well-ventilated place. Keep cool. Store locked up.

Disposal:

Dispose of contents/ container to an approved waste disposal plant.

Other hazards : None known.

Section: 3. COMPOSITION/INFORMATION ON INGREDIENTS

Pure substance/mixture : Mixture

Chemical Name	CAS-No.	Concentration: (%)
Straight Run Middle Distillate	64741-44-2	30 - 60
Hydrotreated Light Distillate	64742-47-8	10 - 30
Polypropylene Glycol	25322-69-4	5 - 10
1-Octanol	111-87-5	1 - 5
Fatty Alkyl Polyglycol	Proprietary	1 - 5
Aliphatic alcohol	Proprietary	1 - 5
Paraffin Wax	8002-74-2	1 - 5

Section: 4. FIRST AID MEASURES

In case of eye contact : Rinse with plenty of water. Get medical attention if symptoms occur.

In case of skin contact : Wash off with soap and plenty of water. Get medical attention if symptoms occur.

If swallowed : Do NOT induce vomiting. Never give anything by mouth to an unconscious person. Aspiration hazard if swallowed - can enter lungs and cause damage. Get medical attention immediately.

If inhaled : Get medical attention if symptoms occur.

Protection of first-aiders : In event of emergency assess the danger before taking action. Do not put yourself at risk of injury. If in doubt, contact emergency responders. Use personal protective equipment as required.

Notes to physician : Treat symptomatically.

Most important symptoms and effects, both acute and delayed : See Section 11 for more detailed information on health effects and symptoms.

Section: 5. FIREFIGHTING MEASURES

Suitable extinguishing media : Use extinguishing measures that are appropriate to local circumstances and the surrounding environment.

Unsuitable extinguishing media : High volume water jet

Specific hazards during firefighting : Fire Hazard
Keep away from heat and sources of ignition.
Flash back possible over considerable distance.

Hazardous combustion products : Carbon oxides

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Paraffin Wax	8002-74-2	TWA (Fumes)	2 mg/m3	ACGIH
		TWA (Fumes)	2 mg/m3	NIOSH REL

Engineering measures : Effective exhaust ventilation system Maintain air concentrations below occupational exposure standards.

Personal protective equipment

Eye protection : Safety glasses

Hand protection : Wear protective gloves.
Gloves should be discarded and replaced if there is any indication of degradation or chemical breakthrough.

Skin protection : Wear suitable protective clothing.

Respiratory protection : When workers are facing concentrations above the exposure limit they must use appropriate certified respirators.

Hygiene measures : Handle in accordance with good industrial hygiene and safety practice. Remove and wash contaminated clothing before re-use.
Wash face, hands and any exposed skin thoroughly after handling.

Section: 9. PHYSICAL AND CHEMICAL PROPERTIES

Appearance : Liquid

Colour : clear

Odour : hydrocarbon-like

Flash point : 92 °C
Method: ASTM D 93, Pensky-Martens closed cup

pH : Not applicable.

Odour Threshold : no data available

Melting point/freezing point : PRECIPITATION POINT: 10 °C
POUR POINT: -45 °C, ASTM D-1177

Initial boiling point and boiling range : 132.2 °C Method: ASTM D 86

Evaporation rate : no data available

Flammability (solid, gas) : no data available

Upper explosion limit : no data available

Lower explosion limit : no data available

Vapour pressure : 5.1 mm Hg (37.8 °C)

Relative vapour density : no data available

Relative density : 0.84 (25 °C) ASTM D-1298

Density : 0.84 g/cm3
7.0 lb/gal

Water solubility : insoluble

Solubility in other solvents : no data available

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Product

Acute oral toxicity	: LD50 rat > 15,380 mg/kg Test substance: Similar Product
Acute inhalation toxicity	: Acute toxicity estimate : 3.38 mg/l Exposure time: 4 h
Acute dermal toxicity	: LD50 rabbit: > 3,038 mg/kg Test substance: Similar Product
Skin corrosion/irritation	: Species: Rabbit Result: 3.1 Method: Draize Test Test substance: Similar Product
Serious eye damage/eye irritation	: Species: rabbit Result: 6.0 Method: Draize Test Test substance: Similar Product
Respiratory or skin sensitization	: no data available
Carcinogenicity	
IARC	No component of this product present at levels greater than or equal to 0.1% is identified as probable, possible or confirmed human carcinogen by IARC.
OSHA	No component of this product present at levels greater than or equal to 0.1% is identified as a carcinogen or potential carcinogen by OSHA.
NTP	No component of this product present at levels greater than or equal to 0.1% is identified as a known or anticipated carcinogen by NTP.
Reproductive effects	: no data available
Germ cell mutagenicity	: no data available
Teratogenicity	: no data available
STOT - single exposure	: no data available
STOT - repeated exposure	: no data available
Aspiration toxicity	: no data available

Section: 12. ECOLOGICAL INFORMATION

Ecotoxicity

Environmental Effects	: Toxic to aquatic life with long lasting effects.
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Species: Ceriodaphnia dubia
Test substance: Product

Components

Toxicity to algae : Hydrotreated Light Distillate
EC50 : > 1,000 mg/l
Exposure time: 48 h

Components

Toxicity to bacteria : Hydrotreated Light Distillate
> 1,000 mg/l

Persistence and degradability

The organic portion of this preparation is expected to be inherently biodegradable.

Total Organic Carbon (TOC) : 195,870 mg/l

Chemical Oxygen Demand (COD): 2,200,000 mg/l

Biochemical Oxygen Demand (BOD):

Incubation Period

Value

102,440 mg/l

Test Descriptor

Product

OECD 301 D (Closed Bottle) 28 Day 70-80%

Mobility

The environmental fate was estimated using a level III fugacity model embedded in the EPI (estimation program interface) Suite TM, provided by the US EPA. The model assumes a steady state condition between the total input and output. The level III model does not require equilibrium between the defined media. The information provided is intended to give the user a general estimate of the environmental fate of this product under the defined conditions of the models.

If released into the environment this material is expected to distribute to the air, water and soil/sediment in the approximate respective percentages;

Air : 10 - 30%
Water : 30 - 50%
Soil : 30 - 50%

The portion in water is expected to be soluble or dispersible.

Bioaccumulative potential

This preparation or material is not expected to bioaccumulate.

Other information

no data available

Section: 13. DISPOSAL CONSIDERATIONS

If this product becomes a waste, it is not a hazardous waste as defined by the Resource Conservation and Recovery Act (RCRA) 40 CFR 261, since it does not have the characteristics of Subpart C, nor is it listed under Subpart D.

Disposal methods : The product should not be allowed to enter drains, water courses or the soil. Where possible recycling is preferred to disposal or incineration. If recycling is not practicable, dispose of in compliance with local regulations. Dispose of wastes in

SAFETY DATA SHEET

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SARA 313

This material does not contain any chemical components with known CAS numbers that exceed the threshold (De Minimis) reporting levels established by SARA Title III, Section 313.

California Prop 65

This product does not contain any chemicals known to State of California to cause cancer, birth defects, or any other reproductive harm.

INTERNATIONAL CHEMICAL CONTROL LAWS :

TOXIC SUBSTANCES CONTROL ACT (TSCA)

The substances in this preparation are included on or exempted from the TSCA 8(b) Inventory (40 CFR 710)

CANADIAN ENVIRONMENTAL PROTECTION ACT (CEPA)

The substance(s) in this preparation are included in or exempted from the Domestic Substance List (DSL).

AUSTRALIA

All substances in this product comply with the National Industrial Chemicals Notification & Assessment Scheme (NICNAS).

CHINA

All substances in this product comply with the Provisions on the Environmental Administration of New Chemical Substances and are listed on or exempt from the Inventory of Existing Chemical Substances China (IECSC).

EUROPE

The substances in this preparation have been reviewed for compliance with the EINECS or ELINCS inventories.

JAPAN

All substances in this product comply with the Law Regulating the Manufacture and Importation Of Chemical Substances and are listed on the Existing and New Chemical Substances list (ENCS).

KOREA

All substances in this product comply with the Toxic Chemical Control Law (TCCL) and are listed on the Existing Chemicals List (ECL)

NEW ZEALAND

All substances in this product comply with the Hazardous Substances and New Organisms (HSNO) Act 1996, and are listed on or are exempt from the New Zealand Inventory of Chemicals.

PHILIPPINES

All substances in this product comply with the Republic Act 6969 (RA 6969) and are listed on the Philippines Inventory of Chemicals & Chemical Substances (PICCS).

Section: 16. OTHER INFORMATION

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COMPANY IDENTITY: Univar
PRODUCT IDENTITY: SULFURIC ACID 93%
SDS NUMBER: CDS-2441

SDS DATE: 01/15/2015
ORIGINAL: 01/15/2015

SAFETY DATA SHEET

This Safety Data Sheet conforms to ANSI Z400.5, and to the format requirements of the Global Harmonizing System.
THIS SDS COMPLIES WITH 29 CFR 1910.1200 (HAZARD COMMUNICATION STANDARD)
IMPORTANT: Read this SDS before handling & disposing of this product.
Pass this information on to employees, customers, & users of this product.

SECTION 1. IDENTIFICATION OF THE SUBSTANCE OR MIXTURE AND OF THE SUPPLIER

PRODUCT IDENTITY: SULFURIC ACID 93%
PRODUCT USES: Mineral Acid

COMPANY IDENTITY: Univar
COMPANY ADDRESS: 17425 NE Union Hill Road
COMPANY CITY: Redmond, WA 98052
COMPANY PHONE: 1-425-889-3400
EMERGENCY PHONES: CHEMTREC: 1-800-424-9300 (USA)
CANUTEC: 1-613-996-6666 (CANADA)

SECTION 2. HAZARDS IDENTIFICATION

DANGER!!

2.1 HAZARD STATEMENTS: (CAT = Hazard Category)

(H200s) PHYSICAL: Corrosive To Metals:
H290 MAY BE CORROSIVE TO METALS.(CAT:1)
(H300s) HEALTH: Skin Corrosion/Irritation:
H314 CAUSES SEVERE SKIN BURNS AND EYE DAMAGE.(CAT:1)
(H300s) HEALTH: Acute Toxicity, Inhalation:
H332 HARMFUL IF INHALED.(CAT:4)

2.2 PRECAUTIONARY STATEMENTS:

EXPOSURE PREVENTION: AVOID ALL CONTACT!
PREVENT DISPERSION OF MISTS OR DUST!

