



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

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

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

Exxon Mobil Corporation (CN600123939) operates the ExxonMobil Baytown Chemical Plant (RN102574803), which manufactures synthetic rubber, olefins and aromatics, and related co-products. A future ammonia manufacturing unit will be constructed. The facility is located at 5000 Bayway Drive, Baytown, Harris County, Texas 77520. The application is for renewal and amendment of TPDES Permit No. WQ0001215000.

Process wastewater, utility wastewater, sanitary wastewater, and stormwater from the Chemical Plant are sent to ExxonMobil's Baytown Refinery for treatment and discharge under the refinery's wastewater permit no. WQ0000592000. Other wastewaters that are discharged from the Chemical Plant Outfalls 003 and 007 include stormwater, utility wastewaters, and intermittent process wastewater. Discharges from Outfalls 003 and 007 are expected to potentially contain biochemical/chemical oxygen demand, suspended solids, total organic carbon, oil and grease, ammonia, and metals. Other constituents are listed in Worksheet 2 of the application.

Permit amendments included in the application are to add intermittent de minimis process wastewater from a potential proposed ammonia manufacturing unit to Outfall 003, modify Other Requirement No. 4 to include wastewater from the potential proposed ammonia manufacturing unit, and to add a daily maximum concentration limit for ammonia to Outfall 003 and monitoring only when there is a discharge from the ammonia unit.

PLANTILLA EN ESPAÑOL PARA SOLICITUDES NUEVAS/RENOVACIONES/ENMIENDAS DE TPDES o TLAP**AGUAS RESIDUALES INDUSTRIALES /AGUAS PLUVIALES**

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

Exxon Mobil Corporation (CN600123939) opera la ExxonMobil Baytown Chemical Plant (RN102574803), que fabrica caucho sintético, olefinas y aromáticos, y coproductos relacionados. En el futuro se construirá una unidad de fabricación de amoníaco. La instalación está situada en 5000 Bayway Drive, Baytown, Condado de Harris, Texas 77520. La solicitud se refiere a la renovación y modificación del permiso TPDES no. WQ0001215000.

Las aguas residuales de proceso, las aguas residuales de servicios públicos, las aguas residuales sanitarias y las aguas pluviales de la planta química se envían a la refinería Baytown de ExxonMobil para su tratamiento y vertido en virtud del permiso de aguas residuales de la refinería no. WQ0000592000. Otras aguas residuales que se vierten desde los Outfalls 003 y 007 de la planta química son aguas pluviales, aguas residuales de servicios públicos y aguas residuales de procesos intermitentes. Se prevé que los vertidos de los Outfalls 003 y 007 potencialmente contengan demanda bioquímica/química de oxígeno, sólidos en suspensión, carbono orgánico total, aceites y grasas, amoníaco y metales. En la Worksheet 2 de la solicitud se enumeran otros componentes.

Las modificaciones del permiso incluidas en la solicitud consisten en añadir al Outfall 003 las aguas residuales de proceso intermitentes de minimis de una posible unidad de fabricación de amoníaco propuesta, modificar el Otro Requisito No. 4 para incluir las aguas residuales de la posible unidad de fabricación de amoníaco propuesta y añadir un límite de concentración máxima diaria de amoníaco al Outfall 003 y supervisar solo cuando haya una descarga de la unidad de amoníaco.

TEXAS COMMISSION ON ENVIRONMENTAL QUALITY



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

PERMIT NO. WQ0001215000

APPLICATION. Exxon Mobil Corporation, P.O. Box 4004, Baytown, Texas 77522, which owns a petrochemical manufacturing facility, has applied to the Texas Commission on Environmental Quality (TCEQ) to amend Texas Pollutant Discharge Elimination System (TPDES) Permit No. WQ0001215000 (EPA I.D. No. TX0007013) to authorize the addition of de minimis process wastewater from a potential proposed ammonia manufacturing unit to Outfall 003; modification of Other Requirement No. 4 to include wastewater from potential proposed ammonia manufacturing unit; and addition of a daily maximum concentration limit for ammonia to Outfall 003 and monitoring only when there is a discharge from the ammonia unit. The facility is located at 5000 Bayway Drive, in the city of Baytown, Harris County, Texas 77520. The discharge route is from the plant site via Outfall 003 to an unnamed tidal inlet, thence to Scott Bay and via Outfall 007 to a Harris County Flood Control District (HCFCD) ditch, thence to West Fork Goose Creek, thence to Goose Creek, thence to Tabbs Bay. TCEQ received this application on February 14, 2025. The permit application will be available for viewing and copying at Sterling Municipal Library, 1 Mary Elizabeth Wilbanks Avenue, Baytown, 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=-95.025555,29.742222&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 Exxon Mobil Corporation at the address stated above or by calling Ms. Jessica Eastburn, BTA Environmental Water Advisor, at 832-864-4924.

Issuance Date: March 13, 2025

Comisión de Calidad Ambiental del Estado de Texas



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

PERMISO NO. WQ0001215000

SOLICITUD. Exxon Mobil Corporation, P.O. Box 4004, Baytown, Texas 77522, propietaria de una planta de fabricación petroquímica, ha solicitado a la Comisión de Calidad Ambiental de Texas (TCEQ) para modificar el Permiso No. WQ0001215000 (EPA I.D. No. TX0007013) del Sistema de Eliminación de Descargas Contaminantes de Texas (TPDES) para autorizar la adición de aguas residuales de proceso de minimis de una posible unidad de fabricación de amoníaco propuesta al Outfall 003; la modificación del Otro requisito No. 4 para incluir las aguas residuales de la posible unidad de fabricación de amoníaco propuesta; y la adición de un límite de concentración máxima diaria de amoníaco al Outfall 003 y el muestreo des aguas solo cuando haya una descarga de la unidad de amoníaco. La instalación está ubicada en 5000 Bayway Drive, en la ciudad de Baytown, en el Condado de Harris, Texas 77520. La ruta de descarga es del sitio de la planta a través del Outfall 003 hasta una ensenada sin nombre, de ahí a la bahía de Scott y a través del Outfall 007 hasta una zanja del Distrito de Control de Inundaciones del Condado de Harris (HCFCD), de ahí a West Fork Goose Creek, de ahí a Goose Creek, de ahí a Tabbs Bay. La TCEQ recibió esta solicitud el 14 de febrero de 2025. La solicitud para el permiso estará disponible para leerla y copiarla en el Sterling Municipal Biblioteca, 1 Mary Elizabeth Wilbanks Avenue, Baytown, en el Condado de Harris, Texas, antes de la fecha de publicación de este aviso en el periódico. La solicitud (cualquier actualización y aviso inclusive) está disponible electrónicamente en la siguiente página web:

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

Este enlace a un mapa electrónico de la ubicación general del sitio o de la instalación es proporcionado como una cortesía y no es parte de la solicitud o del aviso. Para la ubicación exacta, consulte la solicitud.

<https://gisweb.tceq.texas.gov/LocationMapper/?marker=-95.025555,29.742222&level=18>

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

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.

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

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

También se puede obtener información adicional del Exxon Mobil Corporation a la dirección indicada arriba o llamando a Sra. Jessica Eastburn, BTA Environmental Water Advisor al 832-864-4924.

Fecha de emisión el 13 de marzo de 2025

**Exxon Mobil Corporation
Baytown Chemical Plant
TPDES Permit No. WQ0001215000 Application 2025**

Application Contents

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Reference Key

AR1 Administrative Report 1.0
AR1.1 Administrative Report 1.1
TR Technical Report
SPIF Supplemental Permit Information Form
W# Worksheet #



TEXAS COMMISSION ON ENVIRONMENTAL QUALITY

INDUSTRIAL WASTEWATER PERMIT APPLICATION CHECKLIST

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

APPLICANT NAME: Exxon Mobil Corporation

PERMIT NUMBER (If new, leave blank): WQ00 01215000

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"/>
Core Data Form	<input type="checkbox"/>	<input checked="" type="checkbox"/>	Worksheet 11.0	<input type="checkbox"/>	<input checked="" type="checkbox"/>
Summary of Application (PLS)	<input checked="" type="checkbox"/>	<input type="checkbox"/>	Worksheet 11.1	<input type="checkbox"/>	<input checked="" type="checkbox"/>
Public Involvement Plan Form	<input checked="" type="checkbox"/>	<input type="checkbox"/>	Worksheet 11.2	<input type="checkbox"/>	<input checked="" type="checkbox"/>
Technical Report 1.0	<input checked="" type="checkbox"/>	<input type="checkbox"/>	Worksheet 11.3	<input type="checkbox"/>	<input checked="" type="checkbox"/>
Worksheet 1.0	<input type="checkbox"/>	<input checked="" type="checkbox"/>	Original USGS Map	<input checked="" type="checkbox"/>	<input type="checkbox"/>
Worksheet 2.0	<input checked="" type="checkbox"/>	<input type="checkbox"/>	Affected Landowners Map	<input checked="" type="checkbox"/>	<input type="checkbox"/>
Worksheet 3.0	<input type="checkbox"/>	<input checked="" type="checkbox"/>	Landowner Disk or Labels	<input checked="" type="checkbox"/>	<input type="checkbox"/>
Worksheet 3.1	<input type="checkbox"/>	<input checked="" type="checkbox"/>	Flow Diagram	<input checked="" type="checkbox"/>	<input type="checkbox"/>
Worksheet 3.2	<input type="checkbox"/>	<input checked="" type="checkbox"/>	Site Drawing	<input checked="" type="checkbox"/>	<input type="checkbox"/>
Worksheet 3.3	<input type="checkbox"/>	<input checked="" type="checkbox"/>	Original Photographs	<input checked="" type="checkbox"/>	<input type="checkbox"/>
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 type="checkbox"/>	<input checked="" type="checkbox"/>	Water Balance	<input checked="" type="checkbox"/>	<input type="checkbox"/>
Worksheet 6.0	<input type="checkbox"/>	<input checked="" type="checkbox"/>			
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 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: Exxon Mobil Corporation

Permit No.: WQ0001215000

EPA ID No.: TX0007013

Expiration Date: August 19, 2025

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

☒ Industrial Wastewater (wastewater and stormwater)

☐ Industrial Stormwater (stormwater only)

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

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

☒ Active

☐ Inactive

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

☒ TPDES Permit

☐ TLAP

☐ TPDES with TLAP component

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

☐ New

☐ Renewal with changes

☐ Renewal without changes

☒ Major amendment with renewal

☐ Major amendment without renewal

☐ Minor amendment without renewal

☐ Minor modification without renewal

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

- f. If applying for an amendment or modification, describe the request: 1) Add de minimis process wastewater from a potential proposed ammonia manufacturing unit to Outfall 003; 2) modify Other Requirement No. 4 to include wastewater from potential proposed ammonia manufacturing unit; and 3) add a daily maximum concentration limit for ammonia to Outfall 003 and monitoring only when there is a discharge from the ammonia unit.

For TCEQ Use Only

Segment Number _____ County _____
 Expiration Date _____ Region _____
 Permit Number _____

g. Application Fee

EPA Classification	New	Major Amend. (with or without renewal)	Renewal (with or without changes)	Minor Amend. / Minor Mod. (without renewal)
Minor facility not subject to EPA categorical effluent guidelines (40 CFR Parts 400-471)	<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.: N/A

Check or money order amt.: N/A

Named printed on check or money order: N/A

Epay

Voucher number: 748515, 748516

Copy of voucher attachment: V-1 Application Payment Voucher

Item 2. Applicant Information (Instructions, Pages 26)

- a. Customer Number, if applicant is an existing customer: CN600123939

Note: Locate the customer number using the [TCEQ's Central Registry Customer Search](https://www15.tceq.texas.gov/crpub/index.cfm?fuseaction=cust.CustSearch)³.

- b. Legal name of the entity (applicant) applying for this permit: Exxon Mobil Corporation

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

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

Prefix: Mr. Full Name (Last/First Name): Riccardo Cavallo

Title: Baytown Chemical Plant Manager Credential: N/A

- d. Will the 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 3. Co-applicant Information (Instructions, Page 27)

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

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

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

- b. Customer Number (if applicant is an existing customer): CN N/A

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

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

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

Title: N/A Credential: N/A

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

☐ Yes ☐ No

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

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

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

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

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

- a. ☒ Administrative Contact ☐ Technical Contact

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

Title: BTA Senior Water Advisor Credential: N/A

Organization Name: ExxonMobil Baytown Chemical Plant

Mailing Address: 5000 Bayway Drive City/State/Zip: Baytown, TX 77520

Phone No: 346-424-5029 Email: mesha.c.gardner@exxonmobil.com

- b. ☐ Administrative Contact ☒ Technical Contact

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

Title: BTA Environmental Water Advisor Credential: N/A

Organization Name: ExxonMobil Baytown Chemical Plant

Mailing Address: 5000 Bayway Drive City/State/Zip: Baytown, TX 77520

Phone No: 832-864-4924 Email: jessica.a.eastburn@exxonmobil.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): Jessica Eastburn

Title: BTA Environmental Water Advisor Credential: N/A

Organization Name: ExxonMobil Baytown Chemical Plant

Mailing Address: 5000 Bayway Drive City/State/Zip: Baytown, TX 77520

Phone No: 832-864-4924 Email: jessica.a.eastburn@exxonmobil.com

- b. Prefix: N/A Full Name (Last/First Name): Mesha Gardner

Title: BTA Senior Water Advisor Credential: N/A

Organization Name: ExxonMobil Baytown Chemical Plant

Mailing Address: 5000 Bayway Drive City/State/Zip: Baytown, TX 77520

Phone No: 346-424-5029 Email: mesha.c.gardner@exxonmobil.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): Jessica Eastburn

Title: BTA Environmental Water Advisor Credential: N/A

Organization Name: ExxonMobil Baytown Chemical Plant

Mailing Address: 5000 Bayway Drive City/State/Zip: Baytown, TX 77520

Phone No: 832-864-4924

Email: jessica.a.eastburn@exxonmobil.com

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

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

Prefix: Ms. Full Name (Last/First Name): Claudette Bradford

Title: BTA Environmental Department Head Credential: N/A

Organization Name: ExxonMobil Baytown Chemical Plant

Mailing Address: 5000 Bayway Drive City/State/Zip: Baytown, TX 77520

Phone No: 225-540-0314 Email: claudette.b.bradford@exxonmobil.com

Item 9. Notice Information (Instructions, Pages 28)

a. Individual Publishing the Notices

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

Title: BTA Environmental Water Advisor Credential: N/A

Organization Name: ExxonMobil Baytown Chemical Plant

Mailing Address: 5000 Bayway Drive City/State/Zip: Baytown, TX 77520

Phone No: 832-864-4924 Email: jessica.a.eastburn@exxonmobil.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: jessica.a.eastburn@exxonmobil.com, mesha.c.gardner@exxonmobil.com

☐ Fax: N/A

☐ Regular Mail (USPS)

Mailing Address: N/A

City/State/Zip Code: N/A

c. Contact in the Notice

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

Title: BTA Environmental Water Advisor Credential: N/A

Organization Name: ExxonMobil Baytown Chemical Plant

Phone No: 832-864-4924 Email: jessica.a.eastburn@exxonmobil.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: Sterling Municipal Library Location within the building: N/A

Physical Address of Building: 1 Mary Elizabeth Wilbanks Avenue

City: Baytown 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. Summary of Application in Plain Language Template – Complete and attach the Summary of Application in Plain Language Template (TCEQ Form 20972), also known as the plain language summary or PLS. Attachment: A-1 Plain Language Summary
- g. Complete and attach one Public Involvement Plan (PIP) Form (TCEQ Form 20960) for each application for a new permit or major amendment. Attachment: A-2 Public Involvement Plan

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

- a. TCEQ issued Regulated Entity Number (RN), if available: RN102574803

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

- b. Name of project or site (name known by the community where located): ExxonMobil Baytown Chemical 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: Exxon Mobil Corporation

Mailing Address: 5000 Bayway Drive

City/State/Zip: Baytown, TX 77520

Phone No: 254-545-3110

Email: riccardo.cavallo@exxonmobil.com

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

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

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

or Organization Name: Exxon Mobil Corporation

Mailing Address: 5000 Bayway Drive

City/State/Zip: Baytown, TX 77520

Phone No: 254-545-3110

Email: riccardo.cavallo@exxonmobil.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: N/A Full Name (Last/First Name): N/A

or Organization Name: N/A

Mailing Address: N/A

City/State/Zip: N/A

Phone No: N/A

Email: N/A

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

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

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

or Organization Name: N/A

Mailing Address: N/A

City/State/Zip: N/A

Phone No: N/A

Email: N/A

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

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

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

☐ Yes ☒ No

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

<input checked="" type="checkbox"/> One-mile radius	<input checked="" type="checkbox"/> Three-miles downstream information
<input checked="" type="checkbox"/> Applicant's property boundaries	<input type="checkbox"/> Treatment facility boundaries
<input checked="" type="checkbox"/> Labeled point(s) of discharge	<input checked="" type="checkbox"/> Highlighted discharge route(s)
<input type="checkbox"/> Effluent disposal site boundaries	<input checked="" type="checkbox"/> All wastewater ponds
<input type="checkbox"/> Sewage sludge disposal site	<input checked="" type="checkbox"/> New and future construction

Attachment: A-4 USGS Map

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

☐ Yes ☐ No or New Permit N/A

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

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

☒ Yes ☐ No or New Permit

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

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

☒ Yes ☐ No or New Permit

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

- f. City nearest the outfall(s): Baytown

- 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: A-6 Outfall 007 NOI Letters to City and County

For all applications involving an average daily discharge of 5 MGD or more, provide the names of all counties located within 100 statute miles downstream of the point(s) of discharge: N/A

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

☐ Yes No or New Permit ☐ N/A

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

- j. City nearest the disposal site: N/A
- k. County in which the disposal site is located: N/A
- l. For TLAPs, describe how effluent is/will be routed from the treatment facility to the disposal site: N/A
- m. For TLAPs, identify the nearest watercourse to the disposal site to which rainfall runoff might flow if not contained: N/A

Item 12. Miscellaneous Information (Instructions, Page 33)

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

☐ Yes ☒ No

If yes, list each person: N/A

- b. Do you owe any fees to the TCEQ?

☐ Yes ☒ No

If yes, provide the following information:

Account no.: N/A

Total amount due: N/A

- c. Do you owe any penalties to the TCEQ?

☐ Yes ☒ No

If yes, provide the following information:

Enforcement order no.: N/A

Amount due: N/A

Item 13. Signature Page (Instructions, Page 33)

Permit No: WQ0001215000

Applicant Name: Exxon Mobil Corporation

Certification: I, Riccardo Cavallo, 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.