P100s = General, P200s = Prevention,
P300s = Response, P400s = Storage, P500s = Disposal
P234 Keep only in original container.
P260 Do not breathe dust/fume/gas/mist/vapors/spray.
P262 Do not get in eyes, on skin, or on clothing.
P264 Wash hands thoroughly after handling.
P280 Wear protective gloves/protective clothing/eye protection/face protection.
P301+330+331 IF SWALLOWED: Rinse mouth. Do NOT induce vomiting.
P303+361+353 IF ON SKIN (OR HAIR): Remove/Take off immediately all contaminated clothing. Rinse skin with water/shower.
P304+340 IF INHALED: Remove victim to fresh air & keep at rest in a position comfortable for breathing.
P305+351+338 IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses if present & easy to do - Continue rinsing.
P310 Immediately call a POISON CENTER or doctor/physician.
P363 Wash contaminated clothing before reuse.
P390 Absorb spillage to prevent material damage.
P404 Store in a closed container.
P405 Store locked up.
P501 Dispose of contents/container to an approved waste disposal plant.

SEE SECTIONS 8, 11 & 12 FOR TOXICOLOGICAL INFORMATION.



COMPANY IDENTITY: Univar
PRODUCT IDENTITY: SULFURIC ACID 93%
SDS NUMBER: CDS-2441

SDS DATE: 01/15/2015
ORIGINAL: 01/15/2015

SECTION 5. FIRE FIGHTING MEASURES (CONTINUED)

5.4 SPECIFIC HAZARDS OF CHEMICAL & HAZARDOUS COMBUSTION PRODUCTS:

SLIGHTLY COMBUSTIBLE!
Reacts with most metals producing hydrogen which is extremely flammable & may explode.
Keep container tightly closed. Isolate from oxidizers, alkalis, heat, & open flame.
Applying to hot surfaces requires special precautions. Closed containers may explode if exposed to extreme heat. Continue all label precautions!

SECTION 6. ACCIDENTAL RELEASE MEASURES

6.1 SPILL AND LEAK RESPONSE AND ENVIRONMENTAL PRECAUTIONS:

Uncontrolled releases should be responded to by trained personnel using pre-planned procedures. Proper protective equipment should be used. In case of a spill, clear the affected area, protect people, and respond with trained personnel. ELIMINATE all ignition sources (no smoking, flares, sparks, or flames in immediate area). Prevent additional discharge of material, if possible to do so without hazard. For large spills, implement cleanup procedures and, if in public area, advise authorities.

6.2 PERSONAL PRECAUTIONS, PROTECTIVE EQUIPMENT, EMERGENCY PROCEDURES:

The proper personal protective equipment for incidental releases (such as: 1 liter of the product released in a well-ventilated area), use impermeable gloves, they should be Level B: triple-gloves (rubber gloves and nitrile gloves over latex gloves), chemical resistant suit and boots, hard-hat, and Self-Contained Breathing Apparatus specific for the material handled, goggles, face shield, and appropriate body protection. In the event of a large release, use impermeable gloves, specific for the material handled, chemically resistant suit and boots, and hard hat. Self-Contained Breathing Apparatus or respirator may be required where engineering controls are not adequate or conditions for potential exposure exist. When respirators are required, select NIOSH/MSHA approved based on actual or potential airborne concentrations in accordance with latest OSHA and/or ANSI recommendations.

6.3 ENVIRONMENTAL PRECAUTIONS:

Stop spill at source. Construct temporary dikes of dirt, sand, or any appropriate readily available material to prevent spreading of the material. Close or cap valves and/or block or plug hole in leaking container and transfer to another container. Keep from entering storm sewers and ditches which lead to waterways, and if necessary, call the local fire or police department for immediate emergency assistance.

6.4 METHODS AND MATERIAL FOR CONTAINMENT & CLEAN-UP:

Absorb spilled liquid with polypads or other suitable absorbent materials. If necessary, neutralize using suitable buffering material, (acid with soda ash or base with phosphoric acid), and test area with litmus paper to confirm neutralization. Clean up with non-combustible absorbent (such as: sand, soil, and so on). Shovel up and place all spill residue in suitable containers. Dispose of at an appropriate waste disposal facility according to current applicable laws and regulations and product characteristics at time of disposal (see Section 13 - Disposal Considerations).

SECTION 7. HANDLING AND STORAGE

7.1 PRECAUTIONS FOR SAFE HANDLING:

Isolate from oxidizers, alkalis, heat, & open flame. Use only with adequate ventilation. Do not get in eyes, on skin or clothing. Wear OSHA Standard full face shield. Consult Safety Equipment Supplier. Wear goggles, face shield, gloves, apron & footwear impervious to material. Wash clothing before reuse. Continue all label precautions! NEVER pour water into this substance. When dissolving or diluting, always add it slowly to the water.

7.2 CONDITIONS FOR SAFE STORAGE, INCLUDING ANY INCOMPATIBILITIES:

Keep separated from strong oxidants, strong bases, combustible & reducing substances, metals, food & feedstuffs, incompatible materials. May be stored in stainless steel containers. See: Section 10, <Materials to Avoid>. Do not store above 49 C/120 F. Keep container tightly closed & upright when not in use to prevent leakage. Reacts with most metals producing hydrogen which is extremely flammable & may explode. Wear full face shield, gloves & full protective clothing when opening or handling. When empty, drain completely, replace bungs securely.

7.3 NONBULK: CONTAINERS:

Store containers in a cool, dry location, away from direct sunlight, sources of intense heat, or where freezing is possible. Material should be stored in secondary containers or in a diked area, as appropriate. Store containers away from incompatible chemicals (see Section 10, Stability and Reactivity). Post warning and "NO SMOKING" signs in storage and use areas, as appropriate. Empty containers should be handled with care. Never store food, feed, or drinking water in containers which held this product.

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COMPANY IDENTITY: Univar
PRODUCT IDENTITY: SULFURIC ACID 93%
SDS NUMBER: CDS-2441

SDS DATE: 01/15/2015
ORIGINAL: 01/15/2015

SECTION 8. EXPOSURE CONTROLS/PERSONAL PROTECTION (CONTINUED)

VENTILATION

LOCAL EXHAUST: Necessary
SPECIAL: None
MECHANICAL (GENERAL): Necessary
OTHER: None
Please refer to ACGIH document, "Industrial Ventilation, A Manual of Recommended Practices", most recent edition, for details.

8.3 INDIVIDUAL PROTECTION MEASURES, SUCH AS PERSONAL PROTECTIVE EQUIPMENT:

EYE PROTECTION:

Safety eyewear complying with an approved standard should be used when a risk assessment indicates this is necessary to avoid exposure to liquid splashes, mists or dusts. If contact is possible, chemical splash goggles should be worn, when a higher degree of protection is necessary, use splash goggles or safety glasses. Face-shields are recommended when the operation can generate splashes, sprays or mists.

HAND PROTECTION:

Use gloves chemically resistant to this material. Preferred examples: Butyl rubber, Chlorinated Polyethylene, Polyethylene, Ethyl vinyl alcohol laminate ("EVAL"), Polyvinyl alcohol ("PVA"). Examples of acceptable glove barrier materials include: Natural rubber ("latex"), Neoprene, Nitrile/butadiene rubber ("nitril") or ("NBR"), Polyvinyl chloride ("PVC") or "vinyl", Viton. Chemical-resistant, impervious gloves complying with an approved standard should be worn at all times when handling chemical products if a risk assessment indicates this is necessary. Considering the parameters specified by the glove manufacturer, check during use that the gloves are still retaining their protective properties. It should be noted that the time to breakthrough for any glove material may be different for different glove manufacturers. In the case of mixtures, consisting of several substances, the protection time of the gloves cannot be accurately estimated.

BODY PROTECTION:

Use body protection appropriate for task. Cover-all, rubber aprons, or chemical protective clothing made from impervious materials are generally acceptable, depending on the task.

WORK & HYGIENIC PRACTICES:

Wash hands, forearms and face thoroughly after handling chemical products, before eating, smoking and using toilet facilities and at the end of the working period. Provide readily accessible eye wash stations & safety showers. Remove clothing that becomes contaminated. Destroy contaminated leather articles. Launder or discard contaminated clothing.

SECTION 9. PHYSICAL & CHEMICAL PROPERTIES

APPEARANCE:	Oily Liquid, Water-White to slightly yellow
ODOR:	None
ODOR THRESHOLD:	Not Available
pH (Neutrality):	< 1
MELTING POINT/FREEZING POINT:	-29 C / -20 F
BOILING RANGE (IBP, Dry Point):	276 to 281 C / 528 to 538 F
FLASH POINT (TEST METHOD):	Not Applicable
EVAPORATION RATE (n-Butyl Acetate=1):	Not Applicable
FLAMMABILITY CLASSIFICATION:	Noncombustible
LOWER FLAMMABLE LIMIT IN AIR (% by vol):	10.0 (Lowest Component)
UPPER FLAMMABLE LIMIT IN AIR (% by vol):	Not Available
VAPOR PRESSURE (mm of Hg)@20 C	< 0.3
VAPOR DENSITY (air=1):	3.4
GRAVITY @ 68/68F / 20/20C:	
DENSITY:	1.830
SPECIFIC GRAVITY (Water=1):	1.835
POUNDS/GALLON:	15.3
WATER SOLUBILITY:	Complete
PARTITION COEFFICIENT (n-Octane/Water):	Not Available
AUTO IGNITION TEMPERATURE:	Not Applicable
DECOMPOSITION TEMPERATURE:	Not Available
VOCs (>0.044 Lbs/Sq In):	0.0 Vol% / 0.0 g/L / 0.000 Lbs/Gal
TOTAL VOC'S (TVOC)*:	0.0 Vol% / 0.0 g/L / 0.000 Lbs/Gal
NONEXEMPT VOC'S (CVOC)*:	0.0 Vol% / 0.0 g/L / 0.000 Lbs/Gal
HAZARDOUS AIR POLLUTANTS (HAPS):	0.0 Wt% / 0.0 g/L / 0.000 Lbs/Gal
NONEXEMPT VOC PARTIAL PRESSURE (mm of Hg @ 20 C)	0.0
VISCOSITY @ 100 C (ASTM D445) 514.0	
VISCOSITY @ 20 C (ASTM D445):	Not Available

* Using CARB (California Air Resources Board Rules).

COMPANY IDENTITY: Univar
PRODUCT IDENTITY: SULFURIC ACID 93%
SDS NUMBER: CDS-2441

SDS DATE: 01/15/2015
ORIGINAL: 01/15/2015

SECTION 11. TOXICOLOGICAL INFORMATION (CONTINUED)

A MUTAGEN is a chemical which causes permanent changes to genetic material (DNA) such that the changes will propagate across generational lines. An EMBRYOTOXIN is a chemical which causes damage to a developing embryo (such as: within the first 8 weeks of pregnancy in humans), but the damage does not propagate across generational lines. A TERATOGEN is a chemical which causes damage to a developing fetus, but the damage does not propagate across generational lines. A REPRODUCTIVE TOXIN is any substance which interferes in any way with the reproductive process.