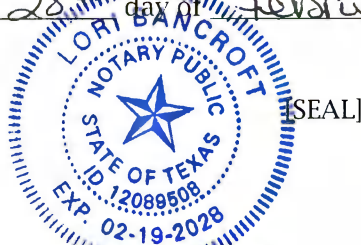
Signatory name (typed or printed): Riccardo Cavallo

Signatory title: Baytown Chemical Plant Manager

Signature:  Date: 2/12/2025
(Use blue ink)

Subscribed and Sworn to before me by the said Riccardo Cavallo
on this 12th day of February, 2025.
My commission expires on the 28th day of February, 2028.


Notary Public



Harris
County, Texas

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

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: A-5-1 Landowners Map
- b. ☒ that the landowners list has also been provided as mailing labels in electronic format (Avery 5160).
- c. Check this box to confirm a separate list with the landowners' names and mailing addresses cross-referenced to the landowner's map has been provided. Provide the source of the landowners' names and mailing addresses: 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: A-3 Outfall Photos

INDUSTRIAL WASTEWATER PERMIT APPLICATION

SUPPLEMENTAL PERMIT INFORMATION FORM (SPIF)

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

Attachment: SPIF-1 Supplemental Permit Information Form



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).

See Attachment T-1 Facility Description.

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

See Attachment T-1 Facility Description.

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

Materials List

Raw Materials	Intermediate Products	Final Products
See Attachment T-1 Facility Description, Table 1 Raw Materials, Major Intermediates, and Final Products.		

Attachment: Attachment T-1 Facility Description, Table 1 Raw Materials, Major Intermediates, and Final Products

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

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

- 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: T-3 BTCP Stormwater Site Drainage Plan

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

☐ Yes ☒ No

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

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

☒ Yes ☐ No

List source(s) used to determine 100-year frequency flood plain: FEMA FIRM Map No. 48201C0935

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

Attachment: N/A

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

☐ Yes ☒ No ☐ N/A (renewal only)

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

☐ Yes ☐ No

If **yes**, provide the permit number: N/A

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

Item 2. Treatment System (Instructions, Page 40)

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

See Attachment T-1 Facility Description.

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: T-1 Facility Description, Figure 1 Wastewater Flow Diagram. A water balance is not included because the flows from the outfalls are intermittent and variable.

Item 3. Impoundments (Instructions, Page 40)

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

☒ Yes ☐ No

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

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

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

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

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

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

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

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

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

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

Impoundment Information

Parameter	Pond #1 Stormwater Retention Pond (Butyl Polymers Area)	Pond #2 Stormwater Retention Pond (Northwest Chemicals Area)	Pond #3 Stormwater Retention Pond (Outfall 007)	Pond # Ammonia Unit Stormwater Retention Ponds (potential proposed)
Use Designation: (T) (D) (C) or (E)	C	C	C	C
Associated Outfall Number	003	003	007	003
Liner Type (C) (I) (S) or (A)	C	C	A	
Alt. Liner Attachment Reference	N/A	N/A	[See Note 1.]	
Leak Detection System, Y/N	N	N	N	
Groundwater Monitoring Wells, Y/N	Y	Y	N	

Parameter	Pond #1 Stormwater Retention Pond (Butyl Polymers Area)	Pond #2 Stormwater Retention Pond (Northwest Chemicals Area)	Pond #3 Stormwater Retention Pond (Outfall 007)	Pond # Ammonia Unit Stormwater Retention Ponds (potential proposed)
Groundwater Monitoring Data Attachment	[See Note 2.]	[See Note 2.]	N/A	
Pond Bottom Located Above The Seasonal High-Water Table, Y/N	-	-	-	
Length (ft)	146.5	N/A	N/A	
Width (ft)	146.5	N/A	N/A	
Max Depth From Water Surface (ft), Not Including Freeboard	11.5	8.5	11	
Freeboard (ft)	2.5	3.5		
Surface Area (acres)	0.49	1.01	2.55	
Storage Capacity (gallons)	1,900,000	2,500,000	2,300,000	
40 CFR Part 257, Subpart D, Y/N	N	N	N	
Date of Construction	1982	1960s	April 2023	
Notes [1] A pond liner certification report was submitted previously to the TCEQ on May 22, 2023. [2] A report on groundwater monitoring data was submitted previously [2024 Annual Response Action Effectiveness Report (RAER), to Ms. Rachel Vander Nat, TCEQ, August 14, 2024).				

Attachment: N/A

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

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

1. Liner data

☐ Yes ☐ No ☒ Not yet designed

2. Leak detection system or groundwater monitoring data

☐ Yes ☐ No ☒ Not yet designed

3. Groundwater impacts

☐ Yes ☐ No ☒ Not yet designed

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

Attachment: A stormwater retention pond(s) for the potential proposed ammonia manufacturing unit will be constructed. After the design is finalized, specifications and any other necessary information on the pond(s) will be provided in accordance with Other Requirement No. 7 in TPDES Permit No. WQ0001215000.

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)
003	29.742069	-95.027264
007	29.762439	-95.019250

Outfall Location Description

Outfall No.	Location Description
003	At the commingled flow in collection box no. 1
007	At the discharge from the Solutions Polymers Unit (SPU) and Linear Alpha Olefins Unit (LAU) Stormwater Detention Pond

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

Outfall No.	Description of sampling point
003	Same as outfall location

Outfall No.	Description of sampling point
007	Same as outfall location

Outfall Flow Information – Permitted and Proposed

Outfall No.	Permitted Daily Avg Flow (MGD)	Permitted Daily Max Flow (MGD)	Proposed Daily Avg Flow (MGD)	Proposed Daily Max Flow (MGD)	Anticipated Discharge Date (mm/dd/yy)
003	Intermittent and variable	Intermittent and variable	Intermittent and variable	Intermittent and variable	N/A
007	Intermittent and variable	Intermittent and variable	Intermittent and variable	Intermittent and variable	N/A

Outfall Discharge – Method and Measurement

Outfall No.	Pumped Discharge? Y/N	Gravity Discharge? Y/N	Type of Flow Measurement Device Used
003	N	Y	Estimate
007	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)
003	Y	N	N	Variable	Variable	Variable
007	Y	N	N	Variable	Variable	Variable

Outfall Wastestream Contributions

Outfall No. 003

Contributing Wastestream	Volume (MGD)	Percent (%) of Total Flow
Stormwater	Intermittent and variable	N/A
Other wastewaters, see Attachment T-1 Facility Description, Table 2 Outfall 003 Wastewaters	Intermittent and variable	N/A

Outfall No. 007

Contributing Wastestream	Volume (MGD)	Percent (%) of Total Flow
Stormwater	Intermittent and variable	N/A
Other wastewaters, see Attachment T-1 Facility Description, Table 3 Outfall 007 Wastewaters	Intermittent and variable	N/A

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: T-4 Treatment Chemicals and SDSs

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	6	Intermittent and variable*	Intermittent and variable*
Boilers	2	Intermittent and variable*	Intermittent and variable*
* Normally routed off-site to the BTRF wastewater system and discharged under TPDES Permit No. WQ0000592000.			
** Existing units at BTCP.			

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: See Attachment T-1 Facility Description.

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

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

- a. Check the box next to the appropriate method of domestic sewage and domestic sewage sludge treatment or disposal. Complete Worksheet 5.0 or Item 7.b if directed to do so.
- ☒ Domestic sewage is routed (i.e., connected to or transported to) to a WWTP permitted to receive domestic sewage for treatment, disposal, or both. Complete Item 7.b.
 - ☐ Domestic sewage disposed of by an on-site septic tank and drainfield system. Complete Item 7.b.
 - ☐ Domestic and industrial treatment sludge ARE commingled prior to use or disposal.
 - ☐ Industrial wastewater and domestic sewage are treated separately, and the respective sludge IS NOT commingled prior to sludge use or disposal. Complete Worksheet 5.0.
 - ☐ Facility is a POTW. Complete Worksheet 5.0.
 - ☐ Domestic sewage is not generated on-site.
 - ☒ Other (e.g., portable toilets), specify and Complete Item 7.b: Domestic sewage is collected in holding tanks and transported by truck to the BTRF sanitary treatment plant or nearby municipal treatment plant.
- 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.
ExxonMobil Baytown Refinery (BTRF)	WQ0000592000
Texas Outhouse	22739
Sprint Waste Services	23833
Port-a-San	23062
AAA Flexible Pipe Cleaning	20010
Other licensed waste haulers/POTWs not provided herein	

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

- a. Is the permittee currently required to meet any implementation schedule for compliance or enforcement?
- ☐ Yes ☒ No
- b. Has the permittee completed or planned for any improvements or construction projects?
- ☐ Yes ☒ No
- c. If **yes** to either 8.a or 8.b, provide a brief summary of the requirements and a status update: N/A

Item 9. Toxicity Testing (Instructions, Page 45)

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

☐ Yes ☒ No

If **yes**, identify the tests and describe their purposes: N/A

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

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

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

☐ Yes ☒ No

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

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

- b. Attach the following information to the application:

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

Attachment: N/A

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

☐ Yes ☐ No

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

Attachment: N/A

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

☐ Yes ☐ No

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

Item 11. Radioactive Materials (Instructions, Page 46)

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

☐ Yes ☒ No

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

Radioactive Materials Mined, Used, Stored, or Processed

Radioactive Material Name	Concentration (pCi/L)
N/A	

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

☐ Yes ☒ No

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

Radioactive Materials Present in the Discharge

Radioactive Material Name	Concentration (pCi/L)
N/A	

Item 12. Cooling Water (Instructions, Page 46)

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

- ☒ Yes
☐ No
☐ Decommissioned: N/A
☐ To Be Decommissioned: N/A

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

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

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

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

☐ Yes ☒ No

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

- c. Cooling Water Supplier

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

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

CWIS ID	S101345 - Intake 1 Lake Houston (from TCEQ PWS database)
Owner	N/A
Operator	San Jacinto River Authority

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

☐ No ☒ Yes; PWS No.: TX1013456 (San Jacinto River Authority Highlands)

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

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

☐ No ☐ Yes; Auth No.: N/A

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

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

☐ No ☐ Yes; AIF: N/A

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

d. 316(b) General Criteria

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

☐ Yes ☐ No

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

☐ Yes ☐ No

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

☐ Yes ☐ No. Explanation: N/A

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

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

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

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

☐ Yes ☐ No

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

f. Oil and Gas Exploration and Production

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

☐ Yes ☐ No

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

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

☐ Yes ☐ No

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

g. Compliance Phase and Track Selection

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

☐ Yes ☐ No

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

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

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

☐ Track I – AIF greater than 10 MGD

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

☐ Track II

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

Attachment: N/A

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

☐ Yes ☐ No

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

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

☐ Yes ☐ No

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

☐ Track I – Fixed facility

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

☐ Track I – Not a fixed facility

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

☐ Track II – Fixed facility

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

Attachment: N/A

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

This item is only applicable to existing permitted facilities.

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

☒ Yes ☐ No

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

- | |
|---|
| 1. <u>Add de minimis process wastewater from a potential proposed ammonia manufacturing unit to Outfall 003.</u> |
| 2. <u>Modify Other Requirement No. 4 to include wastewater from potential proposed ammonia manufacturing unit.</u> |
| 3. <u>Add a daily maximum concentration limit for ammonia to Outfall 003 and monitoring only when there is a discharge from the ammonia unit.</u> |

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

☐ Yes ☒ No

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

N/A

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

☐ Yes ☒ No

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

N/A

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:

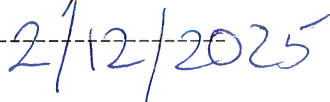
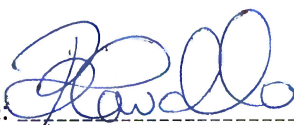
I certify that all laboratory tests submitted with this application meet the requirements of *30 TAC Chapter 25, Environmental Testing Laboratory Accreditation and Certification*.

Printed Name: Riccardo Cavallo

Title: Baytown Chemical Plant Manager

Signature: _____

Date: _____



INDUSTRIAL WASTEWATER PERMIT APPLICATION

WORKSHEET 2.0: POLLUTANT ANALYSIS

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

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

- a. Provide the date range of all sampling events conducted to obtain the analytical data submitted with this application (e.g., 05/01/2018-05/30/2018): 11/05/2024 – 01/31/2025
- 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: See list below.

Contract Laboratories for Outfall Analyses	
Parameters	Laboratory
Surfactants	ALS Laboratory Group 10450 Stancliff Road, Suite 210 Houston, TX 77099 Accreditation ID: T104704231
All other analytes	A&B Labs 10100 East Freeway, Suite 100 Houston, TX 77029 Accreditation ID: T104704213-23-31

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

Attach correspondence from TCEQ approving submittal of less than the required number of samples, if applicable. **Attachment:** N/A

TABLE 1 and TABLE 2 (Instructions, Page 58)

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

Table 1 for Outfall No.: **003**

Samples are (check one): ☐ Composite ☒ Grab

Pollutant	Sample 1 (mg/L)	Sample 2 (mg/L)	Sample 3 (mg/L)	Sample 4 (mg/L)	Sample 5 (mg/L)
	5-Nov-24	18-Nov-24	4-Dec-24	15-Jan-25	26-Jan-25
BOD (5-day)	<2.	3.68	13.1	7.55	-
CBOD (5-day)	<2.	3.46	12.15	7.59	-
Chemical oxygen demand	54.	44.	62.	57.	-
Total organic carbon	11.3	4.96	11.9	5.97	-
Dissolved oxygen	-	-	-	-	-
Ammonia nitrogen	<0.014	<0.014	0.598	0.342	-
Total suspended solids	278.	304.	54.	13.2	-
Nitrate nitrogen	0.241	0.217	0.325	0.592	-
Total organic nitrogen	0.704	0.45	0.552	0.31	-
Total phosphorus	0.291	0.09	0.19	0.262	-
Oil and grease	<1.61	<1.57	<1.55	<1.6	-
Total residual chlorine	-	-	-	-	-
Total dissolved solids	108.	74.	4010.	5460.	-
Sulfate	19.9	14.3	377.	508.	-
Chloride	10.8	14.1	1730.	3070.	-
Fluoride	0.201	0.15	0.463	0.357	-
Total alkalinity (mg/L as CaCO ₃)	76.1	44.	128.	96.1	-
Temperature (°F)	74.3	77.	69.5	60.	60.
pH (standard units)	7.82	8.2	8.2	7.1	8.55

Table 2 for Outfall No.: **003**Samples are (check one): ☐ Composite ☒ Grab

Pollutant	Sample 1 (µg/L)	Sample 2 (µg/L)	Sample 3 (µg/L)	Sample 4 (µg/L)	Sample 5 (µg/L)	MAL (µg/L)
	5-Nov-24	18-Nov-24	4-Dec-24	15-Jan-25	26-Jan-25	
Aluminum, total	1130.	2560.	620.	112.	-	2.5
Antimony, total	0.61	0.63	1.94	0.25	-	5
Arsenic, total	2.76	2.96	3.53	2.37	-	0.5
Barium, total	61.8	83.7	84.2	67.8	-	3
Beryllium, total	0.52	0.48	0.26	0.03	-	0.5
Cadmium, total	0.12	0.2	0.05	<0.05	-	1
Chromium, total	3.93	11.3	3.29	1.71	-	3
Chromium, hexavalent	-	-	<0.5	0.8	<0.5	3
Chromium, trivalent	3.93	11.3	3.29	0.9	-	N/A
Copper, total	10.2	16.3	6.57	8.13	-	2
Cyanide, available	4.5	10.	0.8	1.6	-	2/10
Lead, total	9.02	12.1	4.11	0.6	-	0.5
Mercury, total	0.000915	0.0502	0.015	0.0036	-	0.005/0.0005
Nickel, total	4.71	7.54	4.87	4.81	-	2
Selenium, total	0.33	0.51	1.2	1.78	-	5
Silver, total	<0.05	0.32	<0.05	<0.05	-	0.5
Thallium, total	<0.02	<0.02	<0.02	<0.02	-	0.5
Zinc, total	247.	421.	118.	56.1	-	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.: **003**Samples are (check one): ☐ Composite ☒ Grab

Pollutant	Sample 1 (µg/L)*	Sample 2 (µg/L)*	Sample 3 (µg/L)*	Sample 4 (µg/L)*	MAL (µg/L)*
	5-Nov-24	18-Nov-24	4-Dec-24	15-Jan-25	
Acrylonitrile	<3.	<3.	<3.	<3.	50
Anthracene	<0.39	<0.37	<0.35	<0.35	10
Benzene	<1.	<1.	<1.	<1.	10
Benzidine	<0.73	<0.69	<0.67	<0.66	50
Benzo(a)anthracene	<0.42	<0.4	<0.38	<0.38	5
Benzo(a)pyrene	<0.94	<0.89	<0.86	<0.85	5
Bis(2-chloroethyl)ether	<0.79	<0.76	<0.73	<0.72	10
Bis(2-ethylhexyl)phthalate	<2.4	<2.3	<2.2	<2.2	10
Bromodichloromethane [Dichlorobromomethane]	<1.	<1.	<1.	<1.	10
Bromoform	<1.	<1.	<1.	<1.	10
Carbon tetrachloride	<1.	<1.	<1.	<1.	2
Chlorobenzene	<1.	<1.	<1.	<1.	10
Chlorodibromomethane	<1.	<1.	<1.	<1.	10