11.4 MAMMALIAN TOXICITY INFORMATION

LD50 (Oral, Acute): 2140 mg/kg (Rat)
LC50 / 2 hours: 510 mg/m³ (Rat), 320 mg/m³ (Mouse)

SECTION 12. ECOLOGICAL INFORMATION

12.1 ALL WORK PRACTICES MUST BE AIMED AT ELIMINATING ENVIRONMENTAL CONTAMINATION.

12.2 EFFECT OF MATERIAL ON PLANTS AND ANIMALS:

This product may be harmful or fatal to plant and animal life if released into the environment. Refer to Section 11 (Toxicological Information) for further data on the effects of this product's components on test animals.

12.3 EFFECT OF MATERIAL ON AQUATIC LIFE:

The substance is harmful to aquatic organisms.

LC50 / 48 hours: 49 mg/L, Tap Water, 20 C (Bluegill sunfish)
LC50 / 48 hours: 100 - 330 mg/L, Aerated Water (Flounder)

12.4 MOBILITY IN SOIL

Mobility of this material has not been determined.

12.5 DEGRADABILITY

This product is completely biodegradable.

12.6 ACCUMULATION

Bioaccumulation of this product has not been determined.

SECTION 13. DISPOSAL CONSIDERATIONS

Processing, use or contamination may change the waste disposal requirements. Do not dispose of on land, in surface waters, or in storm drains. Waste should be recycled or disposed of in accordance with regulations. Large amounts should be collected for reuse or consigned to licensed hazardous waste haulers for disposal.

ALL DISPOSAL MUST BE IN ACCORDANCE WITH ALL FEDERAL, STATE, PROVINCIAL, AND LOCAL REGULATIONS. IF IN DOUBT, CONTACT PROPER AGENCIES. EPA CHARACTERISTIC: D002

SECTION 14. TRANSPORT INFORMATION

MARINE POLLUTANT: No
DOT/TDG SHIP NAME: UN1830, Sulfuric acid, 8, PG-II
DRUM LABEL: (CORROSIVE)
IATA / ICAO: UN1830, Sulfuric acid, 8, PG-II
IMO / IMDG: UN1830, Sulfuric acid, 8, PG-II
EMERGENCY RESPONSE GUIDEBOOK NUMBER: 137



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3D TRASAR™ 3DT175

Section: 1. PRODUCT AND COMPANY IDENTIFICATION

Product name : 3D TRASAR™ 3DT175

Other means of identification : Not applicable.

Recommended use : COOLING WATER TREATMENT

Restrictions on use : Refer to available product literature or ask your local Sales Representative for restrictions on use and dose limits.

Company : Nalco Company
1601 W. Diehl Road
Naperville, Illinois 60563-1198
USA
TEL: (630)305-1000

Emergency telephone number : (800) 424-9300 (24 Hours) CHEMTREC

Issuing date : 09/09/2016

Section: 2. HAZARDS IDENTIFICATION


GHS Classification

Skin irritation : Category 2

Eye irritation : Category 2A

Specific target organ toxicity - single exposure : Category 3 (Respiratory system)

GHS Label element

Hazard pictograms : 

Signal Word : Warning

Hazard Statements : Causes skin irritation.
Causes serious eye irritation.
May cause respiratory irritation.

Precautionary Statements : **Prevention:**
Avoid breathing dust/ fume/ gas/ mist/ vapours/ spray. Wash skin thoroughly after handling. Use only outdoors or in a well-ventilated area. Wear protective gloves/ eye protection/ face protection.
Response:
IF ON SKIN: Wash with plenty of soap and water. IF INHALED: Remove person to fresh air and keep comfortable for breathing. Call a POISON CENTER or doctor/ physician if you feel unwell.
IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing. If skin irritation occurs: Get medical advice/attention. If eye irritation persists: Get medical advice/

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attention. Take off contaminated clothing and wash before reuse.

Other hazards : None known.

Section: 3. COMPOSITION/INFORMATION ON INGREDIENTS

Chemical Name	CAS-No.	Concentration: (%)
Inorganic Phosphate	Proprietary	10 - 30
Inorganic Polyphosphate	Proprietary	5 - 10

Section: 4. FIRST AID MEASURES

In case of eye contact	: Rinse immediately with plenty of water, also under the eyelids, for at least 15 minutes. Remove contact lenses, if present and easy to do. Continue rinsing. Get medical attention.
In case of skin contact	: Wash off immediately with plenty of water for at least 15 minutes. Use a mild soap if available. Get medical attention if irritation develops and persists.
If swallowed	: Rinse mouth. Get medical attention if symptoms occur.
If inhaled	: Remove to fresh air. Treat symptomatically. Get medical attention if symptoms occur.
Protection of first-aiders	: In event of emergency assess the danger before taking action. Do not put yourself at risk of injury. If in doubt, contact emergency responders. Use personal protective equipment as required.
Notes to physician	: Treat symptomatically.
Most important symptoms and effects, both acute and delayed	: See Section 11 for more detailed information on health effects and symptoms.

Section: 5. FIREFIGHTING MEASURES

Suitable extinguishing media	: Use extinguishing measures that are appropriate to local circumstances and the surrounding environment.
Unsuitable extinguishing media	: None known.
Specific hazards during firefighting	: Not flammable or combustible.
Hazardous combustion products	: Decomposition products may include the following materials: Carbon oxides nitrogen oxides (NOx) Sulphur oxides Oxides of phosphorus
Special protective equipment for firefighters	: Use personal protective equipment.
Specific extinguishing methods	: Fire residues and contaminated fire extinguishing water must be disposed of in accordance with local regulations. In the event of fire and/or explosion do not breathe fumes.

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Section: 6. ACCIDENTAL RELEASE MEASURES

- Personal precautions, protective equipment and emergency procedures : Ensure adequate ventilation. Ensure clean-up is conducted by trained personnel only. Refer to protective measures listed in sections 7 and 8.
- Environmental precautions : Do not allow contact with soil, surface or ground water.
- Methods and materials for containment and cleaning up : Stop leak if safe to do so. Contain spillage, and then collect with non-combustible absorbent material, (e.g. sand, earth, diatomaceous earth, vermiculite) and place in container for disposal according to local / national regulations (see section 13). For large spills, dike spilled material or otherwise contain material to ensure runoff does not reach a waterway. Flush away traces with water.

Section: 7. HANDLING AND STORAGE

- Advice on safe handling : Avoid contact with skin and eyes. Do not breathe dust/fume/gas/mist/vapours/spray. Wash hands thoroughly after handling. Use only with adequate ventilation.
- Conditions for safe storage : Keep out of reach of children. Keep container tightly closed. Store in suitable labelled containers.
- Suitable material : The following compatibility data is suggested based on similar product data and/or industry experience: Compatibility with Plastic Materials can vary; we therefore recommend that compatibility is tested prior to use.
- Unsuitable material : not determined

Section: 8. EXPOSURE CONTROLS/PERSONAL PROTECTION

Components with workplace control parameters

Contains no substances with occupational exposure limit values.

- Engineering measures : Good general ventilation should be sufficient to control worker exposure to airborne contaminants.

Personal protective equipment

- Eye protection : Safety glasses with side-shields
- Hand protection : Wear the following personal protective equipment:
Standard glove type.
Gloves should be discarded and replaced if there is any indication of degradation or chemical breakthrough.
- Skin protection : Wear suitable protective clothing.
- Respiratory protection : When workers are facing concentrations above the exposure limit they must use appropriate certified respirators.
- Hygiene measures : Handle in accordance with good industrial hygiene and safety practice. Remove

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and wash contaminated clothing before re-use. Wash face, hands and any exposed skin thoroughly after handling.

Section: 9. PHYSICAL AND CHEMICAL PROPERTIES

Appearance	: Liquid
Colour	: light yellow, dark yellow
Odour	: odourless
Flash point	: > 93.3 °C, Estimated
pH	: 11.2
Odour Threshold	: no data available
Melting point/freezing point	: FREEZING POINT: , No data available.
Initial boiling point and boiling range	: no data available
Evaporation rate	: no data available
Flammability (solid, gas)	: no data available
Upper explosion limit	: no data available
Lower explosion limit	: no data available
Vapour pressure	: no data available
Relative vapour density	: no data available
Relative density	: 1.37, (15.5 °C),
Density	: 11.4 lb/gal
Water solubility	: completely soluble
Solubility in other solvents	: no data available
Partition coefficient: n-octanol/water	: no data available
Auto-ignition temperature	: no data available
Thermal decomposition temperature	: no data available
Viscosity, dynamic	: no data available
Viscosity, kinematic	: no data available
Molecular weight	: no data available
VOC	: 0 %, Calculation method

Section: 10. STABILITY AND REACTIVITY

Chemical stability	: Stable under normal conditions.
Possibility of hazardous reactions	: No dangerous reaction known under conditions of normal use.

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Conditions to avoid	: None known.
Incompatible materials	: Acids Contact with strong acids (e.g. sulfuric, phosphoric, nitric, hydrochloric, chromic, sulfonic) may generate heat, splattering or boiling and toxic vapors.
Hazardous decomposition products	: Decomposition products may include the following materials: Carbon oxides nitrogen oxides (NO _x) Sulphur oxides Oxides of phosphorus

Section: 11. TOXICOLOGICAL INFORMATION

Information on likely routes of exposure : Inhalation, Eye contact, Skin contact

Potential Health Effects

Eyes	: Causes serious eye irritation.
Skin	: Causes skin irritation.
Ingestion	: Health injuries are not known or expected under normal use.
Inhalation	: May cause respiratory tract irritation. May cause nose, throat, and lung irritation.
Chronic Exposure	: Health injuries are not known or expected under normal use.

Experience with human exposure

Eye contact	: Redness, Pain, Irritation
Skin contact	: Redness, Irritation
Ingestion	: No symptoms known or expected.
Inhalation	: Respiratory irritation, Cough

Toxicity

Product

Acute oral toxicity	: Acute toxicity estimate: > 5,000 mg/kg
Acute inhalation toxicity	: no data available
Acute dermal toxicity	: Acute toxicity estimate: > 5,000 mg/kg
Skin corrosion/irritation	: no data available
Serious eye damage/eye irritation	: no data available
Respiratory or skin sensitization	: no data available
Carcinogenicity	: no data available

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Reproductive effects : no data available
Germ cell mutagenicity : no data available
Teratogenicity : no data available
STOT - single exposure : no data available
STOT - repeated exposure : no data available
Aspiration toxicity : no data available

Section: 12. ECOLOGICAL INFORMATION

Ecotoxicity

Environmental Effects : This product has no known ecotoxicological effects.