Pollutant	Sample 1 (µg/L)*	Sample 2 (µg/L)*	Sample 3 (µg/L)*	Sample 4 (µg/L)*	MAL (µg/L)*
[Dibromochloromethane]					
Chloroform	<1.	<1.	<1.	1.62	10
Chrysene	<0.63	<0.6	<0.58	<0.57	5
m-Cresol [3-Methylphenol] [1/]	-	<1.4	<1.3	-	10
o-Cresol [2-Methylphenol]	<1.1	<1.1	<1.	<1.	10
p-Cresol [4-Methylphenol] [1/]	-	<1.4	<1.3	-	10
1,2-Dibromoethane	<1.	<1.	<1.	<1.	10
m-Dichlorobenzene [1,3-Dichlorobenzene]	<1.	<1.	<1.	<1.	10
o-Dichlorobenzene [1,2-Dichlorobenzene]	<1.	<1.	<1.	<1.	10
p-Dichlorobenzene [1,4-Dichlorobenzene]	<1.	<1.	<1.	<1.	10
3,3'-Dichlorobenzidine	<0.97	<0.92	<0.89	<0.88	5
1,2-Dichloroethane	<1.	<1.	<1.	<1.	10
1,1-Dichloroethene [1,1-Dichloroethylene]	<1.	<1.	<1.	<1.	10
Dichloromethane [Methylene chloride]	<1.	<1.	<1.	<1.	20
1,2-Dichloropropane	<1.	<1.	<1.	<1.	10
1,3-Dichloropropene [1,3-Dichloropropylene]	<1.	<1.	<1.	<1.	10
2,4-Dimethylphenol	<0.58	<0.56	<0.54	<0.53	10
Di-n-Butyl phthalate	<1.3	<1.3	<1.2	<1.2	10
Epichlorohydrin (1-Chloro-2,3-epoxypropane) [2/]	<17.	<17.	<17.	<17.	---
Ethylbenzene	<1.	<1.	<1.	<1.	10
Ethylene Glycol	<1890.	<1890.	<1890.	<1890.	---
Fluoride	201.	150.	463.	357.	500
Hexachlorobenzene	<0.76	<0.72	<0.7	<0.69	5
Hexachlorobutadiene	<0.45	<0.43	<0.41	<0.41	10
Hexachlorocyclopentadiene	<0.39	<0.37	<0.35	<0.35	10
Hexachloroethane	<0.52	<0.49	<0.47	<0.47	20
4,4'-Isopropylidenediphenol (bisphenol A)	<5.5	<5.25	<5.05	<1.25	1
Methyl ethyl ketone	<1.	<1.	<1.	<1.	50
Methyl tert-butyl ether (MTBE)	<1.	<1.	<1.	<1.	---
Nitrobenzene	<1.	<0.96	<0.92	<0.91	10
N-Nitrosodiethylamine	<5.5	<5.3	<5.1	<5.	20
N-Nitroso-di-n-butylamine	<5.5	<5.3	<5.1	<5.	20
Nonylphenol	<5.5	<5.25	<5.05	<1.25	333
Pentachlorobenzene	<3.3	<3.2	<3.	<3.	20
Pentachlorophenol	<0.55	<0.53	<0.51	<0.5	5
Phenanthrene	<0.48	<0.46	<0.44	<0.44	10
Polychlorinated biphenyls (PCBs) (**)	<0.03	<0.03	<0.03	<0.03	0.2
Pyridine	<0.39	<0.37	<0.35	<0.35	20
1,2,4,5-Tetrachlorobenzene	<5.5	<5.3	<5.1	<5.	20

Pollutant	Sample 1 (µg/L)*	Sample 2 (µg/L)*	Sample 3 (µg/L)*	Sample 4 (µg/L)*	MAL (µg/L)*
1,1,2,2-Tetrachloroethane	<1.	<1.	<1.	<1.	10
Tetrachloroethene [Tetrachloroethylene]	<1.	<1.	<1.	<1.	10
Toluene	<1.	<1.	<1.	<1.	10
1,1,1-Trichloroethane	<1.	<1.	<1.	<1.	10
1,1,2-Trichloroethane	<1.	<1.	<1.	<1.	10
Trichloroethene [Trichloroethylene]	<1.	<1.	<1.	<1.	10
2,4,5-Trichlorophenol	<0.94	<0.89	<0.86	<0.85	50
TTHM (Total trihalomethanes)	<1.	<1.	<1.	1.62	10
Vinyl chloride	<1.	<1.	<1.	<1.	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 "<".

[1] Reported under 625.1; laboratory accreditation for 8270.

[2] Reported under 624.1; laboratory accreditation for 8260.

TABLE 4 (Instructions, Pages 58-59)

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

a. Tributyltin

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

☐ Yes ☒ No

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

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

b. Enterococci (discharge to saltwater)

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

☐ Yes ☒ No

Domestic wastewater is/will be discharged.

☐ Yes ☒ No

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

c. E. coli (discharge to freshwater)

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

☐ Yes ☒ No

Domestic wastewater is/will be discharged.

☐ Yes ☒ No

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

Table 4 for Outfall No.: N/A

Samples are (check one): ☐ Composite ☐ Grab

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

TABLE 5 (Instructions, Page 59)

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

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

☒ N/A

Table 5 for Outfall No.: N/A

Samples are (check one): ☐ Composite ☐ Grab

Pollutant	Sample 1 (µg/L)*	Sample 2 (µg/L)*	Sample 3 (µg/L)*	Sample 4 (µg/L)*	MAL (µg/L)*
Aldrin					0.01
Carbaryl					5
Chlordane					0.2
Chlorpyrifos					0.05
4,4'-DDD					0.1
4,4'-DDE					0.1
4,4'-DDT					0.02
2,4-D					0.7
Danitol [Fenpropathrin]					—
Demeton					0.20
Diazinon					0.5/0.1
Dicofol [Kelthane]					1
Dieldrin					0.02
Diuron					0.090
Endosulfan I (<i>alpha</i>)					0.01
Endosulfan II (<i>beta</i>)					0.02
Endosulfan sulfate					0.1
Endrin					0.02
Guthion [Azinphos methyl]					0.1
Heptachlor					0.01
Heptachlor epoxide					0.01
Hexachlorocyclohexane (<i>alpha</i>)					0.05
Hexachlorocyclohexane (<i>beta</i>)					0.05
Hexachlorocyclohexane (<i>gamma</i>) [Lindane]					0.05
Hexachlorophene					10
Malathion					0.1
Methoxychlor					2.0
Mirex					0.02
Parathion (ethyl)					0.1
Toxaphene					0.3
2,4,5-TP [Silvex]					0.3

* Indicate units if different from µg/L.

TABLE 6 (Instructions, Page 59)

Completion of Table 6 is required for all external outfalls.

Table 6 for Outfall No.: **003**

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)*
			5-Nov-24	18-Nov-24	4-Dec-24	15-Jan-25	
Bromide	<input checked="" type="checkbox"/>	<input type="checkbox"/>	0.09	0.101	9.17	9.83	400
Color (PCU)	<input checked="" type="checkbox"/>	<input type="checkbox"/>	-	-	-	10.	—
Nitrate-Nitrite (as N)	<input checked="" type="checkbox"/>	<input type="checkbox"/>	0.206	0.198	0.351	0.737	—
Sulfide (as S)	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<0.01	<0.01	<0.01	<0.01	—
Sulfite (as SO ₃)	<input checked="" type="checkbox"/>	<input type="checkbox"/>	-	-	-	-	—
Surfactants	<input checked="" type="checkbox"/>	<input type="checkbox"/>	-	-	-	<0.05	—
Boron, total	<input checked="" type="checkbox"/>	<input type="checkbox"/>	0.029	0.032	0.499	0.738	20
Cobalt, total	<input checked="" type="checkbox"/>	<input type="checkbox"/>	0.002	0.002	0.001	<0.001	0.3
Iron, total	<input checked="" type="checkbox"/>	<input type="checkbox"/>	6.1	3.48	1.17	0.344	7
Magnesium, total	<input checked="" type="checkbox"/>	<input type="checkbox"/>	3.27	3.02	114.	163.	20
Manganese, total	<input checked="" type="checkbox"/>	<input type="checkbox"/>	0.099	0.103	0.116	0.038	0.5
Molybdenum, total	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<0.001	1.82	0.006	<0.001	1
Tin, total	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<0.01	<0.01	<0.01	<0.01	5
Titanium, total	<input checked="" type="checkbox"/>	<input type="checkbox"/>	0.049	0.036	0.017	0.012	30

TABLE 7 (Instructions, Page 60)

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

☐ N/A

Table 7 for Applicable Industrial Categories

Industrial Category	40 CFR Part	Volatiles Table 8	Acids Table 9	Bases/Neutrals Table 10	Pesticides Table 11
<input type="checkbox"/> Adhesives and Sealants		<input type="checkbox"/> Yes	<input type="checkbox"/> Yes	<input type="checkbox"/> Yes	No
<input type="checkbox"/> Aluminum Forming	467	<input type="checkbox"/> Yes	<input type="checkbox"/> Yes	<input type="checkbox"/> Yes	No
<input type="checkbox"/> Auto and Other Laundries		<input type="checkbox"/> Yes	<input type="checkbox"/> Yes	<input type="checkbox"/> Yes	<input type="checkbox"/> Yes
<input type="checkbox"/> Battery Manufacturing	461	<input type="checkbox"/> Yes	No	<input type="checkbox"/> Yes	No
<input type="checkbox"/> Coal Mining	434	No	No	No	No
<input type="checkbox"/> Coil Coating	465	<input type="checkbox"/> Yes	<input type="checkbox"/> Yes	<input type="checkbox"/> Yes	No
<input type="checkbox"/> Copper Forming	468	<input type="checkbox"/> Yes	<input type="checkbox"/> Yes	<input type="checkbox"/> Yes	No
<input type="checkbox"/> Electric and Electronic Components	469	<input type="checkbox"/> Yes	<input type="checkbox"/> Yes	<input type="checkbox"/> Yes	<input type="checkbox"/> Yes
<input type="checkbox"/> Electroplating	413	<input type="checkbox"/> Yes	<input type="checkbox"/> Yes	<input type="checkbox"/> Yes	No
<input type="checkbox"/> Explosives Manufacturing	457	No	<input type="checkbox"/> Yes	<input type="checkbox"/> Yes	No
<input type="checkbox"/> Foundries		<input type="checkbox"/> Yes	<input type="checkbox"/> Yes	<input type="checkbox"/> Yes	No
<input type="checkbox"/> Gum and Wood Chemicals - Subparts A,B,C,E	454	<input type="checkbox"/> Yes	<input type="checkbox"/> Yes	No	No
<input type="checkbox"/> Gum and Wood Chemicals - Subparts D,F	454	<input type="checkbox"/> Yes	<input type="checkbox"/> Yes	<input type="checkbox"/> Yes	No
<input type="checkbox"/> Inorganic Chemicals Manufacturing	415	<input type="checkbox"/> Yes	<input type="checkbox"/> Yes	<input type="checkbox"/> Yes	No
<input type="checkbox"/> Iron and Steel Manufacturing	420	<input type="checkbox"/> Yes	<input type="checkbox"/> Yes	<input type="checkbox"/> Yes	No
<input type="checkbox"/> Leather Tanning and Finishing	425	<input type="checkbox"/> Yes	<input type="checkbox"/> Yes	<input type="checkbox"/> Yes	No
<input type="checkbox"/> Mechanical Products Manufacturing		<input type="checkbox"/> Yes	<input type="checkbox"/> Yes	<input type="checkbox"/> Yes	No
<input type="checkbox"/> Nonferrous Metals Manufacturing	421,471	<input type="checkbox"/> Yes	<input type="checkbox"/> Yes	<input type="checkbox"/> Yes	<input type="checkbox"/> Yes
<input type="checkbox"/> Oil and Gas Extraction - Subparts A, D, E, F, G, H	435	<input type="checkbox"/> Yes	<input type="checkbox"/> Yes	<input type="checkbox"/> Yes	No
<input type="checkbox"/> Ore Mining - Subpart B	440	No	<input type="checkbox"/> Yes	No	No
<input checked="" type="checkbox"/> Organic Chemicals Manufacturing	414	<input checked="" type="checkbox"/> Yes	<input checked="" type="checkbox"/> Yes	<input checked="" type="checkbox"/> Yes	<input checked="" 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

Industrial Category	40 CFR Part	Volatiles Table 8	Acids Table 9	Bases/Neutrals Table 10	Pesticides Table 11
<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.: **003**

Samples are (check one): ☐ Composite ☒ Grab

Pollutant	Sample 1 (µg/L)*	Sample 2 (µg/L)*	Sample 3 (µg/L)*	Sample 4 (µg/L)*	MAL (µg/L)
	5-Nov-24	18-Nov-24	4-Dec-24	15-Jan-25	
Acrolein	<6.	<6.	<6.	<6.	50
Acrylonitrile	<3.	<3.	<3.	<3.	50
Benzene	<1.	<1.	<1.	<1.	10
Bromoform	<1.	<1.	<1.	<1.	10
Carbon tetrachloride	<1.	<1.	<1.	<1.	2
Chlorobenzene	<1.	<1.	<1.	<1.	10
Chlorodibromomethane	<1.	<1.	<1.	<1.	10
Chloroethane	<1.	<1.	<1.	<1.	50
2-Chloroethylvinyl ether	<6.	<6.	<6.	<6.	10
Chloroform	<1.	<1.	<1.	1.62	10
Dichlorobromomethane [Bromodichloromethane]	<1.	<1.	<1.	<1.	10
1,1-Dichloroethane	<1.	<1.	<1.	<1.	10
1,2-Dichloroethane	<1.	<1.	<1.	<1.	10
1,1-Dichloroethylene [1,1-Dichloroethene]	<1.	<1.	<1.	<1.	10
1,2-Dichloropropane	<1.	<1.	<1.	<1.	10
1,3-Dichloropropylene [1,3-Dichloropropene]	<1.	<1.	<1.	<1.	10
Ethylbenzene	<1.	<1.	<1.	<1.	10
Methyl bromide [Bromomethane]	<2.	<2.	<2.	<2.	50
Methyl chloride [Chloromethane]	<1.	<1.	<1.	<1.	50
Methylene chloride [Dichloromethane]	<1.	<1.	<1.	<1.	20
1,1,2,2-Tetrachloroethane	<1.	<1.	<1.	<1.	10
Tetrachloroethylene [Tetrachloroethene]	<1.	<1.	<1.	<1.	10
Toluene	<1.	<1.	<1.	<1.	10
1,2-Trans-dichloroethylene [1,2-Trans-dichloroethene]	<1.	<1.	<1.	<1.	10
1,1,1-Trichloroethane	<1.	<1.	<1.	<1.	10
1,1,2-Trichloroethane	<1.	<1.	<1.	<1.	10

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

* Indicate units if different from µg/L.

Table 9 for Outfall No.: **003**

Samples are (check one): ☐ Composite ☒ Grab

Pollutant	Sample 1 (µg/L)*	Sample 2 (µg/L)*	Sample 3 (µg/L)*	Sample 4 (µg/L)*	MAL (µg/L)
	5-Nov-24	18-Nov-24	4-Dec-24	15-Jan-25	
2-Chlorophenol	<0.55	<0.53	<0.51	<0.5	10
2,4-Dichlorophenol	<0.76	<0.72	<0.7	<0.69	10
2,4-Dimethylphenol	<0.58	<0.56	<0.54	<0.53	10
4,6-Dinitro-o-cresol	<0.73	<0.69	<0.67	<0.66	50
2,4-Dinitrophenol	<1.6	<1.5	<1.4	<1.4	50
2-Nitrophenol	<0.97	<0.92	<0.89	<0.88	20
4-Nitrophenol	<1.2	<1.2	<1.1	<1.1	50
p-Chloro-m-cresol	<0.58	<0.56	<0.54	<0.53	10
Pentachlorophenol	<0.55	<0.53	<0.51	<0.5	5
Phenol	<0.48	<0.46	<0.44	<0.44	10
2,4,6-Trichlorophenol	<0.87	<0.83	<0.8	<0.79	10

* Indicate units if different from µg/L.

Table 10 for Outfall No.: **003**

Samples are (check one): ☐ Composite ☒ Grab

Pollutant	Sample 1 (µg/L)*	Sample 2 (µg/L)*	Sample 3 (µg/L)*	Sample 4 (µg/L)*	MAL (µg/L)
	5-Nov-24	18-Nov-24	4-Dec-24	15-Jan-25	
Acenaphthene	<0.31	<0.29	<0.28	<0.28	10
Acenaphthylene	<0.52	<0.49	<0.47	<0.47	10
Anthracene	<0.39	<0.37	<0.35	<0.35	10
Benzidine	<0.73	<0.69	<0.67	<0.66	50
Benzo(a)anthracene	<0.42	<0.4	<0.38	<0.38	5
Benzo(a)pyrene	<0.94	<0.89	<0.86	<0.85	5
3,4-Benzofluoranthene [Benzo(b)fluoranthene]	<0.63	<0.6	<0.58	<0.57	10
Benzo(ghi)perylene	<0.69	<0.66	<0.64	<0.63	20
Benzo(k)fluoranthene	<0.63	<0.6	<0.58	<0.57	5
Bis(2-chloroethoxy)methane	<0.39	<0.37	<0.35	<0.35	10
Bis(2-chloroethyl)ether	<0.79	<0.76	<0.73	<0.72	10
Bis(2-chloroisopropyl)ether	<0.94	<0.89	<0.86	<0.85	10
Bis(2-ethylhexyl)phthalate	<2.4	<2.3	<2.2	<2.2	10
4-Bromophenyl phenyl ether	<0.45	<0.43	<0.41	<0.41	10
Butylbenzyl phthalate	<0.76	<0.72	<0.7	<0.69	10
2-Chloronaphthalene	<0.31	<0.29	<0.28	<0.28	10
4-Chlorophenyl phenyl ether	<0.73	<0.69	<0.67	<0.66	10
Chrysene	<0.63	<0.6	<0.58	<0.57	5
Dibenzo(a,h)anthracene	<0.76	<0.72	<0.7	<0.69	5
1,2-Dichlorobenzene [o-Dichlorobenzene]	<1.	<1.	<1.	<1.	10

Pollutant	Sample 1 (µg/L)*	Sample 2 (µg/L)*	Sample 3 (µg/L)*	Sample 4 (µg/L)*	MAI (µg/L)
1,3-Dichlorobenzene [m-Dichlorobenzene]	<1.	<1.	<1.	<1.	10
1,4-Dichlorobenzene [p-Dichlorobenzene]	<1.	<1.	<1.	<1.	10
3,3'-Dichlorobenzidine	<0.97	<0.92	<0.89	<0.88	5
Diethyl phthalate	<0.69	<0.66	<0.64	<0.63	10
Dimethyl phthalate	<0.79	<0.76	<0.73	<0.72	10
Di-n-butyl phthalate	<1.3	<1.3	<1.2	<1.2	10
2,4-Dinitrotoluene	<1.1	<1.	<0.98	<0.97	10
2,6-Dinitrotoluene	<1.3	<1.3	<1.2	<1.2	10
Di-n-octyl phthalate	<3.	<2.9	<2.8	<2.8	10
1,2-Diphenylhydrazine (as Azobenzene)	<0.24	<0.23	<0.22	<0.22	20
Fluoranthene	<0.48	2.84	<0.44	<0.44	10
Fluorene	<0.52	<0.49	<0.47	<0.47	10
Hexachlorobenzene	<0.76	<0.72	<0.7	<0.69	5
Hexachlorobutadiene	<0.45	<0.43	<0.41	<0.41	10
Hexachlorocyclopentadiene	<0.39	<0.37	<0.35	<0.35	10
Hexachloroethane	<0.52	<0.49	<0.47	<0.47	20
Indeno(1,2,3-cd)pyrene	<0.24	<0.23	<0.22	<0.22	5
Isophorone	<0.31	<0.29	<0.28	<0.28	10
Naphthalene	<0.34	<0.33	<0.31	<0.31	10
Nitrobenzene	<1.	<0.96	<0.92	<0.91	10
N-Nitrosodimethylamine	<0.87	<0.83	<0.8	<0.79	50
N-Nitrosodi-n-propylamine	<0.79	<0.76	<0.73	<0.72	20
N-Nitrosodiphenylamine	<0.52	<0.49	<0.47	<0.47	20
Phenanthrene	<0.48	<0.46	<0.44	<0.44	10
Pyrene	<0.63	<0.6	<0.58	<0.57	10
1,2,4-Trichlorobenzene	<0.58	<0.56	<0.54	<0.53	10

* Indicate units if different from µg/L.

Table 11 for Outfall No.: **003**

Samples are (check one): ☐ Composite ☒ Grab

Pollutant	Sample 1 (µg/L)*	Sample 2 (µg/L)*	Sample 3 (µg/L)*	Sample 4 (µg/L)*	MAI (µg/L)
	5-Nov-24	18-Nov-24	4-Dec-24	15-Jan-25	
Aldrin	<0.004	<0.004	<0.004	<0.004	0.01
alpha-BHC [alpha-Hexachlorocyclohexane]	<0.003	<0.003	<0.003	<0.003	0.05
beta-BHC [beta-Hexachlorocyclohexane]	<0.004	<0.004	<0.004	<0.004	0.05
gamma-BHC [gamma-Hexachlorocyclohexane]	<0.004	<0.004	<0.004	<0.004	0.05
delta-BHC [delta-Hexachlorocyclohexane]	<0.007	<0.006	<0.006	<0.006	0.05
Chlordane	<0.109	<0.104	<0.1	<0.1	0.2
4,4'-DDT	<0.004	<0.004	<0.004	<0.004	0.02
4,4'-DDE	<0.01	<0.009	<0.009	<0.009	0.1
4,4'-DDD	<0.002	<0.002	<0.002	<0.002	0.1

Pollutant	Sample 1 (µg/L)*	Sample 2 (µg/L)*	Sample 3 (µg/L)*	Sample 4 (µg/L)*	MAI (µg/L)
Dieldrin	<0.006	<0.005	<0.005	<0.005	0.02
Endosulfan I (alpha)	<0.008	<0.007	<0.007	<0.007	0.01
Endosulfan II (beta)	<0.004	<0.004	<0.004	<0.004	0.02
Endosulfan sulfate	<0.006	<0.005	<0.005	<0.005	0.1
Endrin	<0.004	<0.004	<0.004	<0.004	0.02
Endrin aldehyde	<0.003	<0.003	<0.003	<0.003	0.1
Heptachlor	<0.004	<0.004	<0.004	<0.004	0.01
Heptachlor epoxide	<0.004	<0.004	<0.004	<0.004	0.01
PCB 1242	<0.0018	<0.0017	<0.0017	<0.0017	0.2
PCB 1254	<0.01	<0.0047	<0.0047	<0.0047	0.2
PCB 1221	<0.02	<0.02	<0.02	<0.02	0.2
PCB 1232	<0.01	<0.0049	<0.0049	<0.0049	0.2
PCB 1248	<0.01	<0.01	<0.01	<0.01	0.2
PCB 1260	<0.03	<0.03	<0.03	<0.03	0.2
PCB 1016	<0.03	<0.03	<0.03	<0.03	0.2
Toxaphene	<0.109	<0.104	<0.1	<0.1	0.3

* Indicate units if different from µg/L.

Attachment: N/A

TABLE 12 (DIOXINS/FURAN COMPOUNDS)

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

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

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

Description: N/A

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

- ☐ Yes ☒ No

Description: N/A

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

Table 12 for Outfall No.: N/A

Samples are (check one): ☐ Composite ☐ Grab

Compound	Toxicity Equivalent Factors	Wastewater Concentration (ppq)	Wastewater Toxicity Equivalents (ppq)	Sludge Concentration (ppt)	Sludge Toxicity Equivalents (ppt)	MAL (ppq)
2,3,7,8-TCDD	1					10
1,2,3,7,8-PeCDD	1.0					50
2,3,7,8-HxCDDs	0.1					50
1,2,3,4,6,7,8-HpCDD	0.01					50
2,3,7,8-TCDF	0.1					10
1,2,3,7,8-PeCDF	0.03					50
2,3,4,7,8-PeCDF	0.3					50
2,3,7,8-HxCDFs	0.1					50
2,3,4,7,8-HpCDFs	0.01					50
OCDD	0.0003					100
OCDF	0.0003					100
PCB 77	0.0001					500
PCB 81	0.0003					500
PCB 126	0.1					500
PCB 169	0.03					500
Total						

TABLE 13 (HAZARDOUS SUBSTANCES)

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

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

☒ Yes ☐ No

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

☒ Yes ☐ No

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

Table 13 for Outfall No.: **003**

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
		5-Nov-24	18-Nov-24	4-Dec-24	15-Jan-25	
Vanadium, total	7440-62-2	6.8	9.67	5.62	4.18	200.8
Xylenes	1330-20-7	<1	-	-	-	624.1
o-Xylene	95-47-6	<1	-	-	-	624.1
m/p-Xylene	108-38-3 106-42-3	<2	-	-	-	624.1

Item 3. Specific Testing Requirements (Instructions, Page 56)

Attach correspondence from TCEQ approving submittal of less than the required number of samples, if applicable. **Attachment:** N/A

TABLE 1 and TABLE 2 (Instructions, Page 58)

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

Table 1 for Outfall No.: **007**

Samples are (check one): ☐ Composite ☒ Grab

Pollutant	Sample 1 (mg/L)	Sample 2 (mg/L)	Sample 3 (mg/L)	Sample 4 (mg/L)	Sample 5 (mg/L)
	5-Nov-24	18-Nov-24	4-Dec-24	25-Dec-24	31-Jan-25
BOD (5-day)	<2.	<2.	3.86	<2.	-
CBOD (5-day)	<2.	<2.	3.43	<2.	-
Chemical oxygen demand	29.	51.	33.	8.	-
Total organic carbon	6.75	4.65	11.6	2.76	-
Dissolved oxygen	-	-	-	-	-
Ammonia nitrogen	0.06	0.063	0.101	<0.014	-
Total suspended solids	106.	31.	42.4	76.	-
Nitrate nitrogen	0.81	0.622	0.835	0.539	-
Total organic nitrogen	0.49	0.53	1.08	<0.02	-
Total phosphorus	0.258	0.2	0.23	0.0717	-
Oil and grease	2.99	<1.61	<1.55	<1.89	-
Total residual chlorine	-	-	-	0.	-
Total dissolved solids	270.	178.	720.	208.	-
Sulfate	86.1	49.7	97.7	74.	-
Chloride	22.8	14.6	90.3	10.4	-
Fluoride	0.311	0.08	0.203	0.398	-
Total alkalinity (mg/L as CaCO ₃)	72.1	82.1	62.1	68.1	-
Temperature (°F)	77.	76.	68.2	62.	64.
pH (standard units)	8.6	8.3	8.85	8.2	8.7

Table 2 for Outfall No.: **007**Samples are (check one): ☐ Composite ☒ Grab

Pollutant	Sample 1 (µg/L)	Sample 2 (µg/L)	Sample 3 (µg/L)	Sample 4 (µg/L)	Sample 5 (µg/L)	MAL (µg/L)
	5-Nov-24	18-Nov-24	4-Dec-24	25-Dec-24	31-Jan-25	
Aluminum, total	1320.	2740.	526.	597.	-	2.5
Antimony, total	0.76	0.55	0.79	0.34	-	5
Arsenic, total	2.5	2.88	2.4	2.38	-	0.5
Barium, total	51.6	63.4	58.6	40.3	-	3
Beryllium, total	0.17	0.24	0.06	0.25	-	0.5
Cadmium, total	<0.05	0.07	0.07	<0.05	-	1
Chromium, total	8.33	15.8	4.51	2.5	-	3
Chromium, hexavalent	-	<0.5	-	-	0.6	3
Chromium, trivalent	8.33	15.8	4.51	2.5	-	N/A
Copper, total	6.72	8.53	6.75	3.86	-	2
Cyanide, available	1.	1.5	1.8	<0.63	-	2/10
Lead, total	3.82	6.94	1.92	3.16	-	0.5
Mercury, total	0.0012	0.00977	0.00396	<0.000042	-	0.005/0.0005
Nickel, total	3.	4.97	3.91	3.1	-	2
Selenium, total	0.79	0.52	1.	0.61	-	5
Silver, total	<0.05	<0.05	<0.05	<0.05	-	0.5
Thallium, total	<0.02	<0.02	<0.02	<0.02	-	0.5
Zinc, total	117.	126.	134.	135.	-	5.0

TABLE 3 (Instructions, Page 58)

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

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

Table 3 for Outfall No.: **007**Samples are (check one): ☐ Composite ☒ Grab

Pollutant	Sample 1 (µg/L)*	Sample 2 (µg/L)*	Sample 3 (µg/L)*	Sample 4 (µg/L)*	MAL (µg/L)*
	5-Nov-24	18-Nov-24	4-Dec-24	25-Dec-24	
Acrylonitrile	<3.	<3.	<3.	<3.	50
Anthracene	<0.38	<0.42	<0.35	<0.38	10
Benzene	<1.	<1.	<1.	<1.	10
Benzidine	<0.71	<0.79	<0.67	<0.72	50
Benzo(a)anthracene	<0.41	<0.46	<0.38	<0.41	5
Benzo(a)pyrene	<0.92	<1.	<0.86	<0.93	5
Bis(2-chloroethyl)ether	<0.78	<0.86	<0.73	<0.78	10
Bis(2-ethylhexyl)phthalate	<2.4	<2.6	<2.2	<2.4	10
Bromodichloromethane [Dichlorobromomethane]	<1.	<1.	<1.	<1.	10
Bromoform	<1.	<1.	<1.	<1.	10
Carbon tetrachloride	<1.	<1.	<1.	<1.	2
Chlorobenzene	<1.	<1.	<1.	<1.	10
Chlorodibromomethane	<1.	<1.	<1.	<1.	10

Pollutant	Sample 1 (µg/L)*	Sample 2 (µg/L)*	Sample 3 (µg/L)*	Sample 4 (µg/L)*	MAL (µg/L)*
[Dibromochloromethane]					
Chloroform	1.55	<1.	<1.	<1.	10
Chrysene	<0.62	<0.68	<0.58	<0.62	5
m-Cresol [3-Methylphenol] [1/]	<1.4	<1.6	<1.3	<1.4	10
o-Cresol [2-Methylphenol]	<1.1	<1.2	<1.	<1.1	10
p-Cresol [4-Methylphenol] [1/]	<1.4	<1.6	<1.3	<1.4	10
1,2-Dibromoethane	<1.	<1.	<1.	<1.	10
m-Dichlorobenzene [1,3-Dichlorobenzene]	<1.	<1.	<1.	<1.	10
o-Dichlorobenzene [1,2-Dichlorobenzene]	<1.	<1.	<1.	<1.	10
p-Dichlorobenzene [1,4-Dichlorobenzene]	<1.	<1.	<1.	<1.	10
3,3'-Dichlorobenzidine	<0.95	<1.1	<0.89	<0.96	5
1,2-Dichloroethane	<1.	<1.	<1.	<1.	10
1,1-Dichloroethene [1,1-Dichloroethylene]	<1.	<1.	<1.	<1.	10
Dichloromethane [Methylene chloride]	<1.	<1.	<1.	<1.	20
1,2-Dichloropropane	<1.	<1.	<1.	<1.	10
1,3-Dichloropropene [1,3-Dichloropropylene]	<1.	<1.	<1.	<1.	10
2,4-Dimethylphenol	<0.57	<0.64	<0.54	<0.58	10
Di-n-Butyl phthalate	<1.3	<1.5	<1.2	<1.3	10
Epichlorohydrin (1-Chloro-2,3-epoxypropane) [2/]	<17.	<17.	<17.	<17.	---
Ethylbenzene	<1.	<1.	<1.	<1.	10
Ethylene Glycol	<1890.	<1890.	<1890.	<1890.	---
Fluoride	311.	80.	203.	398.	500
Hexachlorobenzene	<0.75	<0.83	<0.7	<0.75	5
Hexachlorobutadiene	<0.44	<0.49	<0.41	<0.45	10
Hexachlorocyclopentadiene	<0.38	<0.42	<0.35	<0.38	10
Hexachloroethane	<0.51	<0.56	<0.47	<0.51	20
4,4'-Isopropylidenediphenol (bisphenol A)	<5.4	<6.	<5.05	<5.45	1
Methyl ethyl ketone	<1.	<1.	<1.	<1.	50
Methyl tert-butyl ether (MTBE)	<1.	<1.	<1.	<1.	---
Nitrobenzene	<0.98	<1.1	<0.92	<0.99	10
N-Nitrosodiethylamine	<5.4	<6.	<5.1	<5.5	20
N-Nitroso-di-n-butylamine	<5.4	<6.	<5.1	<5.5	20
Nonylphenol	<5.4	<6.	<5.05	<5.45	333
Pentachlorobenzene	<3.2	<3.6	<3.	<3.3	20
Pentachlorophenol	<0.54	<0.6	<0.51	<0.55	5
Phenanthrene	<0.48	<0.53	<0.44	<0.48	10
Polychlorinated biphenyls (PCBs) (**)	<0.03	<0.03	<0.03	<0.03	0.2
Pyridine	<0.38	<0.42	<0.35	<0.38	20
1,2,4,5-Tetrachlorobenzene	<5.4	<6.	<5.1	<5.5	20

Pollutant	Sample 1 (µg/L)*	Sample 2 (µg/L)*	Sample 3 (µg/L)*	Sample 4 (µg/L)*	MAL (µg/L)*
1,1,2,2-Tetrachloroethane	<1.	<1.	<1.	<1.	10
Tetrachloroethene [Tetrachloroethylene]	<1.	<1.	<1.	<1.	10
Toluene	<1.	<1.	<1.	<1.	10
1,1,1-Trichloroethane	<1.	<1.	<1.	<1.	10
1,1,2-Trichloroethane	<1.	<1.	<1.	<1.	10
Trichloroethene [Trichloroethylene]	<1.	<1.	<1.	<1.	10
2,4,5-Trichlorophenol	<0.92	<1.	<0.86	<0.93	50
TTHM (Total trihalomethanes)	1.55	<1.	<1.	<1.	10
Vinyl chloride	<1.	<1.	<1.	<1.	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 "<".

[1] Reported under 625.1; laboratory accreditation for 8270.

[2] Reported under 624.1; laboratory accreditation for 8260.

TABLE 4 (Instructions, Pages 58-59)

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

d. 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.

e. 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.

f. E. coli (discharge to freshwater)

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

☐ Yes ☒ No

Domestic wastewater is/will be discharged.

☐ Yes ☒ No

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

Table 4 for Outfall No.: N/A

Samples are (check one): ☐ Composite ☐ Grab

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

TABLE 5 (Instructions, Page 59)

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

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

☒ N/A

Table 5 for Outfall No.: N/A

Samples are (check one): ☐ Composite ☐ Grab

Pollutant	Sample 1 (µg/L)*	Sample 2 (µg/L)*	Sample 3 (µg/L)*	Sample 4 (µg/L)*	MAL (µg/L)*
Aldrin					0.01
Carbaryl					5
Chlordane					0.2
Chlorpyrifos					0.05
4,4'-DDD					0.1
4,4'-DDE					0.1
4,4'-DDT					0.02
2,4-D					0.7
Danitol [Fenpropathrin]					—
Demeton					0.20
Diazinon					0.5/0.1
Dicofol [Kelthane]					1
Dieldrin					0.02
Diuron					0.090
Endosulfan I (<i>alpha</i>)					0.01
Endosulfan II (<i>beta</i>)					0.02
Endosulfan sulfate					0.1
Endrin					0.02
Guthion [Azinphos methyl]					0.1
Heptachlor					0.01
Heptachlor epoxide					0.01
Hexachlorocyclohexane (<i>alpha</i>)					0.05
Hexachlorocyclohexane (<i>beta</i>)					0.05
Hexachlorocyclohexane (<i>gamma</i>) [Lindane]					0.05
Hexachlorophene					10
Malathion					0.1
Methoxychlor					2.0
Mirex					0.02
Parathion (ethyl)					0.1
Toxaphene					0.3
2,4,5-TP [Silvex]					0.3

* Indicate units if different from µg/L.

TABLE 6 (Instructions, Page 59)

Completion of Table 6 is required for all external outfalls.