Product

Toxicity to fish : LC50 Fathead Minnow: 1,875 mg/l
Exposure time: 96 hrs
Test substance: Product

NOEC Fathead Minnow: 1,250 mg/l
Exposure time: 96 hrs
Test substance: Product

LC50 Rainbow Trout: 2,152 mg/l
Exposure time: 96 hrs
Test substance: Product

NOEC Rainbow Trout: 1,080 mg/l
Exposure time: 96 hrs
Test substance: Product

Toxicity to daphnia and other aquatic invertebrates : EC50 Ceriodaphnia dubia: 1,875 mg/l
Exposure time: 48 hrs
Test substance: Product

LC50 Ceriodaphnia dubia: 1,875 mg/l
Exposure time: 48 hrs
Test substance: Product

NOEC Ceriodaphnia dubia: 1,250 mg/l
Exposure time: 48 hrs
Test substance: Product

EC50 Daphnia magna: 2,265 mg/l
Exposure time: 48 hrs
Test substance: Product

LC50 Daphnia magna: 2,265 mg/l
Exposure time: 48 hrs
Test substance: Product

NOEC Daphnia magna: 1,800 mg/l

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Exposure time: 48 hrs
Test substance: Product

Persistence and degradability

The organic portion of this preparation is expected to be inherently biodegradable.

Total Organic Carbon (TOC) : 41,000 mg/l

Chemical Oxygen Demand (COD): 100,000 mg/l

Biochemical Oxygen Demand (BOD):

Incubation Period	Value
5 d	420 mg/l

Test Descriptor
Product

Mobility

The environmental fate was estimated using a level III fugacity model embedded in the EPI (estimation program interface) Suite TM, provided by the US EPA. The model assumes a steady state condition between the total input and output. The level III model does not require equilibrium between the defined media. The information provided is intended to give the user a general estimate of the environmental fate of this product under the defined conditions of the models.

If released into the environment this material is expected to distribute to the air, water and soil/sediment in the approximate respective percentages;

Air	: <5%
Water	: 30 - 50%
Soil	: 50 - 70%

The portion in water is expected to be soluble or dispersible.

Bioaccumulative potential

This preparation or material is not expected to bioaccumulate.

Other information

no data available

Section: 13. DISPOSAL CONSIDERATIONS

If this product becomes a waste, it is not a hazardous waste as defined by the Resource Conservation and Recovery Act (RCRA) 40 CFR 261, since it does not have the characteristics of Subpart C, nor is it listed under Subpart D.

Disposal methods : Where possible recycling is preferred to disposal or incineration. If recycling is not practicable, dispose of in compliance with local regulations. Dispose of wastes in an approved waste disposal facility.

Disposal considerations : Dispose of as unused product. Empty containers should be taken to an approved waste handling site for recycling or disposal. Do not re-use empty containers.

Section: 14. TRANSPORT INFORMATION

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The shipper/consignor/sender is responsible to ensure that the packaging, labeling, and markings are in compliance with the selected mode of transport.

Land transport (DOT)

Proper shipping name : PRODUCT IS NOT REGULATED DURING TRANSPORTATION

Air transport (IATA)

Proper shipping name : PRODUCT IS NOT REGULATED DURING TRANSPORTATION

Sea transport (IMDG/IMO)

Proper shipping name : PRODUCT IS NOT REGULATED DURING TRANSPORTATION

Section: 15. REGULATORY INFORMATION

EPCRA - Emergency Planning and Community Right-to-Know Act

CERCLA Reportable Quantity

This material does not contain any components with a CERCLA RQ.

SARA 304 Extremely Hazardous Substances Reportable Quantity

This material does not contain any components with a section 304 EHS RQ.

SARA 311/312 Hazards : Acute Health Hazard

SARA 302 : No chemicals in this material are subject to the reporting requirements of SARA Title III, Section 302.

SARA 313 : This material does not contain any chemical components with known CAS numbers that exceed the threshold (De Minimis) reporting levels established by SARA Title III, Section 313.

California Prop 65

This product does not contain any chemicals known to State of California to cause cancer, birth defects, or any other reproductive harm.

INTERNATIONAL CHEMICAL CONTROL LAWS :

TOXIC SUBSTANCES CONTROL ACT (TSCA)

The substances in this preparation are included on or exempted from the TSCA 8(b) Inventory (40 CFR 710)

CANADIAN ENVIRONMENTAL PROTECTION ACT (CEPA)

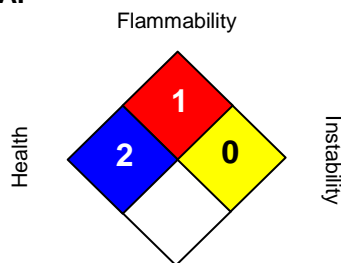
The substance(s) in this preparation are included in or exempted from the Domestic Substance List (DSL).

Section: 16. OTHER INFORMATION

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3D TRASAR™ 3DT175

NFPA:



HMIS III:

HEALTH	2
FLAMMABILITY	1
PHYSICAL HAZARD	0

0 = not significant, 1 = Slight,
2 = Moderate, 3 = High
4 = Extreme, * = Chronic

Revision Date : 09/09/2016
Version Number : 1.3
Prepared By : Regulatory Affairs

REVISED INFORMATION: Significant changes to regulatory or health information for this revision is indicated by a bar in the left-hand margin of the SDS.

The information provided in this Safety Data Sheet is correct to the best of our knowledge, information and belief at the date of its publication. The information given is designed only as a guidance for safe handling, use, processing, storage, transportation, disposal and release and is not to be considered a warranty or quality specification. The information relates only to the specific material designated and may not be valid for such material used in combination with any other materials or in any process, unless specified in the text. For additional copies of an SDS visit www.nalco.com and request access.

1. Product and Company Identification

Product identifier	BOILERMATE 1200S
Other means of identification	Not available
Recommended use	Boiler Water Treatment
Recommended restrictions	None known.
Manufacturer	Miura America Co., Ltd. 2200 Steven B Smith Blvd Rockmart, GA 30153 U.S.A. Phone: 678-685-0929 Toll Free: 1-888-309-557 Fax: 678-685-0930 Emergency Phone: 1-800-424-9300 (CHEMTREC)

2. Hazards Identification

Physical hazards	Corrosive to metals	Category 1
Health hazards	Skin corrosion/irritation	Category 1
	Serious eye damage/eye irritation	Category 1
	Specific target organ toxicity, single exposure	Category 3 respiratory tract irritation
Environmental hazards	Not classified.	
OSHA defined hazards	Not classified.	
Label elements		



Signal word	Danger
Hazard statement	May be corrosive to metals. Causes severe skin burns and eye damage. May cause respiratory irritation.
Precautionary statement	
Prevention	Keep only in original container. Do not breathe mist or vapor. Wash thoroughly after handling. Use only outdoors or in a well-ventilated area. Wear protective gloves/protective clothing/eye protection/face protection.
Response	Absorb spillage to prevent material damage. If in eyes: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing. If on skin (or hair): Take off immediately all contaminated clothing. Rinse skin with water/shower. Wash contaminated clothing before reuse. If swallowed: Rinse mouth. Do NOT induce vomiting. If inhaled: Remove person to fresh air and keep comfortable for breathing. Immediately call a poison center/doctor. Specific treatment (see this label).
Storage	Store in corrosive resistant container with a resistant inner liner. Store in a well-ventilated place. Keep container tightly closed. Store locked up.
Disposal	Dispose of contents/container in accordance with local/regional/national/international regulations.
Hazard(s) not otherwise classified (HNOC)	None known.
Supplemental information	100% of the mixture consists of component(s) of unknown acute inhalation toxicity.

3. Composition/Information on Ingredients

Mixture

Chemical name	Common name and synonyms	CAS number	%
Silicic acid, sodium salt		1344-09-8	10 - 30
Potassium hydroxide		1310-58-3	3 - 7
Tetrasodium salt of ethylenediaminetetracetic acid tetrahydrate		13235-36-4	1 - 5

Composition comments US GHS: The exact percentage (concentration) of composition has been withheld as a trade secret in accordance with paragraph (i) of §1910.1200.

4. First Aid Measures

Inhalation	If inhaled: Remove person to fresh air and keep comfortable for breathing. Immediately call a poison center/doctor.
Skin contact	If on skin (or hair): Take off immediately all contaminated clothing. Rinse skin with water/shower. Immediately call a poison center/doctor. Specific treatment (see product label). Wash contaminated clothing before reuse.
Eye contact	If in eyes: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing. Immediately call a poison center/doctor.
Ingestion	If swallowed: Rinse mouth. Do NOT induce vomiting. Immediately call a poison center/doctor.
Most important symptoms/effects, acute and delayed	Burning pain and severe corrosive skin damage. Causes serious eye damage. Symptoms may include stinging, tearing, redness, swelling, and blurred vision. Permanent eye damage including blindness could result.
Indication of immediate medical attention and special treatment needed	Treat patient symptomatically.
General information	If you feel unwell, seek medical advice (show the label where possible). Ensure that medical personnel are aware of the material(s) involved, and take precautions to protect themselves. Show this safety data sheet to the doctor in attendance. Avoid contact with eyes and skin. Wear rubber gloves and chemical splash goggles. Keep out of reach of children.

5. Fire Fighting Measures

Suitable extinguishing media	Water fog. Foam. Dry chemical powder. Carbon dioxide (CO2).
Unsuitable extinguishing media	Not available.
Specific hazards arising from the chemical	Firefighters should wear a self-contained breathing apparatus.
Special protective equipment and precautions for firefighters	Firefighters should wear full protective clothing including self contained breathing apparatus.
Fire-fighting equipment/instructions	Move containers from fire area if you can do so without risk.
Specific methods	Use standard firefighting procedures and consider the hazards of other involved materials.
Hazardous combustion products	May include and are not limited to: Oxides of nitrogen. Oxides of potassium. Oxides of sodium. Oxides of sulfur.
Explosion data	
Sensitivity to mechanical impact	Not available.
Sensitivity to static discharge	Not available.

6. Accidental Release Measures

Personal precautions, protective equipment and emergency procedures	Keep people away from and upwind of spill/leak. Keep out of low areas. Do not touch damaged containers or spilled material unless wearing appropriate protective clothing. Do not breathe mist or vapor. Ensure adequate ventilation. Local authorities should be advised if significant spillages cannot be contained. For personal protection, see section 8 of the SDS.
Methods and materials for containment and cleaning up	Stop leak if you can do so without risk. Dike the spilled material, where this is possible. Cover with plastic sheet to prevent spreading. Absorb in vermiculite, dry sand or earth and place into containers. Never return spills to original containers for re-use. Clean surface thoroughly to remove residual contamination. Following product recovery, flush area with water. Prevent entry into waterways, sewer, basements or confined areas. For waste disposal, see section 13 of the SDS.
Environmental precautions	Do not discharge into lakes, streams, ponds or public waters.

7. Handling and Storage

Precautions for safe handling	DANGER -- CORROSIVE Avoid contact with eyes, skin and clothing. Do not breathe mist or vapor. Wear appropriate personal protective equipment. Use only with adequate ventilation. Avoid prolonged exposure. Observe good industrial hygiene practices. Wash thoroughly after handling. When using do not eat or drink.
Conditions for safe storage, including any incompatibilities	Store in a closed container. Store in corrosive resistant container with a resistant inner liner. Store in a cool, dry place out of direct sunlight. Store away from incompatible materials (see Section 10 of the SDS). Keep out of the reach of children. Store locked up.

8. Exposure Controls/Personal Protection

Occupational exposure limits

US. ACGIH Threshold Limit Values

Components	Type	Value
Potassium hydroxide (CAS 1310-58-3)	Ceiling	2 mg/m3

US. NIOSH: Pocket Guide to Chemical Hazards

Components	Type	Value
Potassium hydroxide (CAS 1310-58-3)	TWA	2 mg/m3

Biological limit values	No biological exposure limits noted for the ingredient(s).
Exposure guidelines	Chemicals listed in section 3 that are not listed here do not have established limit values for ACGIH or OSHA PEL.
Appropriate engineering controls	Ensure adequate ventilation.
Individual protection measures, such as personal protective equipment	
Eye/face protection	Wear chemical goggles.
Skin protection	
Hand protection	Impervious gloves. Confirm with reputable supplier first.
Other	As required by employer code.
Respiratory protection	Where exposure guideline levels may be exceeded, use an approved NIOSH respirator.
Thermal hazards	Not applicable.
General hygiene considerations	Handle in accordance with good industrial hygiene and safety practice. Wash hands before breaks and immediately after handling the product. When using do not eat or drink.

9. Physical and Chemical Properties

Appearance	Transparent
Physical state	Liquid.
Form	Liquid
Color	Colorless
Odor	Very little
Odor threshold	Not available.
pH	11.7 (1% water solution)
Melting point/freezing point	<= 23 °F (<= -5 °C)
Initial boiling point and boiling range	> 212 °F (> 100 °C)
Pour point	Not available.
Specific gravity	1.25
Partition coefficient (n-octanol/water)	Not available.
Flash point	Not available.
Evaporation rate	Not available.

Flammability (solid, gas)	Not applicable.
Upper/lower flammability or explosive limits	
Flammability limit - lower (%)	Not available.
Flammability limit - upper (%)	Not available.
Explosive limit - lower (%)	Not available.
Explosive limit - upper (%)	Not available.
Vapor pressure	Not available.
Vapor density	Not available.
Relative density	Not available.
Solubility(ies)	Not available.
Auto-ignition temperature	Not available.
Decomposition temperature	Not available.
Viscosity	Not available.

10. Stability and Reactivity

Reactivity	Reacts violently with acids. This product may react with strong oxidizing agents.
Possibility of hazardous reactions	Hazardous polymerization does not occur.
Chemical stability	Stable under recommended storage conditions.
Conditions to avoid	Do not mix with other chemicals.
Incompatible materials	Oxidizing agents. Acids. Caustics. Reducing agents. Organic materials.
Hazardous decomposition products	May include and are not limited to: Oxides of potassium. Oxides of sodium. Oxides of nitrogen. Oxides of sulfur.

11. Toxicological Information

Routes of exposure	Eye, Skin contact, Inhalation, Ingestion.	
Information on likely routes of exposure		
Ingestion	Causes digestive tract burns.	
Inhalation	May cause irritation to the respiratory system.	
Skin contact	Causes severe skin burns.	
Eye contact	Causes serious eye damage.	
Symptoms related to the physical, chemical and toxicological characteristics	Burning pain and severe corrosive skin damage. Causes serious eye damage. Symptoms may include stinging, tearing, redness, swelling, and blurred vision. Permanent eye damage including blindness could result.	
Information on toxicological effects		
Acute toxicity	May cause respiratory irritation.	
Components	Species	Test Results
Potassium hydroxide (CAS 1310-58-3)		
Acute		
<i>Inhalation</i>		
LC50	Not available	
<i>Oral</i>		
LD50	Rat	214 mg/kg
Silicic acid, sodium salt (CAS 1344-09-8)		
Acute		
<i>Dermal</i>		
LD50	Rabbit	4640 mg/kg
<i>Inhalation</i>		
LC50	Not available	
<i>Oral</i>		
LD50	Mouse	1100 mg/kg
	Rat	1153 mg/kg

Components	Species	Test Results
Tetrasodium salt of ethylenediaminetetracetic acid tetrahydrate (CAS 13235-36-4)		
Acute		
<i>Dermal</i>		
LD50	Not available	
<i>Inhalation</i>		
LC50	Not available	
<i>Oral</i>		
LD50	Rat	945 mg/kg
Skin corrosion/irritation	Causes severe skin burns and eye damage.	
Exposure minutes	Not available.	
Erythema value	Not available.	
Oedema value	Not available.	
Serious eye damage/eye irritation	Causes serious eye damage.	
Corneal opacity value	Not available.	
Iris lesion value	Not available.	
Conjunctival reddening value	Not available.	
Conjunctival oedema value	Not available.	
Recover days	Not available.	
Respiratory or skin sensitization		
Respiratory sensitization	Not available.	
Skin sensitization	This product is not expected to cause skin sensitization.	
Germ cell mutagenicity	Not classified.	
Mutagenicity	Not classified.	
Carcinogenicity	Not classified.	
Reproductive toxicity	Not classified.	
Teratogenicity	Not classified.	
Specific target organ toxicity - single exposure	Respiratory tract irritation.	
Specific target organ toxicity - repeated exposure	Not classified.	
Aspiration hazard	Not classified.	
Chronic effects	Prolonged inhalation may be harmful.	
Further information	Not available.	
Name of Toxicologically Synergistic Products	Not available.	

12. Ecological Information

Ecotoxicity	See below		
Components	Species	Test Results	
Potassium hydroxide (CAS 1310-58-3)			
Aquatic			
Fish	LC50	Western mosquitofish (<i>Gambusia affinis</i>)	80 mg/l, 96 hours
Silicic acid, sodium salt (CAS 1344-09-8)			
Aquatic			
Crustacea	EC50	Water flea (<i>Ceriodaphnia dubia</i>)	0.28 - 0.57 mg/l, 48 hours
Fish	LC50	Western mosquitofish (<i>Gambusia affinis</i>)	1800 mg/l, 96 hours
Tetrasodium salt of ethylenediaminetetracetic acid tetrahydrate (CAS 13235-36-4)			
Aquatic			
Fish	LC50	Bluegill (<i>Lepomis macrochirus</i>)	472 - 500 mg/l, 96 hours
Persistence and degradability	No data is available on the degradability of this product.		
Bioaccumulative potential	No data available.		
Mobility in soil	No data available.		

Mobility in general	Not available.
Other adverse effects	No other adverse environmental effects (e.g. ozone depletion, photochemical ozone creation potential, endocrine disruption, global warming potential) are expected from this component.

13. Disposal Considerations

Disposal instructions	Dispose of contents/container in accordance with local/regional/national/international regulations.
Local disposal regulations	Dispose in accordance with all applicable regulations.
Hazardous waste code	The waste code should be assigned in discussion between the user, the producer and the waste disposal company.
Waste from residues / unused products	Empty containers or liners may retain some product residues. This material and its container must be disposed of in a safe manner (see: Disposal instructions).
Contaminated packaging	Empty containers should be taken to an approved waste handling site for recycling or disposal. Since emptied containers may retain product residue, follow label warnings even after container is emptied.

14. Transport Information

General	Canada: TDG Proof of Classification: In accordance with Part 2.2.1 (SOR/2014-152) of the Transportation of Dangerous Goods Regulations, we certify that the classification of this product is correct as of the SDS date of issue. If applicable, the technical name and the classification of the product will appear below.
----------------	---

U.S. Department of Transportation (DOT)

Basic shipping requirements:

UN number	UN1760
Proper shipping name	Corrosive liquids, n.o.s. (Potassium hydroxide)
Hazard class	8
Packing group	III
Special provisions	IB3, T7, TP1, TP28
Packaging exceptions	154

Transportation of Dangerous Goods (TDG - Canada)

Basic shipping requirements:

UN number	UN1760
Proper shipping name	CORROSIVE LIQUID, N.O.S. (Potassium hydroxide)
Hazard class	8
Packing group	III
Special provisions	16

DOT



TDG



15. Regulatory Information

Canadian federal regulations	This product has been classified in accordance with the hazard criteria of the Controlled Products Regulations and the SDS contains all the information required by the Controlled Products Regulations.
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Canada WHMIS Ingredient Disclosure: Threshold limits

Potassium hydroxide (CAS 1310-58-3)	1 %
-------------------------------------	-----

WHMIS status	Controlled
---------------------	------------

WHMIS labeling



US federal regulations

This product is a "Hazardous Chemical" as defined by the OSHA Hazard Communication Standard, 29 CFR 1910.1200.

TSCA Section 12(b) Export Notification (40 CFR 707, Subpt. D)

Not regulated.

US CWA Section 311 Hazardous Substances: Listed substance

Potassium hydroxide (CAS 1310-58-3) Listed.

CERCLA Hazardous Substance List (40 CFR 302.4)

Potassium hydroxide (CAS 1310-58-3) Listed.

Clean Air Act (CAA) Section 112(r) Accidental Release Prevention (40 CFR 68.130)

Not regulated.

Clean Air Act (CAA) Section 112 Hazardous Air Pollutants (HAPs) List

Not regulated.

Superfund Amendments and Reauthorization Act of 1986 (SARA)**Hazard categories**

Immediate Hazard - Yes

Delayed Hazard - No

Fire Hazard - No

Pressure Hazard - No

Reactivity Hazard - No

SARA 302 Extremely hazardous substance

No

SARA 311/312 Hazardous chemical

No

SARA 313 (TRI reporting)

Not regulated.

Other federal regulations**Clean Water Act (CWA) Section 112(r) (40 CFR 68.130)**

Hazardous substance

Safe Drinking Water Act (SDWA)

Not regulated.

Food and Drug Administration (FDA)

Not regulated.

US state regulations

This product does not contain a chemical known to the State of California to cause cancer, birth defects or other reproductive harm.

US - California Hazardous Substances (Director's): Listed substance

Potassium hydroxide (CAS 1310-58-3) Listed.

US - California Proposition 65 - Carcinogens & Reproductive Toxicity (CRT): Listed substance

Not listed.

US - Illinois Chemical Safety Act: Listed substance

Potassium hydroxide (CAS 1310-58-3) Listed.

US - Louisiana Spill Reporting: Listed substance

Potassium hydroxide (CAS 1310-58-3) Listed.

US - Minnesota Haz Subs: Listed substance

Potassium hydroxide (CAS 1310-58-3) Listed.

US - New Jersey RTK - Substances: Listed substance

Potassium hydroxide (CAS 1310-58-3) Listed.

US - New York Release Reporting: Hazardous Substances: Listed substance

Potassium hydroxide (CAS 1310-58-3) Listed.

US - Texas Effects Screening Levels: Listed substance

Potassium hydroxide (CAS 1310-58-3) Listed.