Table 6 for Outfall No.: **007**

Samples are (check one): ☐ Composite ☒ Grab

Pollutants	Believed Present	Believed Absent	Sample 1 (mg/L)	Sample 2 (mg/L)	Sample 3 (mg/L)	Sample 4 (mg/L)	MAL (µg/L)*
			5-Nov-24	18-Nov-24	4-Dec-24	25-Dec-24	
Bromide	<input checked="" type="checkbox"/>	<input type="checkbox"/>	0.03	0.05	0.536	<0.02	400
Color (PCU)	<input checked="" type="checkbox"/>	<input type="checkbox"/>	-	-	-	-	—
Nitrate-Nitrite (as N)	<input checked="" type="checkbox"/>	<input type="checkbox"/>	0.792	1.35	1.61	0.566	—
Sulfide (as S)	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<0.01	<0.01	<0.01	<0.01	—
Sulfite (as SO ₃)	<input checked="" type="checkbox"/>	<input type="checkbox"/>	-	-	-	-	—
Surfactants	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<0.05	<0.05	-	-	—
Boron, total	<input checked="" type="checkbox"/>	<input type="checkbox"/>	0.066	0.056	0.094	0.044	20
Cobalt, total	<input checked="" type="checkbox"/>	<input type="checkbox"/>	0.001	0.002	<0.001	0.001	0.3
Iron, total	<input checked="" type="checkbox"/>	<input type="checkbox"/>	2.52	3.92	0.842	2.48	7
Magnesium, total	<input checked="" type="checkbox"/>	<input type="checkbox"/>	3.46	2.73	2.62	2.84	20
Manganese, total	<input checked="" type="checkbox"/>	<input type="checkbox"/>	0.054	0.071	0.027	0.047	0.5
Molybdenum, total	<input checked="" type="checkbox"/>	<input type="checkbox"/>	0.008	0.004	0.031	0.008	1
Tin, total	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<0.01	<0.01	<0.01	<0.01	5
Titanium, total	<input checked="" type="checkbox"/>	<input type="checkbox"/>	0.046	0.063	0.025	0.11	30

TABLE 7 (Instructions, Page 60)

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

☐ N/A

Table 7 for Applicable Industrial Categories

Industrial Category	40 CFR Part	Volatiles Table 8	Acids Table 9	Bases/Neutrals Table 10	Pesticides Table 11
<input type="checkbox"/> Adhesives and Sealants		<input type="checkbox"/> Yes	<input type="checkbox"/> Yes	<input type="checkbox"/> Yes	No
<input type="checkbox"/> Aluminum Forming	467	<input type="checkbox"/> Yes	<input type="checkbox"/> Yes	<input type="checkbox"/> Yes	No
<input type="checkbox"/> Auto and Other Laundries		<input type="checkbox"/> Yes	<input type="checkbox"/> Yes	<input type="checkbox"/> Yes	<input type="checkbox"/> Yes
<input type="checkbox"/> Battery Manufacturing	461	<input type="checkbox"/> Yes	No	<input type="checkbox"/> Yes	No
<input type="checkbox"/> Coal Mining	434	No	No	No	No
<input type="checkbox"/> Coil Coating	465	<input type="checkbox"/> Yes	<input type="checkbox"/> Yes	<input type="checkbox"/> Yes	No
<input type="checkbox"/> Copper Forming	468	<input type="checkbox"/> Yes	<input type="checkbox"/> Yes	<input type="checkbox"/> Yes	No
<input type="checkbox"/> Electric and Electronic Components	469	<input type="checkbox"/> Yes	<input type="checkbox"/> Yes	<input type="checkbox"/> Yes	<input type="checkbox"/> Yes
<input type="checkbox"/> Electroplating	413	<input type="checkbox"/> Yes	<input type="checkbox"/> Yes	<input type="checkbox"/> Yes	No
<input type="checkbox"/> Explosives Manufacturing	457	No	<input type="checkbox"/> Yes	<input type="checkbox"/> Yes	No
<input type="checkbox"/> Foundries		<input type="checkbox"/> Yes	<input type="checkbox"/> Yes	<input type="checkbox"/> Yes	No
<input type="checkbox"/> Gum and Wood Chemicals - Subparts A,B,C,E	454	<input type="checkbox"/> Yes	<input type="checkbox"/> Yes	No	No
<input type="checkbox"/> Gum and Wood Chemicals - Subparts D,F	454	<input type="checkbox"/> Yes	<input type="checkbox"/> Yes	<input type="checkbox"/> Yes	No
<input type="checkbox"/> Inorganic Chemicals Manufacturing	415	<input type="checkbox"/> Yes	<input type="checkbox"/> Yes	<input type="checkbox"/> Yes	No
<input type="checkbox"/> Iron and Steel Manufacturing	420	<input type="checkbox"/> Yes	<input type="checkbox"/> Yes	<input type="checkbox"/> Yes	No
<input type="checkbox"/> Leather Tanning and Finishing	425	<input type="checkbox"/> Yes	<input type="checkbox"/> Yes	<input type="checkbox"/> Yes	No
<input type="checkbox"/> Mechanical Products Manufacturing		<input type="checkbox"/> Yes	<input type="checkbox"/> Yes	<input type="checkbox"/> Yes	No
<input type="checkbox"/> Nonferrous Metals Manufacturing	421,471	<input type="checkbox"/> Yes	<input type="checkbox"/> Yes	<input type="checkbox"/> Yes	<input type="checkbox"/> Yes
<input type="checkbox"/> Oil and Gas Extraction - Subparts A, D, E, F, G, H	435	<input type="checkbox"/> Yes	<input type="checkbox"/> Yes	<input type="checkbox"/> Yes	No
<input type="checkbox"/> Ore Mining - Subpart B	440	No	<input type="checkbox"/> Yes	No	No
<input checked="" type="checkbox"/> Organic Chemicals Manufacturing	414	<input checked="" type="checkbox"/> Yes	<input checked="" type="checkbox"/> Yes	<input checked="" type="checkbox"/> Yes	<input checked="" 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

Industrial Category	40 CFR Part	Volatiles Table 8	Acids Table 9	Bases/Neutrals Table 10	Pesticides Table 11
<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.: 007

Samples are (check one): ☐ Composite ☒ Grab

Pollutant	Sample 1 (µg/L)*	Sample 2 (µg/L)*	Sample 3 (µg/L)*	Sample 4 (µg/L)*	MAL (µg/L)
	5-Nov-24	18-Nov-24	4-Dec-24	25-Dec-24	
Acrolein	-	<6.	<6.	<6.	50
Acrylonitrile	<3.	<3.	<3.	<3.	50
Benzene	<1.	<1.	<1.	<1.	10
Bromoform	<1.	<1.	<1.	<1.	10
Carbon tetrachloride	<1.	<1.	<1.	<1.	2
Chlorobenzene	<1.	<1.	<1.	<1.	10
Chlorodibromomethane	<1.	<1.	<1.	<1.	10
Chloroethane	<1.	<1.	<1.	<1.	50
2-Chloroethylvinyl ether	<6.	<6.	<6.	<6.	10
Chloroform	1.55	<1.	<1.	<1.	10
Dichlorobromomethane [Bromodichloromethane]	<1.	<1.	<1.	<1.	10
1,1-Dichloroethane	<1.	<1.	<1.	<1.	10
1,2-Dichloroethane	<1.	<1.	<1.	<1.	10
1,1-Dichloroethylene [1,1-Dichloroethene]	<1.	<1.	<1.	<1.	10
1,2-Dichloropropane	<1.	<1.	<1.	<1.	10
1,3-Dichloropropylene [1,3-Dichloropropene]	<1.	<1.	<1.	<1.	10
Ethylbenzene	<1.	<1.	<1.	<1.	10
Methyl bromide [Bromomethane]	<2.	<2.	<2.	<2.	50
Methyl chloride [Chloromethane]	<1.	<1.	<1.	3.94	50
Methylene chloride [Dichloromethane]	<1.	<1.	<1.	<1.	20
1,1,2,2-Tetrachloroethane	<1.	<1.	<1.	<1.	10
Tetrachloroethylene [Tetrachloroethene]	<1.	<1.	<1.	<1.	10
Toluene	<1.	<1.	<1.	<1.	10
1,2-Trans-dichloroethylene [1,2-Trans-dichloroethene]	<1.	<1.	<1.	<1.	10
1,1,1-Trichloroethane	<1.	<1.	<1.	<1.	10
1,1,2-Trichloroethane	<1.	<1.	<1.	<1.	10

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

* Indicate units if different from µg/L.

Table 9 for Outfall No.: **007**

Samples are (check one): ☐ Composite ☒ Grab

Pollutant	Sample 1 (µg/L)*	Sample 2 (µg/L)*	Sample 3 (µg/L)*	Sample 4 (µg/L)*	MAL (µg/L)
	5-Nov-24	18-Nov-24	4-Dec-24	25-Dec-24	
2-Chlorophenol	<0.54	<0.6	<0.51	<0.55	10
2,4-Dichlorophenol	<0.75	<0.83	<0.7	<0.75	10
2,4-Dimethylphenol	<0.57	<0.64	<0.54	<0.58	10
4,6-Dinitro-o-cresol	<0.71	<0.79	<0.67	<0.72	50
2,4-Dinitrophenol	<1.5	<1.7	<1.4	<1.5	50
2-Nitrophenol	<0.95	<1.1	<0.89	<0.96	20
4-Nitrophenol	<1.2	<1.4	<1.1	<1.2	50
p-Chloro-m-cresol	<0.57	<0.64	<0.54	<0.58	10
Pentachlorophenol	<0.54	<0.6	<0.51	<0.55	5
Phenol	<0.48	<0.53	<0.44	<0.48	10
2,4,6-Trichlorophenol	<0.85	<0.95	<0.8	<0.86	10

* Indicate units if different from µg/L.

Table 10 for Outfall No.: **007**

Samples are (check one): ☐ Composite ☒ Grab

Pollutant	Sample 1 (µg/L)*	Sample 2 (µg/L)*	Sample 3 (µg/L)*	Sample 4 (µg/L)*	MAL (µg/L)
	5-Nov-24	18-Nov-24	4-Dec-24	25-Dec-24	
Acenaphthene	<0.3	<0.34	<0.28	<0.31	10
Acenaphthylene	<0.51	<0.56	<0.47	<0.51	10
Anthracene	<0.38	<0.42	<0.35	<0.38	10
Benzidine	<0.71	<0.79	<0.67	<0.72	50
Benzo(a)anthracene	<0.41	<0.46	<0.38	<0.41	5
Benzo(a)pyrene	<0.92	<1.	<0.86	<0.93	5
3,4-Benzofluoranthene [Benzo(b)fluoranthene]	<0.62	<0.68	<0.58	<0.62	10
Benzo(ghi)perylene	<0.68	<0.76	<0.64	<0.69	20
Benzo(k)fluoranthene	<0.62	<0.68	<0.58	<0.62	5
Bis(2-chloroethoxy)methane	<0.38	<0.42	<0.35	<0.38	10
Bis(2-chloroethyl)ether	<0.78	<0.86	<0.73	<0.78	10
Bis(2-chloroisopropyl)ether	<0.92	<1.	<0.86	<0.93	10
Bis(2-ethylhexyl)phthalate	<2.4	<2.6	<2.2	<2.4	10
4-Bromophenyl phenyl ether	<0.44	<0.49	<0.41	<0.45	10
Butylbenzyl phthalate	<0.75	<0.83	<0.7	<0.75	10
2-Chloronaphthalene	<0.3	<0.34	<0.28	<0.31	10
4-Chlorophenyl phenyl ether	<0.71	<0.79	<0.67	<0.72	10
Chrysene	<0.62	<0.68	<0.58	<0.62	5
Dibenzo(a,h)anthracene	<0.75	<0.83	<0.7	<0.75	5
1,2-Dichlorobenzene [o-Dichlorobenzene]	<1.	<1.	<1.	<1.	10

Pollutant	Sample 1 (µg/L)*	Sample 2 (µg/L)*	Sample 3 (µg/L)*	Sample 4 (µg/L)*	MAI (µg/L)
1,3-Dichlorobenzene [m-Dichlorobenzene]	<1.	<1.	<1.	<1.	10
1,4-Dichlorobenzene [p-Dichlorobenzene]	<1.	<1.	<1.	<1.	10
3,3'-Dichlorobenzidine	<0.95	<1.1	<0.89	<0.96	5
Diethyl phthalate	<0.68	<0.76	<0.64	<0.69	10
Dimethyl phthalate	<0.78	<0.86	<0.73	<0.78	10
Di-n-butyl phthalate	<1.3	<1.5	<1.2	<1.3	10
2,4-Dinitrotoluene	<1.	<1.2	<0.98	<1.1	10
2,6-Dinitrotoluene	<1.3	<1.5	<1.2	<1.3	10
Di-n-octyl phthalate	<3.	<3.3	<2.8	<3.	10
1,2-Diphenylhydrazine (as Azobenzene)	<0.24	<0.26	<0.22	<0.24	20
Fluoranthene	<0.48	<0.53	<0.44	<0.48	10
Fluorene	<0.51	<0.56	<0.47	<0.51	10
Hexachlorobenzene	<0.75	<0.83	<0.7	<0.75	5
Hexachlorobutadiene	<0.44	<0.49	<0.41	<0.45	10
Hexachlorocyclopentadiene	<0.38	<0.42	<0.35	<0.38	10
Hexachloroethane	<0.51	<0.56	<0.47	<0.51	20
Indeno(1,2,3-cd)pyrene	<0.24	<0.26	<0.22	<0.24	5
Isophorone	<0.3	<0.34	<0.28	<0.31	10
Naphthalene	<0.33	<0.37	<0.31	<0.34	10
Nitrobenzene	<0.98	<1.1	<0.92	<0.99	10
N-Nitrosodimethylamine	<0.85	<0.95	<0.8	<0.86	50
N-Nitrosodi-n-propylamine	<0.78	<0.86	<0.73	<0.78	20
N-Nitrosodiphenylamine	<0.51	<0.56	<0.47	<0.51	20
Phenanthrene	<0.48	<0.53	<0.44	<0.48	10
Pyrene	<0.62	<0.68	<0.58	<0.62	10
1,2,4-Trichlorobenzene	<0.57	<0.64	<0.54	<0.58	10

* Indicate units if different from µg/L.

Table 11 for Outfall No.: 007

Samples are (check one): ☐ Composite ☒ Grab

Pollutant	Sample 1 (µg/L)*	Sample 2 (µg/L)*	Sample 3 (µg/L)*	Sample 4 (µg/L)*	MAI (µg/L)
	5-Nov-24	18-Nov-24	4-Dec-24	25-Dec-24	
Aldrin	<0.005	<0.005	<0.004	<0.005	0.01
alpha-BHC [alpha-Hexachlorocyclohexane]	<0.004	<0.004	<0.003	<0.004	0.05
beta-BHC [beta-Hexachlorocyclohexane]	<0.005	<0.005	<0.004	<0.005	0.05
gamma-BHC [gamma-Hexachlorocyclohexane]	<0.005	<0.005	<0.004	<0.005	0.05
delta-BHC [delta-Hexachlorocyclohexane]	<0.007	<0.007	<0.006	<0.007	0.05
Chlordane	<0.118	<0.116	<0.1	<0.122	0.2
4,4'-DDT	<0.005	<0.005	<0.004	<0.005	0.02
4,4'-DDE	<0.011	<0.01	<0.009	<0.011	0.1
4,4'-DDD	<0.002	<0.002	<0.002	<0.002	0.1

Pollutant	Sample 1 (µg/L)*	Sample 2 (µg/L)*	Sample 3 (µg/L)*	Sample 4 (µg/L)*	MAI (µg/L)
Dieldrin	<0.006	<0.006	<0.005	<0.006	0.02
Endosulfan I (alpha)	<0.008	<0.008	<0.007	<0.009	0.01
Endosulfan II (beta)	<0.005	<0.005	<0.004	<0.005	0.02
Endosulfan sulfate	<0.006	<0.006	<0.005	<0.006	0.1
Endrin	<0.005	<0.005	<0.004	<0.005	0.02
Endrin aldehyde	<0.004	<0.004	<0.003	<0.004	0.1
Heptachlor	<0.005	<0.005	<0.004	<0.005	0.01
Heptachlor epoxide	<0.005	<0.005	<0.004	<0.005	0.01
PCB 1242	<0.002	<0.0017	<0.0017	<0.002	0.2
PCB 1254	<0.01	<0.0047	<0.0047	<0.01	0.2
PCB 1221	<0.02	<0.02	<0.02	<0.02	0.2
PCB 1232	<0.01	<0.0049	<0.0049	<0.01	0.2
PCB 1248	<0.01	<0.01	<0.01	<0.01	0.2
PCB 1260	<0.03	<0.03	<0.03	<0.03	0.2
PCB 1016	<0.03	<0.03	<0.03	<0.03	0.2
Toxaphene	<0.118	<0.116	<0.1	<0.122	0.3

* Indicate units if different from µg/L.

Attachment: N/A

TABLE 12 (DIOXINS/FURAN COMPOUNDS)

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

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

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

Description: N/A

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

- ☐ Yes ☒ No

Description: N/A

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

Table 12 for Outfall No.: N/ASamples are (check one): ☐ Composite ☐ Grab

Compound	Toxicity Equivalent Factors	Wastewater Concentration (ppq)	Wastewater Toxicity Equivalents (ppq)	Sludge Concentration (ppt)	Sludge Toxicity Equivalents (ppt)	MAL (ppq)
2,3,7,8-TCDD	1					10
1,2,3,7,8-PeCDD	1.0					50
2,3,7,8-HxCDDs	0.1					50
1,2,3,4,6,7,8-HpCDD	0.01					50
2,3,7,8-TCDF	0.1					10
1,2,3,7,8-PeCDF	0.03					50
2,3,4,7,8-PeCDF	0.3					50
2,3,7,8-HxCDFs	0.1					50
2,3,4,7,8-HpCDFs	0.01					50
OCDD	0.0003					100
OCDF	0.0003					100
PCB 77	0.0001					500
PCB 81	0.0003					500
PCB 126	0.1					500
PCB 169	0.03					500
Total						

TABLE 13 (HAZARDOUS SUBSTANCES)

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

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

☒ Yes ☐ No

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

☒ Yes ☐ No

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

Table 13 for Outfall No.: 007

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
		4-Nov-24	18-Nov-24	4-Dec-24	25-Dec-24	
Vanadium, total	7440-62-2	8.24	10.2	5.39	64.5	200.8
Xylenes	1330-20-7	<1	-	-	<1	624.1
o-Xylene	95-47-6	<1	-	-	<1	624.1
m/p-Xylene	108-38-3 106-42-3	<2	-	-	<2	624.1

INDUSTRIAL WASTEWATER PERMIT APPLICATION

WORKSHEET 4.0: RECEIVING WATERS

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

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

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

☐ Yes ☒ No

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

1. The legal name of the owner of the drinking water supply intake: N/A
2. The distance and direction from the outfall to the drinking water supply intake: N/A

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

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

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

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

- a. Width of the receiving water at the outfall: Outfall 003, at tidal inlet, 30 feet

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

☐ Yes ☒ No

If **yes**, provide the distance and direction from the outfall(s) to the oyster reefs: N/A

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

☐ Yes ☒ No

If **yes**, provide the distance and direction from the outfall(s) to the grasses: N/A

Item 3. Classified Segment (Instructions, Page 80)

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

☒ Yes (Outfall 003) ☒ No (Outfall 007)

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)

Responses for Items 4-5 apply to Outfall 007.

- a. Name of the immediate receiving waters: Unnamed ditch
- b. Check the appropriate description of the immediate receiving waters:
- ☐ Lake or Pond
 - Surface area (acres): N/A
 - Average depth of the entire water body (feet): N/A
 - Average depth of water body within a 500-foot radius of the discharge point (feet): N/a
 - ☒ Man-Made Channel or Ditch
 - ☐ Stream or Creek
 - ☐ Freshwater Swamp or Marsh
 - ☐ Tidal Stream, Bayou, or Marsh
 - ☐ Open Bay
 - ☐ Other, specify:

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

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

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

- ☒ Intermittent (dry for at least one week during most years)
- ☐ Intermittent with Perennial Pools (enduring pools containing habitat to maintain aquatic life uses)
- ☐ Perennial (normally flowing)

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

- ☐ USGS flow records
- ☒ personal observation
- ☐ historical observation by adjacent landowner(s)
- ☐ other, specify: N/A

- d. List the names of all perennial streams that join the receiving water within three miles downstream of the discharge point: West Fork Goose Creek, thence to Goose Creek, thence to Tabbs Bay

- 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: The stream channel changes from a man-made ditch to a natural streambed and the flow conditions change from intermittent to perennial. The natural streambed becomes wider downstream towards the tidally influenced portion of Goose Creek.