Silicic acid, sodium salt (CAS 1344-09-8) Listed.

Tetrasodium salt of ethylenediaminetetracetic acid tetrahydrate (CAS 13235-36-4) Listed.

US. Massachusetts RTK - Substance List

Potassium hydroxide (CAS 1310-58-3) Listed.

US. Pennsylvania RTK - Hazardous Substances

Potassium hydroxide (CAS 1310-58-3) Listed.

US. Rhode Island RTK

Potassium hydroxide (CAS 1310-58-3) Listed.

Inventory status

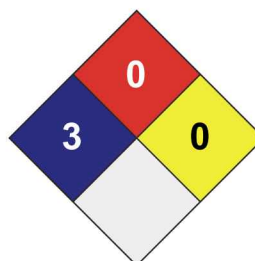
Country(s) or region	Inventory name	On inventory (yes/no)*
Canada	Domestic Substances List (DSL)	Yes
Canada	Non-Domestic Substances List (NDSL)	No
United States & Puerto Rico	Toxic Substances Control Act (TSCA) Inventory	Yes

*A "Yes" indicates that all components of this product comply with the inventory requirements administered by the governing country(s)

16. Other Information

LEGEND	
Severe	4
Serious	3
Moderate	2
Slight	1
Minimal	0

HEALTH	/ 3
FLAMMABILITY	0
PHYSICAL HAZARD	0
PERSONAL PROTECTION	X

**Disclaimer**

Information contained herein was obtained from sources considered technically accurate and reliable. While every effort has been made to ensure full disclosure of product hazards, in some cases data is not available and is so stated. Since conditions of actual product use are beyond control of the supplier, it is assumed that users of this material have been fully trained according to the requirements of all applicable legislation and regulatory instruments. No warranty, expressed or implied, is made and supplier will not be liable for any losses, injuries or consequential damages which may result from the use of or reliance on any information contained in this document.

Issue date

08-July-2015

Effective date

08-July-2015

Further information

For an updated SDS, please contact the supplier/manufacturer listed on the first page of the document.

Prepared by

Dell Tech Laboratories, Ltd. Phone: (519) 858-5021

Other information

This Safety Data Sheet was prepared to comply with the current OSHA Hazard Communication Standard (HCS) adoption of the Globally Harmonized System of Classification and Labeling of Chemicals (GHS).

This SDS conforms to the ANSI Z400.1/Z129.1-2010 Standard.

Leah Whallon

From: Wagner, Andrea <andrea.wagner@aecom.com>
Sent: Wednesday, May 29, 2024 2:29 PM
To: Leah Whallon; rami.qafisheh@messer-us.com
Cc: Philipp Sieber; Dhiman, Divya; Shihada, Huda; Hunter Armstrong; Gill Craig
Subject: RE: Application to Amend Permit No. WQ0005108000; Messer LLC; La Porte Air Separation Unit
Attachments: AR.1.1.-1a Adjacent Landowner Map.pdf; AR.1.1.1 - Landowner map cross-reference list.docx; AR.1.1.1b__Adjacent Landowner Labels - 4 SETS.docx
Follow Up Flag: Follow up
Flag Status: Flagged

Leah Whallon,

Thank you for clarifying the request. It was our prior understanding that only the downstream landowners were needed but we have updated the landowner map, associated list, and associated mailing labels, as requested, to add upstream landowners to the previously depicted downstream landowners. Please let us know if you have additional questions. Thank you!

Andrea Wagner

Project Manager, Compliance Services
M +1 609-213-7245
andrea.wagner@aecom.com

[Click here to connect with me on LinkedIn](#)

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Conshohocken, Pennsylvania 19428, United States
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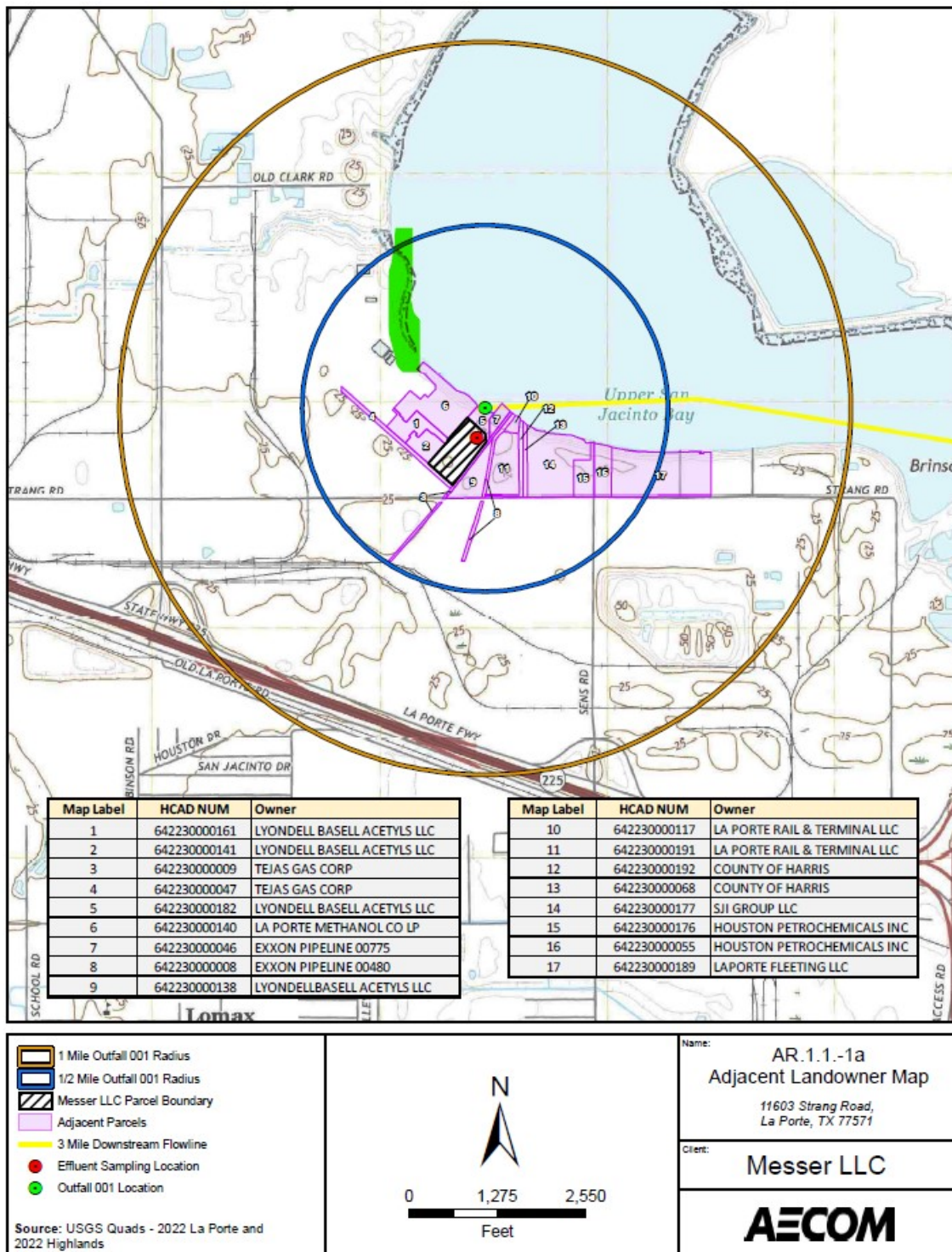
From: Leah Whallon <Leah.Whallon@Tceq.Texas.Gov>
Sent: Wednesday, May 22, 2024 2:32 PM
To: Wagner, Andrea <andrea.wagner@aecom.com>; rami.qafisheh@messer-us.com
Cc: Philipp Sieber <philipp.sieber@messer-us.com>; Dhiman, Divya <Divya.Dhiman@aecom.com>; Shihada, Huda

<huda.shihada@aecom.com>; Hunter Armstrong <Hunter.Armstrong@messer-us.com>; Gill Craig <gill.craig@messer-us.com>

Subject: RE: Application to Amend Permit No. WQ0005108000; Messer LLC; La Porte Air Separation Unit

Thank you, Andrea.

I'm reviewing the response and there are still some affected landowners missing from the map and list. Not all landowners along the shoreline in the one half mile radius are shown. I've highlighted this area in green in the image below. Please provide an updated landowner map, list, and mailing labels that include all affected landowners. Please provide the complete response by May 29, 2024.



Please let me know if you have any questions.

Thank you,



Leah Whallon
Texas Commission on Environmental Quality
Water Quality Division
512-239-0084
leah.whallon@tceq.texas.gov

How is our customer service? Fill out our online customer satisfaction survey at www.tceq.texas.gov/customersurvey

From: Wagner, Andrea <andrea.wagner@aecom.com>
Sent: Friday, May 17, 2024 5:34 AM
To: Leah Whallon <Leah.Whallon@Tceq.Texas.Gov>; rami.qafisheh@messer-us.com
Cc: Philipp Sieber <philipp.sieber@messer-us.com>; Dhiman, Divya <Divya.Dhiman@aecom.com>; Shihada, Huda <huda.shihada@aecom.com>; Hunter Armstrong <Hunter.Armstrong@messer-us.com>; Gill Craig <gill.craig@messer-us.com>
Subject: RE: Application to Amend Permit No. WQ0005108000; Messer LLC; La Porte Air Separation Unit

Dear Leah Whallon,

Please find attached a letter in response to your requests as well as associated attachments. Let us know if you have questions. Thank you!

Andrea Wagner

Project Manager, Compliance Services
M +1 609-213-7245
andrea.wagner@aecom.com

[Click here to connect with me on LinkedIn](#)

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AECOM **iapc**

From: Leah Whallon <Leah.Whallon@Tceq.Texas.Gov>
Sent: Friday, May 3, 2024 5:10 PM
To: rami.qafisheh@messer-us.com

Cc: Wagner, Andrea <andrea.wagner@aeacom.com>

Subject: Application to Amend Permit No. WQ0005108000; Messer LLC; La Porte Air Separation Unit

Good Afternoon,

Please see the attached Notice of Deficiency letter dated May 3, 2024 requesting additional information needed to declare the application administratively complete. Please send the complete response by May 17, 2024.

Please let me know if you have any questions.

Thank you,



Leah Whallon

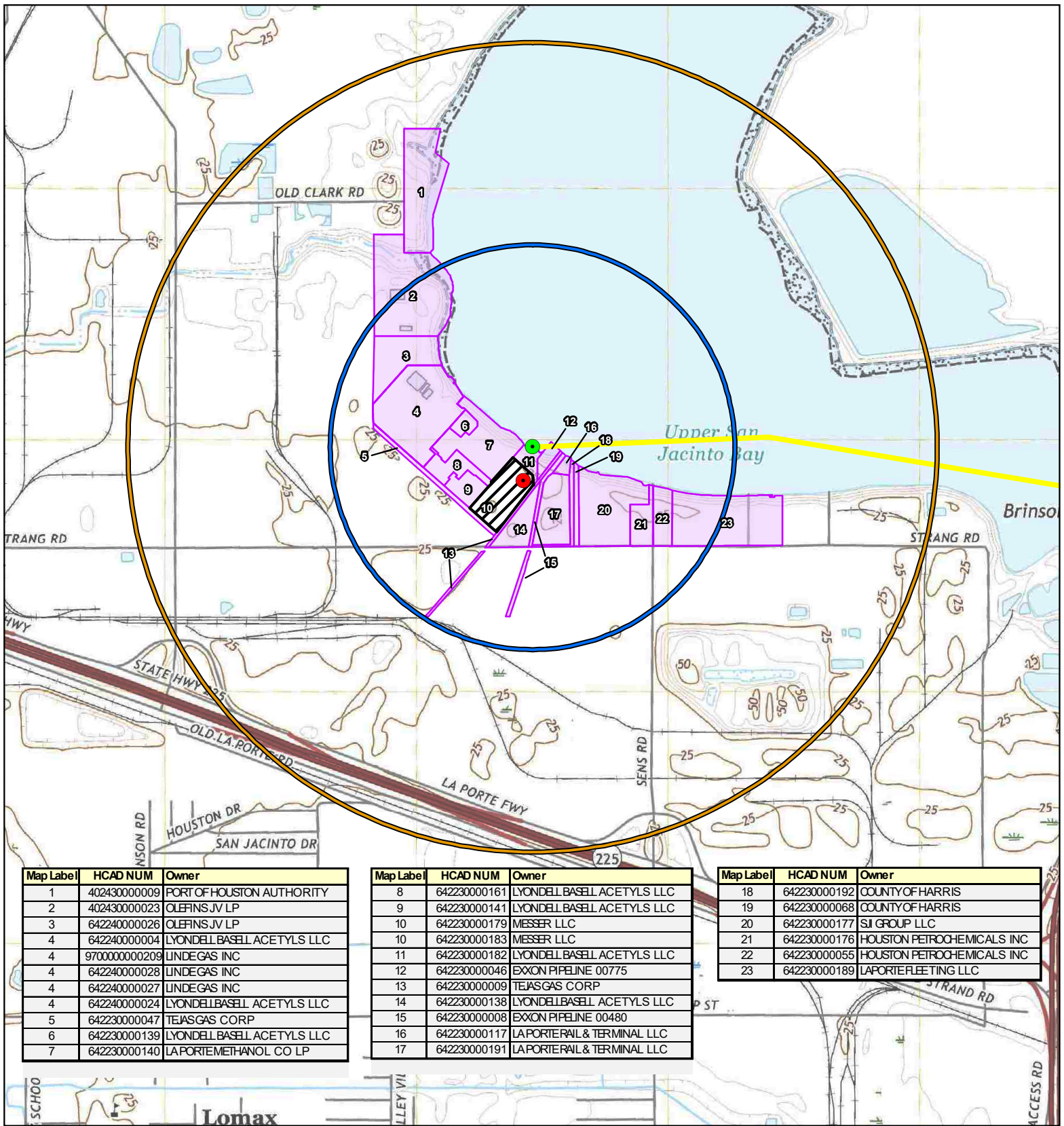
Texas Commission on Environmental Quality

Water Quality Division

512-239-0084

leah.whallon@tceq.texas.gov








How is our customer service? Fill out our online customer satisfaction survey at www.tceq.texas.gov/customersurvey



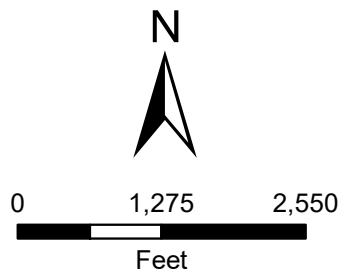
Map Label	HCAD NUM	Owner
1	402430000009	PORT OF HOUSTON AUTHORITY
2	402430000023	OLEFINS JV LP
3	642240000026	OLEFINS JV LP
4	642240000004	LYONDELL BASELL ACETYL'S LLC
4	9700000000209	LINDEGAS INC
4	642240000028	LINDEGAS INC
4	642240000027	LINDEGAS INC
4	642240000024	LYONDELL BASELL ACETYL'S LLC
5	642230000047	TEJAS GAS CORP
6	642230000139	LYONDELL BASELL ACETYL'S LLC
7	642230000140	LAPORTE METHANOL CO LP

Map Label	HCAD NUM	Owner
8	642230000161	LYONDELL BASELL ACETYL'S LLC
9	642230000141	LYONDELL BASELL ACETYL'S LLC
10	642230000179	MESSER LLC
10	642230000183	MESSER LLC
11	642230000182	LYONDELL BASELL ACETYL'S LLC
12	642230000046	EXXON PIPELINE 00775
13	642230000009	TEJAS GAS CORP
14	642230000138	LYONDELL BASELL ACETYL'S LLC
15	642230000008	EXXON PIPELINE 00480
16	642230000117	LAPORTE RAIL & TERMINAL LLC
17	642230000191	LAPORTE RAIL & TERMINAL LLC

Map Label	HCAD NUM	Owner
18	642230000192	COUNTY OF HARRIS
19	642230000068	COUNTY OF HARRIS
20	642230000177	SJ GROUP LLC
21	642230000176	HOUSTON PETROCHEMICALS INC
22	642230000055	HOUSTON PETROCHEMICALS INC
23	642230000189	LAPORTE FLEETING LLC

-  1 Mile Outfall 001 Radius
-  1/2 Mile Outfall 001 Radius
-  Messer LLC Parcel Boundary
-  Adjacent Parcels
-  3 Mile Downstream Flowline
-  Effluent Sampling Location
-  Outfall 001 Location

Source: USGS Quads - 2022 La Porte and 2022 Highlands



Name: AR.1.1.-1a
Adjacent Landowner Map

11603 Strang Road,
La Porte, TX 77571

Client: Messer LLC

AECOM

AR.1.1.1 – Adjacent Landowner Cross-reference List

Map ID	Adjacent Landowner Name	Adjacent Landowner Address
1	Port of Houston Authority	111 EAST LOOP N HOUSTON TX 77029-4326
2	Olefins JV LP	1221 MCKINNEY ST HOUSTON TX 77010-2011
3	Olefins JV LP	1221 MCKINNEY ST HOUSTON TX 77010-2011
4	LyondellBasell Acetyls LLC	ATTN TAX DEPT PO BOX 3646 HOUSTON TX 77253-3646
4	Linde Gas Inc	10 RIVERVIEW DR DANBURY CT 06810-6268
4	Linde Gas Inc	575 MOUNTAIN AVE NEW PROVIDENCE NJ 07974-2097
4	Linde Gas Inc	10 RIVERVIEW DR DANBURY CT 06810-6268
4	LyondellBasell Acetyls LLC	1221 MCKINNEY ST STE 300 HOUSTON TX 77010-2036
5	Tejas Gas Corp	PROPERTY TAX DEPT 500 DALLAS ST STE 100 HOUSTON TX 77002-4804
6	LyondellBasell Acetyls LLC	Lyondell chemical CO 1221 McKinney St STE 300 Houston TX 77010-2036
7	La Porte Methanol CO LP	MILLENNIUM CHEMICALS TAX DEPT PO BOX 3646 HOUSTON TX 77253-36
8	LyondellBasell Acetyls LLC	Lyondell chemical CO 1221 McKinney St STE 300 Houston TX 77010-2036
9	LyondellBasell Acetyls LLC	Lyondell chemical CO 1221 McKinney St STE 300 Houston TX 77010-2036
10	Messer LLC (parent facility)	200 SOMERSET CORPORATE BLVD STE 6000 BRIDGEWATER NJ 08807-2862
10	Messer LLC (parent facility)	200 SOMERSET CORPORATE BLVD STE 6000 BRIDGEWATER NJ 08807-2862
11	LyondellBasell Acetyls LLC	LYONDELLBASELL ACETYLS LLC ATTN TAX DEPT PO BOX 3646 HOUSTON TX 77253-3646
12	Exxon Pipeline 00775	EXXON PIPELINE 00775 PO BOX 53

		HOUSTON TX 77001-0053
13	Tejas Gas Corp	PROPERTY TAX DEPT 500 DALLAS ST STE 100 HOUSTON TX 77002-4804
14	LyondellBasell Acetyls LLC	ATTN TAX DEPT PO BOX 3646 HOUSTON TX 77253-3646
15	Exxon Pipeline 00480	EXXON PIPELINE 00480 PO BOX 53 HOUSTON TX 77001-0053
16	La Porte Rail and Terminal LLC	LA PORTE RAIL & TERMINAL LLC 12501 STRANG RD LA PORTE TX 77571-8704
17	La Porte Rail and Terminal LLC	LA PORTE RAIL & TERMINAL LLC 12501 STRANG RD LA PORTE TX 77571-8704
18	County of Harris	COUNTY OF HARRIS PO BOX 1525 HOUSTON TX 77251-1525
19	County of Harris	COUNTY OF HARRIS PO BOX 1525 HOUSTON TX 77251-1525
20	SJI Group LLC	SJI GROUP LLC 302 E VIEJO DR FRIENDSWOOD TX 77546-5547
21	Houston Petrochemicals Inc.	HOUSTON PETROCHEMICALS INC PO BOX 144 LA PORTE TX 77572-0144
22	Houston Petrochemicals Inc.	HOUSTON PETROCHEMICALS INC PO BOX 144 LA PORTE TX 77572-0144
23	LaPorte Fleeting LLC	LAPORTE FLEETING LLC C/O TURN SERVICES LLC 9100 SAFETY DR CONVENT LA 70723-2232

LYONDELLBASELL ACETYLS LLC LYONDELL CHEMICAL CO 1221 MCKINNEY ST STE 300 HOUSTON TX 77010-2036	EXXON PIPELINE 00775 PO BOX 53 HOUSTON TX 77001-0053	TEJAS GAS CORP PROPERTY TAX DEPT 500 DALLAS ST STE 100 HOUSTON TX77002-4804
LYONDELLBASELL ACETYLS LLC LYONDELL CHEMICAL CO 1221 MCKINNEY ST STE 300 HOUSTON TX 77010-2036	EXXON PIPELINE 00775 PO BOX 53 HOUSTON TX 77001-0053	TEJAS GAS CORP PROPERTY TAX DEPT 500 DALLAS ST STE 100 HOUSTON TX77002-4804
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LA PORT METHANOL CO LP MILLENNIUM CHEMICALS TAX DEPT PO BOX 3646 HOUSTON TX 77253-36	LA PORT METHANOL CO LP MILLENNIUM CHEMICALS TAX DEPT PO BOX 3646 HOUSTON TX 77253-36	LYONDELLBASELL ACETYLS LLC ATTN TAX DEPT PO BOX 3646 HOUSTON TX 77253-3646
LA PORT METHANOL CO LP MILLENNIUM CHEMICALS TAX DEPT PO BOX 3646 HOUSTON TX 77253-36	LYONDELLBASELL ACETYLS LLC ATTN TAX DEPT PO BOX 3646 HOUSTON TX 77253-3646	LYONDELLBASELL ACETYLS LLC ATTN TAX DEPT PO BOX 3646 HOUSTON TX 77253-3646
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12501 STRANG RD
LA PORTE TX 77571-8704