- f. General observations of the water body during normal dry weather conditions: Outfall 007 is a man-made channel. Upstream of the Outfall 007 discharge is a pellet interceptor to capture pellets/trash and it is lined with a flow fill and bull rock with a heavy canvas tarp material to help mitigate erosion. Surrounding the discharge area is natural soil and vegetation.

Date and time of observation: 02/05/2025 12:00 pm

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

☐ Yes ☒ No If **yes**, describe how: N/A

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

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

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

- 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 checked="" type="checkbox"/> other, specify: <u>Stormwater drainage</u>

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

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

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

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

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

**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: Exxon Mobil Corporation

Permit No. WQ00 01215000EPA ID No. TX 0007013

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

5000 Bayway Drive, City of Baytown, Harris County, Texas 77520

Provide the name, address, phone and fax number of an individual that can be contacted to answer specific questions about the property.

Prefix (Mr., Ms., Miss): Ms.

First and Last Name: Jessica Eastburn

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

Title: BTA Environmental Water Advisor

Mailing Address: 3525 Decker Drive

City, State, Zip Code: Baytown, TX 77520

Phone No.: 832-864-4924 Ext.: N/A Fax No.: N/A

E-mail Address: jessica.a.eastburn@exxonmobil.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.

Via Outfall 003 to an unnamed tidal inlet, thence to Scott Bay in Segment No. 2429 of the Bays and Estuaries and via Outfall 007 to Harris County Flood Control District (HCFCD) ditch O107-00-00, thence to West Fork Goose Creek, thence to Goose Creek, thence to Tabbs Bay in Segment No. 2426 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).

See Attachment SPIF-2 USGS Map.

6. Provide original photographs of any structures 50 years or older on the property.
7. 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

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

Private access roads, located within the ExxonMobil property, will be constructed to facilitate access to the work sites. Heavy machinery that may produce vibration effects may be used during construction.

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

Industrialized area

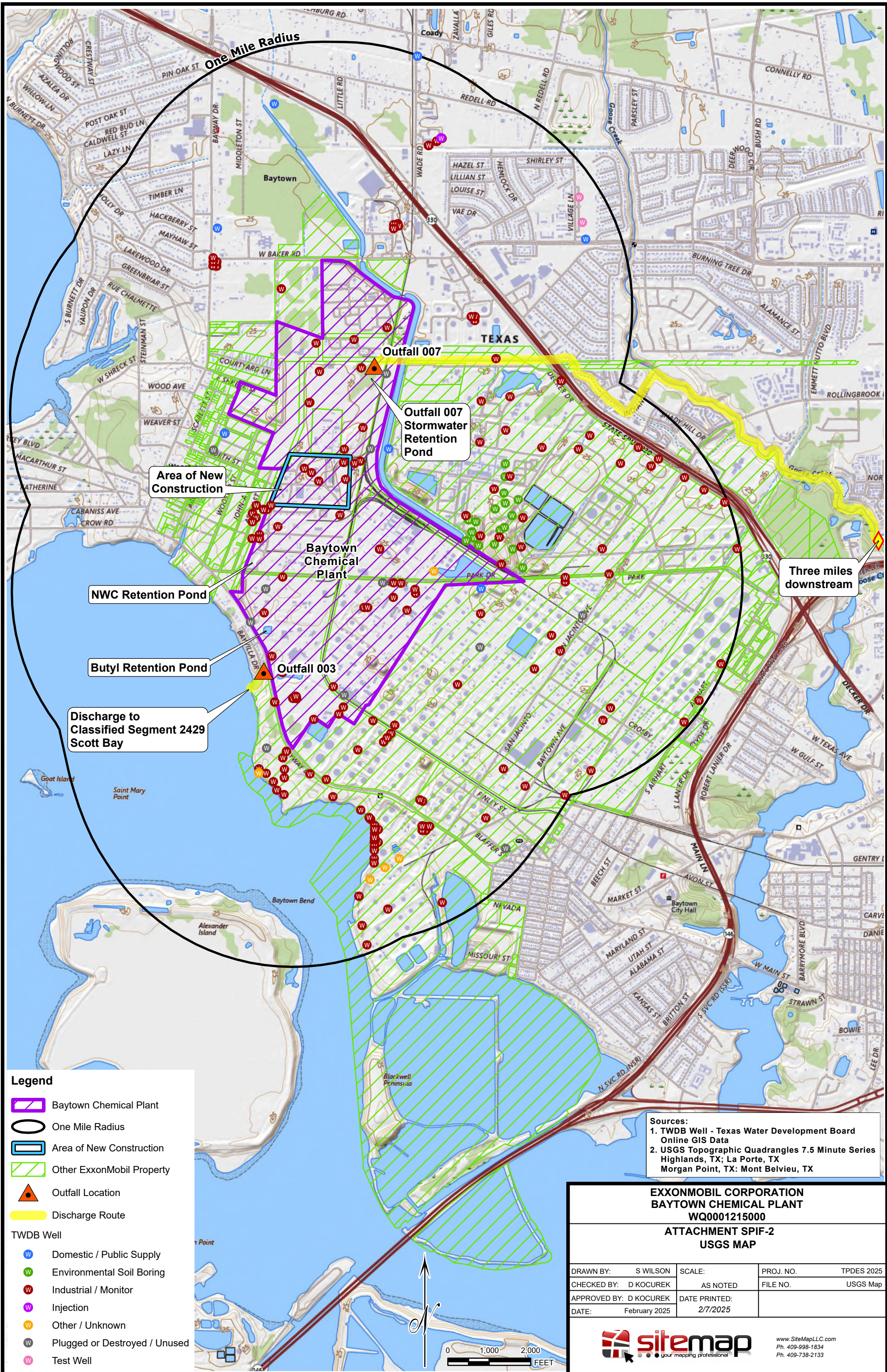
THE FOLLOWING ITEMS APPLY ONLY TO APPLICATIONS FOR NEW TPDES PERMITS AND MAJOR AMENDMENTS TO TPDES PERMITS

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

The site has been used for chemical manufacturing since World War II, when butyl production began as part of a government project. New production units and expansion projects have been constructed periodically since then. With regard to Item 6 above, there is some process equipment that is older than 50 years; photos are not included in the application.

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

The site has been used for chemical manufacturing since World War II.



Legend

Baytown Chemical Plant

One Mile Radius

Area of New Construction

Other ExxonMobil Property

Outfall Location

Discharge Route

TWDB Well

Domestic / Public Supply

Environmental Soil Boring

Industrial / Monitor

Injection

Other / Unknown

Plugged or Destroyed / Unused

Test Well

Sources:
1. TWDB Well - Texas Water Development Board Online GIS Data
2. USGS Topographic Quadrangles 7.5 Minute Series Highlands, TX; La Porte, TX
Morgan Point, TX; Mont Belvieu, TX

EXXONMOBIL CORPORATION
BAYTOWN CHEMICAL PLANT
WQ0001215000

ATTACHMENT SPIF-2
USGS MAP

DRAWN BY: S WILSON	SCALE: AS NOTED	PROJ. NO. TPDES 2025
CHECKED BY: D KOCUREK	DATE PRINTED: 2/7/2025	FILE NO. USGS Map
APPROVED BY: D KOCUREK	DATE: February 2025	

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Ph. 409-738-2133



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)		3. Regulated Entity Reference Number (if issued)
CN 600123939		RN 102574803

[Follow this link to search for CN or RN numbers in Central Registry**](#)

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)			
The Customer Name submitted here may be updated automatically based on what is current and active with the Texas Secretary of State (SOS) or Texas Comptroller of Public Accounts (CPA).			
6. Customer Legal Name (If an individual, print last name first: eg: Doe, John)		If new Customer, enter previous Customer below:	
EXXON MOBIL CORPORATION			
7. TX SOS/CPA Filing Number	8. TX State Tax ID (11 digits)	9. Federal Tax ID (9 digits)	10. DUNS Number (if applicable)
0003362806	11354090059	135409005	001213214
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:	PO BOX 4004		
	City	State	ZIP
	BAYTOWN	TX	77522
16. Country Mailing Information (if outside USA)		17. E-Mail Address (if applicable)	
18. Telephone Number	19. Extension or Code	20. Fax Number (if applicable)	
(254) 545-3110		() -	

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 type="checkbox"/> Update to Regulated Entity Information	
The Regulated Entity Name submitted may be updated, in order to meet TCEQ Core Data Standards (removal of organizational endings such as Inc, LP, or LLC).	
22. Regulated Entity Name (Enter name of the site where the regulated action is taking place.)	
EXXONMOBIL BAYTOWN CHEMICAL PLANT	

23. Street Address of the Regulated Entity: (No PO Boxes)	5000 BAYWAY DRIVE							
	ATTACHMENT CF-1							
24. County	City	BAYTOWN	State	TX	ZIP	77520	ZIP + 4	1646

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

25. Description to Physical Location:								
26. Nearest City	State				Nearest ZIP Code			
BAYTOWN	TX				77520			
Latitude/Longitude are required and may be added/updated to meet TCEQ Core Data Standards. (Geocoding of the Physical Address may be used to supply coordinates where none have been provided or to gain accuracy).								
27. Latitude (N) In Decimal:	29.740556			28. Longitude (W) In Decimal:	95.025278			
Degrees	Minutes	Seconds	Degrees	Minutes	Seconds			
29	44	26.00	95	01	31.00			
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)			
2869	2822		325110		325212			
33. What is the Primary Business of this entity? (Do not repeat the SIC or NAICS description.)								
MFG SYNTHETIC RUBBER ORGANIC CHEMICALS								
34. Mailing Address:	PO BOX 4004							
	City	BAYTOWN	State	TX	ZIP	77522	ZIP + 4	4004
35. E-Mail Address:								
36. Telephone Number	37. Extension or Code		38. Fax Number (if applicable)					
() -			() -					

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.

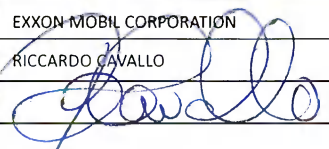
<input type="checkbox"/> Dam Safety	<input type="checkbox"/> Districts	<input type="checkbox"/> Edwards Aquifer	<input type="checkbox"/> Emissions Inventory Air	<input type="checkbox"/> Industrial Hazardous Waste
<input type="checkbox"/> Municipal Solid Waste	<input type="checkbox"/> New Source Review Air	<input type="checkbox"/> OSSF	<input type="checkbox"/> Petroleum Storage Tank	<input type="checkbox"/> PWS
<input type="checkbox"/> Sludge	<input type="checkbox"/> Storm Water	<input type="checkbox"/> Title V Air	<input type="checkbox"/> Tires	<input type="checkbox"/> Used Oil
<input type="checkbox"/> Voluntary Cleanup	<input checked="" type="checkbox"/> Wastewater	<input type="checkbox"/> Wastewater Agriculture	<input type="checkbox"/> Water Rights	<input type="checkbox"/> Other:
WQ0001215000				

SECTION IV: Preparer Information

40. Name:	JESSICA EASTBURN	41. Title:	BTA ENVIRONMENTAL WATER ADVISOR
42. Telephone Number	43. Ext./Code	44. Fax Number	45. E-Mail Address
(832) 864-4924		() -	JESSICA.A.EASTBURN@EXXONMOBIL.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:	EXXON-MOBIL CORPORATION	Job Title:	BAYTOWN CHEMICAL PLANT MANAGER
Name (In Print):	RICCARDO CAVALLO	Phone:	(254) 545- 3110
Signature:		Date:	2/12/2025

[Shopping Cart](#)[Select Fee](#)[Search Transactions](#)[Sign Out](#)

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: 582EA000650690

Date: 02/11/2025 08:29 AM

Payment Method: CC - Authorization 0000078350

ePay Actor: BARB SOLTIS

Actor Email: barb.j.soltis@exxonmobil.com

IP: 136.228.238.230

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: BARB SOLTIS

Company: EXXONMOBIL PRODUCT SOLUTIONS

Address: 5000 BAYWAY DR, BAYTOWN, TX 77520

Phone: 254-545-3244

Cart Items

Click on the voucher number to see the voucher details.

Voucher	Fee Description	AR Number	Amount
748515	WW PERMIT - MINOR FACILITY SUBJECT TO 40 CFR 400-471 - MAJOR AMENDMENT		\$1,200.00
748516	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.

ATTACHMENT V-1
Application Payment Voucher



TEXAS COMMISSION ON ENVIRONMENTAL QUALITY

**SUMMARY OF APPLICATION IN PLAIN
LANGUAGE FOR TPDES OR TLAP PERMIT
APPLICATIONS****Summary of Application (in plain language) Template and
Instructions for Texas Pollutant Discharge Elimination System
(TPDES) and Texas Land Application (TLAP) Permit
Applications**

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

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

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

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

Exxon Mobil Corporation (CN600123939) operates the ExxonMobil Baytown Chemical Plant (RN102574803), which manufactures synthetic rubber, olefins and aromatics, and related co-products. A future ammonia manufacturing unit will be constructed. The facility is located at 5000 Bayway Drive, Baytown, Harris County, Texas 77520. The application is for renewal and amendment of TPDES Permit No. WQ0001215000.

Process wastewater, utility wastewater, sanitary wastewater, and stormwater from the Chemical Plant are sent to ExxonMobil's Baytown Refinery for treatment and discharge under the refinery's wastewater permit no. WQ0000592000. Other wastewaters that are discharged from the Chemical Plant Outfalls 003 and 007 include stormwater, utility wastewaters, and intermittent process wastewater. Discharges from Outfalls 003 and 007 are expected to potentially contain biochemical/chemical oxygen demand, suspended solids, total organic carbon, oil and grease, ammonia, and metals. Other constituents are listed in Worksheet 2 of the application.

Permit amendments included in the application are to add intermittent de minimis process wastewater from a potential proposed ammonia manufacturing unit to Outfall 003, modify Other Requirement No. 4 to include wastewater from the potential proposed ammonia manufacturing unit, and to add a daily maximum concentration limit for ammonia to Outfall 003 and monitoring only when there is a discharge from the ammonia unit.

PLANTILLA EN ESPAÑOL PARA SOLICITUDES NUEVAS/RENOVACIONES/ENMIENDAS DE TPDES o TLAP**AGUAS RESIDUALES INDUSTRIALES /AGUAS PLUVIALES**

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

Exxon Mobil Corporation (CN600123939) opera la ExxonMobil Baytown Chemical Plant (RN102574803), que fabrica caucho sintético, olefinas y aromáticos, y coproductos relacionados. En el futuro se construirá una unidad de fabricación de amoníaco. La instalación está situada en 5000 Bayway Drive, Baytown, Condado de Harris, Texas 77520. La solicitud se refiere a la renovación y modificación del permiso TPDES no. WQ0001215000.

Las aguas residuales de proceso, las aguas residuales de servicios públicos, las aguas residuales sanitarias y las aguas pluviales de la planta química se envían a la refinería Baytown de ExxonMobil para su tratamiento y vertido en virtud del permiso de aguas residuales de la refinería no. WQ0000592000. Otras aguas residuales que se vierten desde los Outfalls 003 y 007 de la planta química son aguas pluviales, aguas residuales de servicios públicos y aguas residuales de procesos intermitentes. Se prevé que los vertidos de los Outfalls 003 y 007 potencialmente contengan demanda bioquímica/química de oxígeno, sólidos en suspensión, carbono orgánico total, aceites y grasas, amoníaco y metales. En la Worksheet 2 de la solicitud se enumeran otros componentes.

Las modificaciones del permiso incluidas en la solicitud consisten en añadir al Outfall 003 las aguas residuales de proceso intermitentes de minimis de una posible unidad de fabricación de amoníaco propuesta, modificar el Otro Requisito No. 4 para incluir las aguas residuales de la posible unidad de fabricación de amoníaco propuesta y añadir un límite de concentración máxima diaria de amoníaco al Outfall 003 y supervisar solo cuando haya una descarga de la unidad de amoníaco.



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.