COUNTY OF HARRIS
PO BOX 1525
HOUSTON TX 77251-1525

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PO BOX 1525
HOUSTON TX 77251-1525

COUNTY OF HARRIS
PO BOX 1525
HOUSTON TX 77251-1525

SJI GROUP LLC
302 E VIEJO DR
FRIENDSWOOD TX 77546-5547

SJI GROUP LLC
302 E VIEJO DR
FRIENDSWOOD TX 77546-5547

SJI GROUP LLC
302 E VIEJO DR
FRIENDSWOOD TX 77546-5547

SJI GROUP LLC
302 E VIEJO DR
FRIENDSWOOD TX 77546-5547

HOUSTON PETROCHEMICALS INC.
PO BOX 144
LA PORTE TX 77572-0144

HOUSTON PETROCHEMICALS INC.
PO BOX 144
LA PORTE TX 77572-0144

HOUSTON PETROCHEMICALS INC.
PO BOX 144
LA PORTE TX 77572-0144

HOUSTON PETROCHEMICALS INC.
PO BOX 144
LA PORTE TX 77572-0144

LA PORTE FLEETING LLC
C/O TURN SERVICES LLC
9100 SAFETY DR
CONVENT LA 70723-2232

LA PORTE FLEETING LLC
C/O TURN SERVICES LLC
9100 SAFETY DR
CONVENT LA 70723-2232

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CONVENT LA 70723-2232

LA PORTE FLEETING LLC
C/O TURN SERVICES LLC
9100 SAFETY DR
CONVENT LA 70723-2232

PORT OF HOUSTON AUTHORITY
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HOUSTON TX 77029-4326

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OLEFINS JV LP
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HOUSTON TX 77010-2011

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OLEFINS JV LP
1221 MCKINNEY ST
HOUSTON TX 77010-2011

LINDE GAS INC
10 REVIerview DR
DANBURY CT 06810-6268

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DANBURY CT 06810-6268

LINDE GAS INC
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DANBURY CT 06810-6268

LINDE GAS INC
10 REVIerview DR
DANBURY CT 06810-6268

LINDE GAS INC
575 MOUNTAIN AVE
NEW PROVIDENCE NJ 07974-2097

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LINDE GAS INC
575 MOUNTAIN AVE
NEW PROVIDENCE NJ 07974-2097

LINDE GAS INC
575 MOUNTAIN AVE
NEW PROVIDENCE NJ 07974-2097



May 17, 2024

Via E-mail to Leah.Whallon@Tceq.Texas.Gov

Leah Whallon
Applications Review and Processing Team, MC-148
Water Quality Division
Texas Commission on Environmental Quality
12100 Park 35 Circle
Austin, Texas 78753

RE: Response to Letter Dated May 3, 2024
Application to Amend Permit No.: WQ0005108000 (EPA I.D. No. TX0135101)
Applicant Name: Messer LLC (CN603509266)
Site name: Messer La Porte Air Separation Unit (RN110995396)
Type of Application: Major amendment with renewal

Ms. Whallon:

On behalf of Messer LLC, please find attached the information requested in your letter dated May 3, 2024, along with associated responses to each request below in bold text.

1. *Administrative Report 1.1, Affected Landowner Information*
The affected landowner map does not identify the downstream landowners along the shore for one-half mile in each direction from the outfall. Please provide a revised landowner map that also includes the downstream landowners. Please also provide an updated cross referenced landowner list and the landowner list formatted for mailing labels (Avery 5160) in a Microsoft Word document.

Please find attached the following requested files:

- **PDF version of “Attachment AR.1.1.-1a Adjacent landowner Map” (updated as requested);**
- **Microsoft Word version of an updated “Attachment AR.1.1.1 – landowner map cross-reference list;”**
- **PDF version of an updated “Attachment AR.1.1.1 – landowner map cross-reference list;”**
- **Microsoft Word version of updated “Attachment AR1.1.1b – Adjacent Landowner Labels – 4 SETS;” and,**
- **PDF version of updated “Attachment AR1.1.1b – Adjacent Landowner Labels – 4 SETS.”**

2. *The following is a portion of the NORI which contains information relevant to your application. Please read it carefully and indicate if it contains any errors or omissions. The complete notice will be sent to you once the application is declared administratively complete.*

APPLICATION. Messer LLC, 11605 Strang Road, La Porte, Texas 77571, which owns an air separation plant, has applied to the Texas Commission on Environmental Quality (TCEQ) to amend Texas Pollutant Discharge Elimination System (TPDES) Permit No. WQ0005108000 (EPA I.D. No. TX0135101) to authorize reduction of the copper effluent limits. The facility is located at 11605 Strang Road, near the city of La Porte, in Harris County, Texas 77571. The discharge route is from the plant site to directly to San Jacinto Bay. TCEQ received this application on April 26, 2024. The permit application will be available for viewing and copying at La Porte Public Library, 600 South Broadway Street, La Porte, in Harris County, Texas prior to the date this notice is published in the newspaper. This link to an electronic map of the site or facility's general location is provided as a public courtesy and not part of the application or notice. For the exact location, refer to the application.

<https://gisweb.tceq.texas.gov/LocationMapper/?marker=-95.053333,29.704444&level=18>

Further information may also be obtained from Messer LLC at the address stated above or by calling Rami Qafisheh, La Porte Zone Production Manager, at 409-240-9150.

The information provided above is primarily confirmed. However, Messer is requesting “a reduction/elimination of copper effluent limits in the renewed permit.” So, see below the proposed phrasing to add “/elimination” in the fourth line below:

APPLICATION. Messer LLC, 11605 Strang Road, La Porte, Texas 77571, which owns an air separation plant, has applied to the Texas Commission on Environmental Quality (TCEQ) to amend Texas Pollutant Discharge Elimination System (TPDES) Permit No. WQ0005108000 (EPA I.D. No. TX0135101) to authorize reduction/elimination of the copper effluent limits. The facility is located at 11605 Strang Road, near the city of La Porte, in Harris County, Texas 77571. The discharge route is from the plant site to directly to San Jacinto Bay. TCEQ received this application on April 26, 2024. The permit application will be available for viewing and copying at La Porte Public Library, 600 South Broadway Street, La Porte, in Harris County, Texas prior to the date this notice is published in the newspaper. This link to an electronic map of the site or facility's general location is provided as a public courtesy and not part of the application or notice. For the exact location, refer to the application.

<https://gisweb.tceq.texas.gov/LocationMapper/?marker=-95.053333,29.704444&level=18>

Further information may also be obtained from Messer LLC at the address stated above or by calling Rami Qafisheh, La Porte Zone Production Manager, at 409-240-9150.

3. *The application indicates that public notices in Spanish are required. After confirming the portion of the NORI above does not contain any errors or omissions,*

please use the attached template to translate the NORI into Spanish. Only the first and last paragraphs are unique to this application and require translation. Please provide the translated Spanish NORI in a Microsoft Word document.

Please find attached a Microsoft Word version of “Industrial Discharge Renewal Spanish NORI.”

Should you have any questions or require additional information, please contact me at (609) 213-7245 or andrea.wagner@aecom.com.

Sincerely,



Andrea Wagner
Project Manager, AECOM

Attachments: Attachment AR.1.1.-1a Adjacent landowner Map (PDF)
Attachment AR.1.1.1 – landowner map cross-reference list (Microsoft Word)
Attachment AR.1.1.1 – landowner map cross-reference list (PDF)
Attachment AR1.1.1b – Adjacent Landowner Labels – 4 SETS (Microsoft Word)
Attachment AR1.1.1b – Adjacent Landowner Labels – 4 SETS (PDF)
Industrial Discharge Renewal Spanish NORI (Microsoft Word)

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. WQ00_____

SOLICITUD. Messer LLC, 11605 Strang Road, La Porte, Texas 7757, propietario de una planta de separación de aire, ha solicitado a la Comisión de Calidad Ambiental de Texas (TCEQ) enmendar el Permiso No. WQ0005108000 (EPA I.D. No. TX0135101) del Sistema de Eliminación de Descargas de Contaminantes de Texas (TPDES) para autorizar la reducción/eliminación de los límites de efluentes de cobre. La planta está ubicada en el 11605 Strang Road, cerca de la ciudad de La Porte, en el Condado de Harris, Texas 77571. La ruta de descarga es desde el sitio de la planta hasta directamente a la Bahía de San Jacinto. La TCEQ recibió esta solicitud el día 26 de Abril de 2024. La solicitud para el permiso estará disponible para leerla y copiarla en la Biblioteca Publica de La Porte, 600 South Broadway Street, La Porte, en el Condado de Harris, antes de la fecha de publicación de este aviso en el periódico. Este enlace a un mapa electrónico de la ubicación general del sitio o de la instalación es proporcionado como una cortesía y no es parte de la solicitud o del aviso. Para la ubicación exacta, consulte la solicitud.

<https://gisweb.tceq.texas.gov/LocationMapper/?marker=-95.053333,29.704444&level=18>

Include the following non-italicized sentence if the facility is located in the Coastal Management Program boundary and is an application for a major amendment which will increase the pollutant loads to coastal waters or would result in relocation of an outfall to a critical areas, or a renewal with such a major amendment. The Coastal Management Program boundary is the area along the Texas Coast of the Gulf of México as depicted on the map in 31 TAC §503.1 and includes part or all of the following counties: Cameron, Willacy, Kenedy, Kleberg, Nueces, San Patricio, Aransas, Refugio, Calhoun, Victoria, Jackson, Matagorda, Brazoria, Galveston, Harris, Chambers, Jefferson y Orange. If the application is for amendment that does not meet the above description or a renewal without such a major amendment, do not include the sentence: El Director Ejecutivo de la TCEQ ha revisado esta medida para ver si está de acuerdo con los objetivos y las regulaciones del Programa de Administración Costero de Texas (CMP) de acuerdo con las regulaciones del Consejo Coordinador de la Costa (CCC) y ha determinado que la acción es conforme con las metas y regulaciones pertinentes del CMP.

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 por qué el miembro sería afectado; y explicar cómo los intereses que el grupo desea proteger son pertinentes al propósito del grupo.

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

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

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

También se puede obtener información adicional por parte de Messer LLC en la dirección indicada arriba o llamando a Rami Qafisheh, Gerente de Producción Zona de La Porte al 409-240-9150.

Fecha de emisión _____ *[Date notice issued]*