**Attachment A-3
Outfall Photos**



Photo 1. Long view of Outfall 003 into Scott Bay



Photo 2. Closeup view of Outfall 003 into Scott Bay

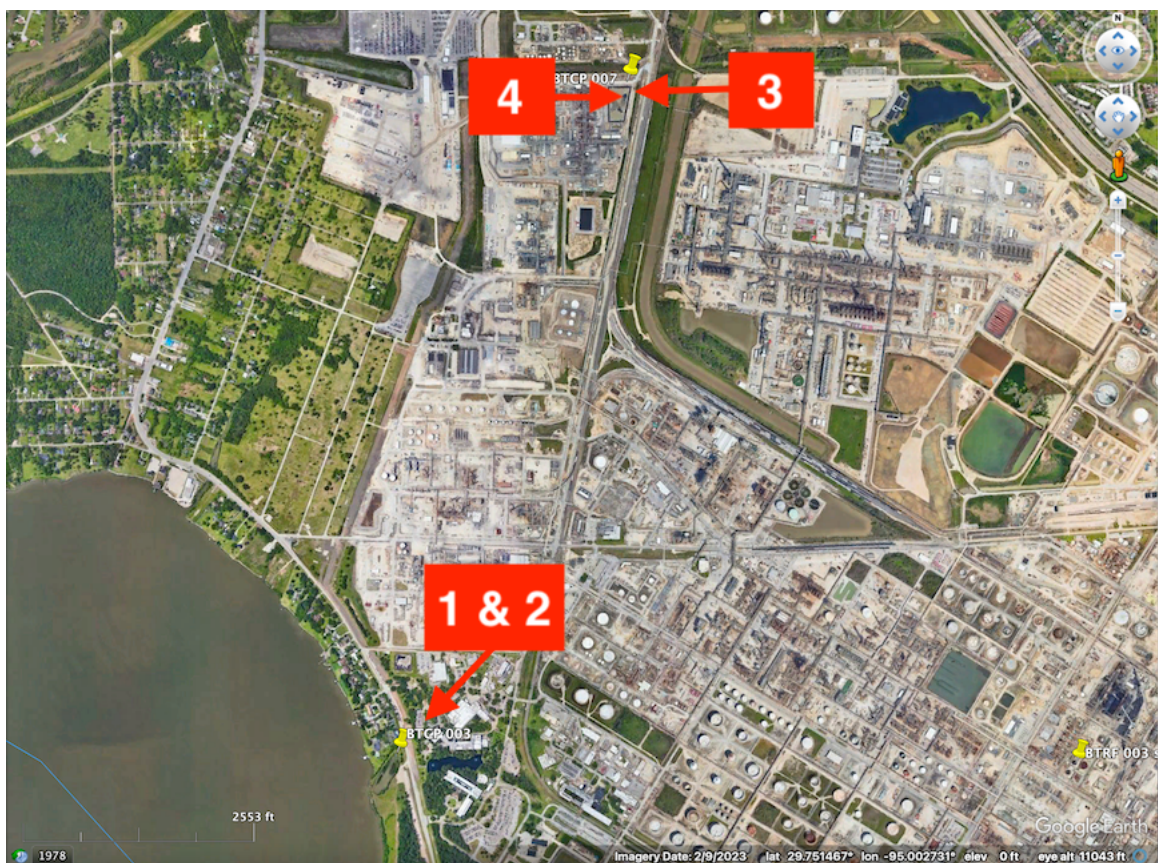


Photo 3. Upstream of Outfall 007

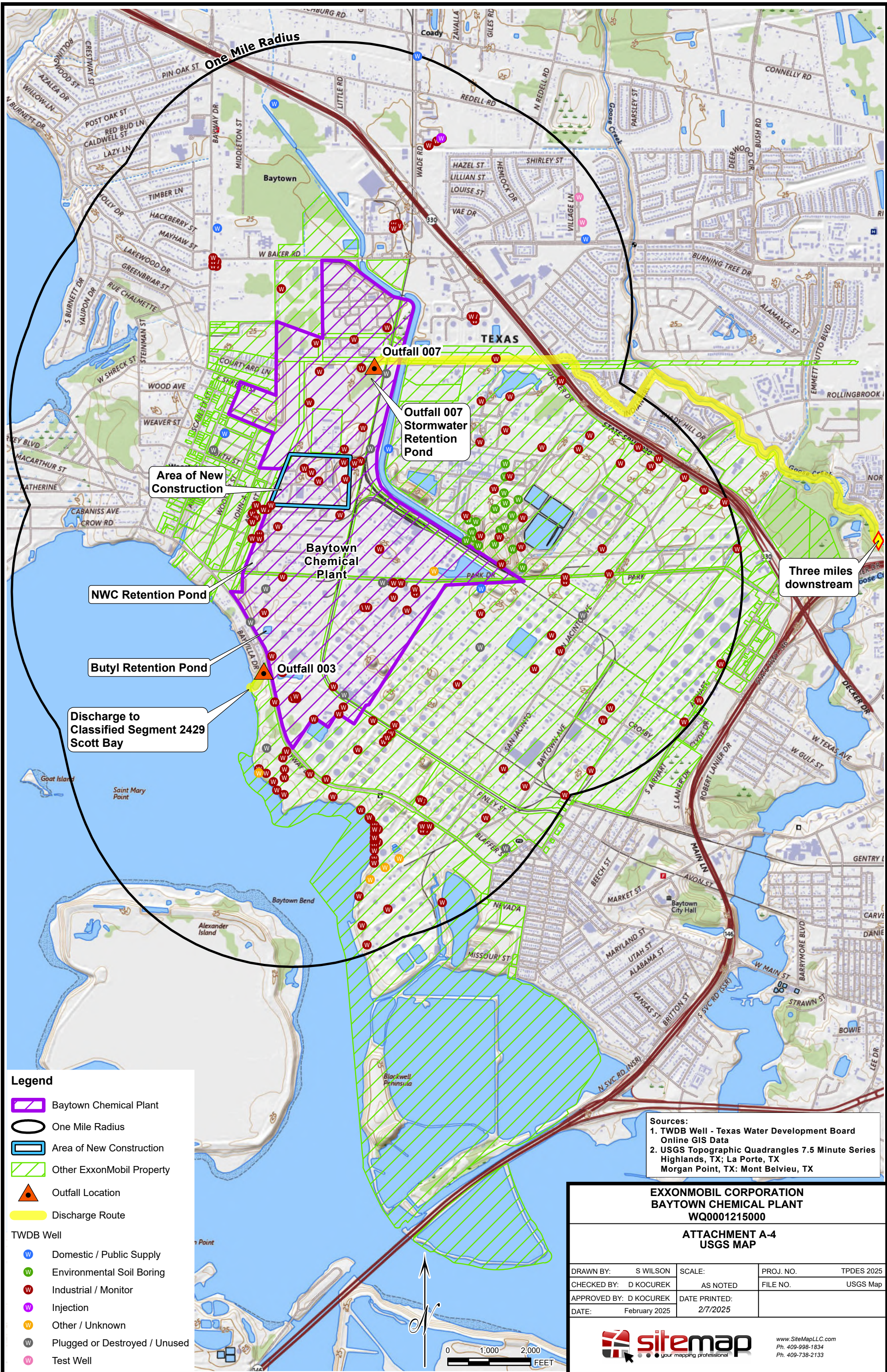


Photo 4. Downstream of Outfall 007, where flow commingles with MSGP Outfalls 008 and 009

Attachment A-3 Outfall Photos



Aerial Showing Location of Outfall Photos



Legend

Baytown Chemical Plant

One Mile Radius

Area of New Construction

Other ExxonMobil Property

Outfall Location

Discharge Route

TWDB Well

W

Domestic / Public Supply

W

Environmental Soil Boring

W

Industrial / Monitor

W

Injection

W

Other / Unknown

W

Plugged or Destroyed / Unused

W

Test Well

Sources:
1. TWDB Well - Texas Water Development Board Online GIS Data
2. USGS Topographic Quadrangles 7.5 Minute Series Highlands, TX; La Porte, TX
Morgan Point, TX; Mont Belvieu, TX

EXXONMOBIL CORPORATION
BAYTOWN CHEMICAL PLANT
WQ0001215000

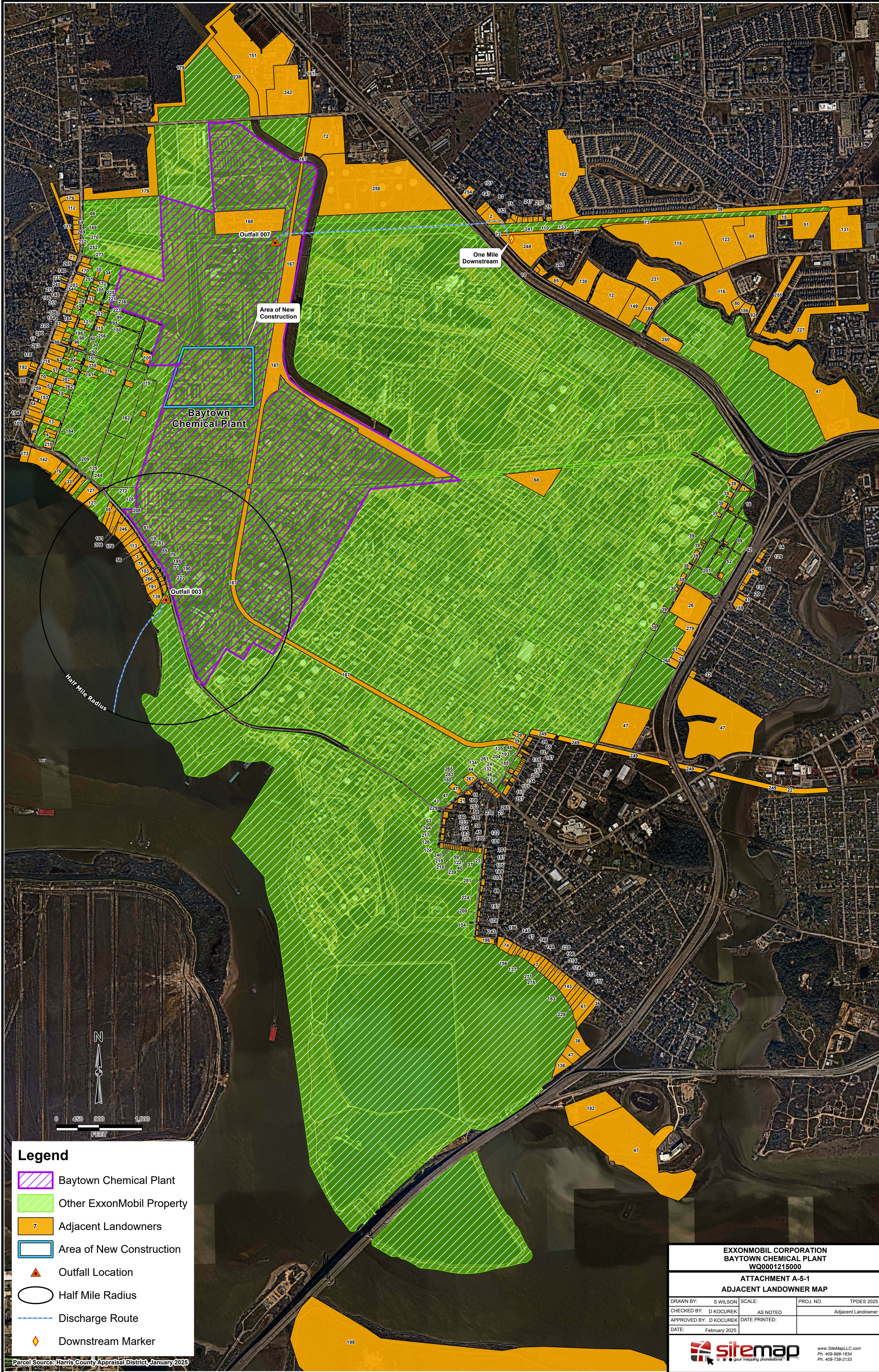
ATTACHMENT A-4
USGS MAP

DRAWN BY: S WILSON	SCALE: AS NOTED	PROJ. NO. TPDES 2025
CHECKED BY: D KOCUREK	DATE PRINTED: 2/7/2025	FILE NO. USGS Map
APPROVED BY: D KOCUREK	DATE: February 2025	

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J:\Prj\ExxonMobil\Baytown\Chemical Plant\2025\TPDES\XOM GIS.aprx



Legend

- Baytown Chemical Plant
- Other ExxonMobil Property
- Adjacent Landowners
- Area of New Construction
- Outfall Location
- Half Mile Radius
- Discharge Route
- Downstream Marker

Parcel Source: Harris County Appraisal District, January 2025

EXXONMOBIL CORPORATION
BAYTOWN CHEMICAL PLANT
WQ0001215000

ATTACHMENT A-5-1
ADJACENT LANDOWNER MAP

DRAWN BY: S WILSON	SCALE:	PROJ. NO. TPDES 2025
CHECKED BY: D KOCUREK	AS NOTED	Adjacent Landowner
APPROVED BY: D KOCUREK	DATE PRINTED:	
DATE: February 2025		



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Ph. 409-738-2133

ATTACHMENT A-5-2
Adjacent Landowner List
WQ0001215000

MAP ID	OWNER NAME	ADDRESS	CITY	STATE	ZIP CODE
1	146 ENTERPRISES INC	1108 MAXI CIR	FRIENDSWOOD	TX	77546-4324
2	3500 DECKER HOLDINGS LLC	712 WILCREST DR STE 313	HOUSTON	TX	77042-1348
3	ABDELSAYED MAGDY & DALLAL	6 BAYVILLA ST	BAYTOWN	TX	77520-2103
4	AGUILERA JOSE DE JESUS & MARGARITA	103 ARBOR ST	BAYTOWN	TX	77520-1905
5	ALEMAN-HERNANDEZ CRISTINA	407 SCARLETT ST	BAYTOWN	TX	77520-1949
6	ALFORD MARK	13807 LAKEWATER DR	PEARLAND	TX	77584-3441
7	ALMENDAREZ THERESA K	3815 PATRAS DR	PASADENA	TX	77505-3368
8	ALVARADO SILVIA J	16523 OAK LN	CHANNELVIEW	TX	77530-2937
9	AMADOR ANTONIO V & MARY E	2419 LOCH LOMOND ST	HIGHLANDS	TX	77562-2300
10	AMERICAN PIONEER INV INC	8556 KATY FWY STE 128	HOUSTON	TX	77024-1806
11	ANDRADE AUGUSTIN & JUANITA	2005 KANSAS ST	BAYTOWN	TX	77520-6319
12	APTCs LLC	2205 AVENUE I STE 117	ROSENBERG	TX	77471-2651
13	ARBOR BAY VILLAS I LLC	115 ARBOR ST 21	BAYTOWN	TX	77520-1914
14	ARENAS NOHEMI & JOSE F	1700 BROKEN ARROW ST	BAYTOWN	TX	77521-2569
15	ASBM FAMILY LIMITED PARTNERSHIP	87 PIPER WALK	SUGAR LAND	TX	77479-2516
16	AVELLANEDA FRANCISCO	500 N AIRHART DR	BAYTOWN	TX	77520-2205
17	BAGUIO CORSINO JR & MYRTLE	6330 BAYWAY DR	BAYTOWN	TX	77520-1712
18	BARAGAN MA DALILA	209 ARBOR ST	BAYTOWN	TX	77520-1907
19	BARNETT MARTHA F	7 BAYVILLA ST	BAYTOWN	TX	77520-2102
20	BARRIENTES RICHARD & SYLVIA	23 WILLOW POINT PLACE	SPRING	TX	77382-1646
21	BAY AREA HOMELESS SERVICES	PO BOX 4130	BAYTOWN	TX	77522-4130
22	BAYCREEK PROPERTIES LIMITED PARTNERSHIP	PO BOX 2241	BAYTOWN	TX	77522-2241
23	BENAVIDES JAVIER & PORFIRIA	9801 LARKWOOD DR APT 2524	HOUSTON	TX	77096-7203
24	BENAVIDES JUAN	1306 HARBOR ST	BAYTOWN	TX	77520-4122
25	BENOIT LAURIE WHITE POPE	1112 SMITH DRIVE	ALVIN	TX	77511-5562
26	BOC GROUP INC	575 MOUNTAIN AVE	NEW PROVIDENCE	NJ	07974-2097
27	BONILLA MARIA G	905 BECKMAN ST	HOUSTON	TX	77076-2706
28	BRC FAMILY LIMITED PARTNERSHIP	11302 CEDAR GULLY RD	BEACH CITY	TX	77523-8277
29	BUCHANAN TRUDY T	411 SCARLETT ST	BAYTOWN	TX	77520-1949
30	BURNETT CECIL THERESE	301 ARBOR ST	BAYTOWN	TX	77520-1909
31	BUSE WILLIAM E	416 SCARLETT ST	BAYTOWN	TX	77520-1950
32	CALVERY BAPTIST CHURCH	501 S ATLANTIC ST	BAYTOWN	TX	77520-4306
33	CAPETILLO THOMAS & KAREN	5713 BAYWAY DR	BAYTOWN	TX	77520-2110
34	CARDENAS HECTOR & BELLA	225 FORTNER ST	BAYTOWN	TX	77520-1933
35	CARDENAS HECTOR III	113 FORTNER ST	BAYTOWN	TX	77520-1931
36	CARGILL RICHARD NATHAN	1721 MISSOURI ST	BAYTOWN	TX	77520-6436
37	CASTRO NICANORA	3315 MICHIGAN ST	BAYTOWN	TX	77520-5931
38	CASTRO NORA L	3313 MICHIGAN ST	BAYTOWN	TX	77520-5931
39	CENTERPOINT ENERGY HOU ELE	PO BOX 1475	HOUSTON	TX	77251-1475
40	CERINO ELEAZAR	3317 MICHIGAN ST	BAYTOWN	TX	77520-5931
41	CHAPA JORGE	2205 DORRIS ST	BAYTOWN	TX	77520-4229
42	CHAPA MARY E	318 N HIGHWAY 146	BAYTOWN	TX	77520-2246
43	CHAVEZ CARMELA	PO BOX 3287	BAYTOWN	TX	77522-3287
44	CHAVEZ PEDRO MARTINEZ	2211 SPRING HOLLOW DR	BAYTOWN	TX	77521-7645
45	CHAVIRA J J	3311 MICHIGAN ST	BAYTOWN	TX	77520-5931
46	CHUKWUOCHA MOTORS INC	5015 LARK CREEK CT	SUGAR LAND	TX	77479-3866
47	CITY OF BAYTOWN	PO BOX 2805	BAYTOWN	TX	77522-2805
48	CITY OF BAYTOWN TR FOR	PO BOX 2805	BAYTOWN	TX	77522-2805
49	CONTRERAS LUDMILLA G	3228 IOWA ST	BAYTOWN	TX	77520-
50	CORTES ABEL	204 NORTH ST	BAYTOWN	TX	77520-1946
51	COUNTRY CLUB PROFESSIONAL PARK INC	PO BOX 1091	BAYTOWN	TX	77522-1091
52	COY ANNA E	5308 LORRAINE DR	BAYTOWN	TX	77521-1732
53	CRE & LAND LLC	PO BOX 741109	HOUSTON	TX	77274-1109
54	CUEVAS JOSE M & ANGELITA	6524 BAYWAY DR	BAYTOWN	TX	77520-1716
55	CURRIE MARVIN A III	5505 BAYWAY DR	BAYTOWN	TX	77520-2106
56	CURRY FAMILY TRUST	6A BAYVILLA ST	BAYTOWN	TX	77520-2103
57	DAMIAN DISTRIBUTE LLC	11911 ARCADIA BEND	HOUSTON	TX	77041-6219
58	DE LA CRUZ JAVIER	1309 ASH ST	BAYTOWN	TX	77520-6801
59	DEHARGROVE NORMA H	12702 STILLINGTON DR	HOUSTON	TX	77015-2013
60	DELGADO MARY E	316 SCARLETT ST	BAYTOWN	TX	77520-1948
61	DENNY TOM R & DONNA MARIE	1805 MISSOURI ST	BAYTOWN	TX	77520-6437
62	DIAZ WILLIAM NOE	6318 BAYWAY DR	BAYTOWN	TX	77520-1712
63	DLV PROPERTIES LLC	138 VIEUX CARRE	HOUSTON	TX	77009-4760
64	DOMINGUEZ SANDRA	1606 OLIVE ST	BAYTOWN	TX	77520-5734
65	DONATO JEROME N	2318 HODGES ST	BAYTOWN	TX	77521-1241
66	DOT CONSTRUCTION CO INC	PO BOX 223	FREDERICKSBURG	TX	78624-0223
67	EARP REAL ESTATE MANAGEMENT LLC	2201 CENTER ST	DEER PARK	TX	77536-4165
68	ECO SERVICES OPERATIONS CORP	300 LINDENWOOD DR	MALVERN	PA	19355-1740
69	EGW ROLLINGBROOK INVESTMENTS LP	1185 W GEORGIA ST STE 1045	VANCOUVER	BC	UGE 4E6
70	EKURRO RESOURCES LLC	3950 ASHBURNHAM DR APT 47	HOUSTON	TX	77082-5941
71	ELLIS DAVID L & MARSHA A	14 BAYVILLA ST	BAYTOWN	TX	77520-2103
72	ENTERPRISE LOGISTICS SERVICES LLC	PO BOX 4018	HOUSTON	TX	77210-4018
73	EQUISTAR CHEMICALS LP	PO BOX 3646	HOUSTON	TX	77253-3646
74	ERICKSON CARMEN	5902 W DAVIS ST	CONROE	TX	77304-4897
75	ERNST BYRON L & KAREN S	5011 GLENHAVEN DR	BAYTOWN	TX	77521-2913
76	ETC NGL TRANSPORT LLC	711 LOUISIANA ST STE 900	HOUSTON	TX	77002-2831
77	FAITH LIFE CHRISTIAN CENTER	6711 BAYWAY DR	BAYTOWN	TX	77520-1530
78	FAUST DON	5 BAYVILLA ST	BAYTOWN	TX	77520-2102
79	FINK LILLIAN	12 BAYVILLA ST	BAYTOWN	TX	77520-2103
80	FIRST CHURCH BAYTOWN	1850 BROADWAY ST	PEARLAND	TX	77581
81	FIRST OAKLAND PROPERTIES LLC SERIES 209	4119 CROWNWOOD DR	SEABROOK	TX	77586-4003
82	FLANDERS EMMANUEL E ESTATE OF	2004 BRUCE DR	BAYTOWN	TX	77520-5602
83	FLORES TROY	16054 SPINNAKER DR	CROSBY	TX	77532-5577

ATTACHMENT A-5-2
Adjacent Landowner List
WQ0001215000

MAP ID	OWNER NAME	ADDRESS	CITY	STATE	ZIP CODE
84	FLOWERS KEN	6110 BAYWAY DR	BAYTOWN	TX	77520-1708
85	FOUBISTER LIEN &	31 MARLIN LN	BAYTOWN	TX	77520-7406
86	FRALEY MARGARET	247 ARBOR ST	BAYTOWN	TX	77520-
87	FUENTES JUAN ORTEGA	1211 CHERRY ST	BAYTOWN	TX	77520-4110
88	GARCIA ADAN HEREDIA & CRISTAL HEREDIA	4611 SENECA CT	BAYTOWN	TX	77521
89	GARCIA JOSE LUIS & SAN JUANA	300 FORTINBERRY ST	BAYTOWN	TX	77520-2212
90	GARCIA LESDY	706 MCCARDELL ST	CHANNELVIEW	TX	77530-3414
91	GARCIA ROQUE & VERONICA V	5330 BUSH RD	BAYTOWN	TX	77521-1605
92	GARCIA ROXANA	3415 ROLLINGCREEK DR	BAYTOWN	TX	77521-3650
93	GOLD FINANCIAL SVC INC	1302 WAUGH DR STE 250	HOUSTON	TX	77019-3908
94	GONZALES JOHNNY	241 ARBOR ST	BAYTOWN	TX	77520-1907
95	GONZALES JOSE & SANDRA	406 ARBOR ST	BAYTOWN	TX	77520-1912
96	GONZALEZ ARNULFO	6309 BAYWAY DR	BAYTOWN	TX	77520-1711
97	GONZALEZ CRUZ	2409 MISSOURI ST	BAYTOWN	TX	77520-6139
98	GONZALEZ MARIA	301 SCARLETT ST	BAYTOWN	TX	77520-1947
99	GONZALEZ MARIA DE LA LUZ	412 ARBOR ST	BAYTOWN	TX	77520-1912
100	GONZALEZ TEODORO & MARIA	807 W ELLAINE AVE	PASADENA	TX	77506-4323
101	GOOSE CREEK ISD	PO BOX 2805	DEER PARK	TX	77536
102	GOOSE CREEK RESERVE COMMUNITY ASSOC	PO BOX 727	HOUSTON	TX	77001
103	GORMAN SHARON E	4 BAYVILLA ST	BAYTOWN	TX	77520-2103
104	GRDEN JOHN PAUL JR & MARY DIANNE	3227 MISSOURI ST	BAYTOWN	TX	77520-5935
105	GRUVER DANIEL R & MARY A	410 BARNES ST	BAYTOWN	TX	77520-1922
106	GUADIANA JUAN & ANA	401 SCARLETT	BAYTOWN	TX	77520-1949
107	GUAJARDO MONICA	3710 DECKER DR APT 1	BAYTOWN	TX	77520-1659
108	GUERRA AMANDA	939 ELTON ST	HOUSTON	TX	77034-1205
109	GUERRERO AVILA JUAN	5524 EAST RD	BAYTOWN	TX	77521-9005
110	GUILLEN JAIME	5003 GLENHAVEN DR	BAYTOWN	TX	77521-2913
111	GULF REFINING	PO BOX 285	HOUSTON	TX	77001-0285
112	HAMASH INVESTMENTS LLC	11610 LEGEND MANOR DR	HOUSTON	TX	77082-3080
113	HARGRAVES NORMAN R	5305 BAYWAY DR	BAYTOWN	TX	77520-2104
114	HAROLD L SHEARN FAMILY TRUST	24523 RIMROCK CYN CT	SALINAS	CA	93908-9408
115	HARRIS COUNTY FLOOD CONTROL DISTRICT	9900 NW FRWY	HOUSTON	TX	77092-8601
116	HARVEST TEMPLE MINISTRIES	3105 ROLLINGBROOK DR	BAYTOWN	TX	77521-3661
117	HAWKINS ROCIO	1305 CHERRY ST	BAYTOWN	TX	77520-4112
118	HEERNADEZ BENITO	17119 WILD TURKEY DR	CYPRESS	TX	77429-1520
119	HENSLEY GUY SHERWOOD	3819 BAYOU CIRCLE	DICKINSON	TX	77539-6403
120	HERNADEZ JOSE RAMON	3125 OHIO ST	BAYTOWN	TX	77520-6022
121	HERNADEZ OSCAR G	320 SCARLETT ST	BAYTOWN	TX	77520-1948
122	HERRERA APOLINAR	906 MASSEY TOMPKINS	BAYTOWN	TX	77521-4318
123	HFI WYNDHAM PARK APTS LP	1500 N POST OAK RD STE 190	HOUSTON	TX	77055-5487
124	HILL R G & MARY	702 GRESHAM ST	BAYTOWN	TX	77520-2304
125	HOLMSLEY DELL T & MARY K	5709 BAYWAY DR	BAYTOWN	TX	77520-2110
126	HOME CASH OFFER PROS LLC	6075 ROSEWELL RD STE 174	ATLANTA	GA	30328-4337
127	HSC PIPELINE PARTNERSHIP LLC	PO BOX 4018	HOUSTON	TX	77210-4018
128	HUGHEY GINA CIRELLI	421 MEADOW BEND DR	FRIENDSWOOD	TX	77546-2493
129	ICB REALTY INVESTMENT LLC	1251 S KIRKWOOD RD	HOUSTON	TX	77077-2602
130	INDUSTRIAL SAFETY TRAINING COUNCIL	8200 N MAIN ST	BAYTOWN	TX	77521-9506
131	IRG ROLLINGBROOK LLC	180 YORICK ST STE 1100	NEW YORK	NY	10014
132	JACKSON JANICE L	1606 LOCH LAKE DR	EL LAGO	TX	77586-5906
133	JACKSON JOEL H	4900 GOOSE CREEK DR	BAYTOWN	TX	77521-2918
134	JD INTEREST LLC	3107 LAUREN LN	HOUSTON	TX	77082-3463
135	JIMENEZ MARTHA	11418 BRANDY LN	HOUSTON	TX	77044-5860
136	JOHN P GANNON INC	525 PARK GROVE LN	KATY	TX	77450-1759
137	JOHNSON ROBERT A & HAMILTON DIANA K	2407 MISSOURI ST	BAYTOWN	TX	77520-6139
138	JUAN VAZQUEZ	118 GRAHAM ST	BAYTOWN	TX	77520-7002
139	JUSTIN & BRANDON NGUYEN INVESTMENT	540 S MAIN ST	HIGHLANDS	TX	77562-4230
140	KELEASE PROPERTIES 1 LTD	6604 BAYWAY DR	BAYTOWN	TX	77520-1718
141	KENNINGTON WILLIAM MORRIS	236 ARBOR ST	BAYTOWN	TX	77520-1908
142	KM HOLDINGS LP	5901 BAYWAY DR	BAYTOWN	TX	77520-2113
143	KRIZAK DANIEL J & LOIS M	2001 MISSOURI ST	BAYTOWN	TX	77520-6441
144	KRIZAK KIM S	3411 GARTH RD	BAYTOWN	TX	77520-6139
145	KRIZAK TIMOTHY E & CHERYL J	2417 MISSOURI ST	BAYTOWN	TX	77520-6139
146	KRIZAK ZOE	2401 MISSOURI ST	BAYTOWN	TX	77520-6139
147	KSG INVESTMENTS LLC	4383 KATY HOCKLEY CUT OFF RD	KATY	TX	77493-7842
148	KURBAD ANTHONY D	6518 BAYWAY DR	BAYTOWN	TX	77520-1716
149	L & J FINAL EDITION LTD	5044 TIMBER CREEK DR	HOUSTON	TX	77017-5954
150	LAZARO RAMIRO & MARIA I	404 ARBOR ST	BAYTOWN	TX	77520-1912
151	LCY ELASTOMERS LP	4803 DECKER DR	BAYTOWN	TX	77520-1447
152	LINARES ALYSSA	5013 GLENHAVEN DR	BAYTOWN	TX	77521-2913
153	LINDSEY DANNY C	6202 BAYWAY DR	BAYTOWN	TX	77520-1710
154	LOPEZ JANIE	315 SCARLET	BAYTOWN	TX	77520-1947
155	LOPEZ JOSE & ROSA	3212 NEBRASKA ST	BAYTOWN	TX	77520-5940
156	LUNDY FRANK J JR & FRANCES	2415 MISSOURI ST	BAYTOWN	TX	77520-6139
157	M A M ENTERPRISE	PO BOX 1426	TOMBALL	TX	77377-1426
158	MANZO DAVID & ADELINA	6516 BAYWAY DR	BAYTOWN	TX	77520-1716
159	MARTINEZ DANIEL	4623 BARKALOO RD	BAYTOWN	TX	77521-9209
160	MARTINEZ JUAN C & SYLVIA E	3409 MICHIGAN ST	BAYTOWN	TX	77520-5933
161	MATTHEWS EUGENE E & HAZEL	5415 BAYWAY DR	BAYTOWN	TX	77520-2105
162	MCCARTNEY BEVERLEY N ESTATE OF	8502 MEADOWLARK DR	BAYTOWN	TX	77523-9633
163	MCCLENDON ROBERT L & JANICE J	2105 MISSOURI ST	BAYTOWN	TX	77520-6443
164	MEDINA JOSE MANUEL GRANDA	17422 WILTON PARK CT	SPRING	TX	77379-4678
165	MELENDEZ MARI	235 ARBOR ST	BAYTOWN	TX	77520-1907
166	MINOR ISAAC III & MARGIE M	4811 SAINT ANDREWS DR	BAYTOWN	TX	77521-3015

ATTACHMENT A-5-2
Adjacent Landowner List
WQ0001215000

MAP ID	OWNER NAME	ADDRESS	CITY	STATE	ZIP CODE
167	MISSOURI PACIFIC RAILROAD COMPANY	1400 DOUGLAS ST STOP 1640	OMAHA	NE	68179-1001
168	MONUMENT CHEMICAL BAYTOWN LLC	6510 TELECOM DR STE 425	INDIANAPOLIS	IN	46278-6330
169	MORELOCK MICHAEL M	6819 BAYWAY DR	BAYTOWN	TX	77520-1501
170	MORENO ANTONIO	2166 COLONIAL ST	ALVIN	TX	77511-4374
171	MORENO CYNTHIA	1245 CHERRY ST	BAYTOWN	TX	77520-4110
172	MORGAN SHIRLEY	1805 E TEXAS AVE	BAYTOWN	TX	77520-7441
173	MUNGLE KENNETH & MYNA	5901 BAYWAY DR	BAYTOWN	TX	77520-2113
174	NAVARRO CATHERINE M	2109 MISSOURI ST	BAYTOWN	TX	77520-6443
175	NEGRETE JUAN J	3225 INDIANA ST	BAYTOWN	TX	77520-5925
176	NGUYEN LIEN T	14930 CUTLEAF LN	CYPRESS	TX	77429-7588
177	NILES RYAN K	1807 MISSOURI ST	BAYTOWN	TX	77520-6437
178	NUNEZ MANUEL N	604 MEADOWICK DR	BAYTOWN	TX	77521-4419
179	OCCIDENTAL CHEMICAL CORP	PO BOX 27570	HOUSTON	TX	77227-7570
180	OLIVARES BRAULIO	16811 KINNEY POINT LN	HOUSTON	TX	77073-3265
181	OLVERA MARIA E	3303 MICHIGAN ST	BAYTOWN	TX	77520-5931
182	ORION CONSTRUCTION LP ET AL	12000 AEROSPACE AVE STE 300	HOUSTON	TX	77034-5588
183	ORTIZ FRANCISCO	3403 MICHIGAN ST	BAYTOWN	TX	77520-5933
184	ORTIZ PEGGY SUE	105 ARBOR ST	BAYTOWN	TX	77520-1905
185	PAEZ LEONARDO H	1231 CHERRY ST	BAYTOWN	TX	77520-4110
186	PARKER JOSHUA LEHI & ANA	3419 ROLLINGCREEK DR	BAYTOWN	TX	77521
187	PENA ALMA & RODRIGO	3228 INDIANA ST	BAYTOWN	TX	77520-5926
188	PEOPLE OF GOD INC	3403 MARKET ST	BAYTOWN	TX	77520-5954
189	PEQUENO JOSE & FELIPA	2009 MONTANA ST	BAYTOWN	TX	77520-6662
190	PEREZ AMOS G JR	15 BAYVILLA ST	BAYTOWN	TX	77520-2102
191	PEREZ ERNESTO D	2 BAYVILLA DR	BAYTOWN	TX	77520-2103
192	PEREZ GILBERT III	8027 STAFFLOWER DR	BAYTOWN	TX	77521-7505
193	PEREZ SALUD C	1215 CHERRY ST	BAYTOWN	TX	77520-4110
194	PHAM TUAN D & SILVIA V	514 LAGO TRACE DR	HUFFMAN	TX	77336-4687
195	PIERCE DAVID A	13 BAYVILLA ST	BAYTOWN	TX	77520-2102
196	POHLER WILLIAM J	2110 HUGGINS ST	BAYTOWN	TX	77520-5918
197	POLO JUANITA MOLINA	3230 NEBRASKA ST	BAYTOWN	TX	77520-5940
198	PONCE RODOLFO	307 SCARLETT ST	BAYTOWN	TX	77520-1947
199	PORT OF HOUSTON AUTHORITY	111 EAST LOOP N	HOUSTON	TX	77029-4326
200	PRADO HECTOR & SANDRA	3229 NEBRASKA ST	BAYTOWN	TX	77520-5939
201	PUENTE JULIO C	3229 MICHIGAN ST	BAYTOWN	TX	77520-5929
202	RAMBARRAN ALISON	225 ARBOR ST	BAYTOWN	TX	77520-1907
203	RAMBARRAN OSCAR & ALISON	225 ARBOR ST	BAYTOWN	TX	77520-1907
204	RAMERIZ HUGO & ADELA	1223 CHERRY ST	BAYTOWN	TX	77520-4110
205	RAMIREZ ADELA GONZALEZ	6712 BAYWAY DR	BAYTOWN	TX	77520-1524
206	RAMIREZ HUGO & ADELA	1227 CHERRY ST	BAYTOWN	TX	77520-4110
207	RAMOS JOSE A	2308 DORRIS ST	BAYTOWN	TX	77520-2253
208	RAMOS ROMUALDO & DEINORA	5407 BAYWAY DR	BAYTOWN	TX	77520-2105
209	REITER JOHN F JR	5715 BAYWAY DR	BAYTOWN	TX	77520-2110
210	RENDON JOSE H & ELSA	7515 N MAIN ST	BAYTOWN	TX	77521-9501
211	RENDON LUIS R	6512 BAYWAY DR	BAYTOWN	TX	77520-1716
212	REYNOLDS LORETTA	407 ARBOR ST	BAYTOWN	TX	77520-1911
213	RIFLE KIMBERLY	1100 UVALDE RD	HOUSTON	TX	77015-3706
214	RIOS JOHNNY & ESTHER T	2111 MISSOURI ST	BAYTOWN	TX	77520-6443
215	RIOS JOSE C	400 ARBOR ST	BAYTOWN	TX	77520-1912
216	RIOS MAGDALENS &	6314A BAYWAY DR	BAYTOWN	TX	77520-
217	RL EQUITY LLC	110 AVENUE B STE 100	STAFFORD	TX	77477-5501
218	ROBBINS TIMOTHY S	5900 BAYWAY DR	BAYTOWN	TX	77520-2114
219	ROBLES SANDRA M	3415 MICHIGAN ST	BAYTOWN	TX	77520-5933
220	RODRIGUEZ GUSTAVO A	4003 E LINDBERGH CT	BAYTOWN	TX	77521-2193
221	RODRIGUEZ JUAN A & DALIA G	415 ARBOR ST	BAYTOWN	TX	77520-1911
222	RODRIGUEZ MARC D & DEBRA L	16 BAYVILLA ST	BAYTOWN	TX	77520-2103
223	RODRIGUEZ RANULFO	414 SCARLETT ST	BAYTOWN	TX	77520-1950
224	RODRIGUEZ RENE & SANDRA	3229 IOWA ST	BAYTOWN	TX	77520-5927
225	RODRIGUEZ SALVADOR & GRACIELA	420 SCARLETT ST	BAYTOWN	TX	77520-1950
226	RODRIGUEZ JESUS M & LENORA	3401 MICHIGAN ST	BAYTOWN	TX	77520-5933
227	ROLLINGBROOK HOMEOWNERS ASSOCIATION INC	16000 BARKERS POINT LN	HOUSTON	TX	77079-4023
228	ROSS JOYN S & SYLVIA	4502 HAZEL TON	HOUSTON	TX	77035-3712
229	ROUX DON	3416 WISCONSIN ST	BAYTOWN	TX	77520-5951
230	ROYCHOWDMURY DEBASHISH	8703 RUDDY DUCK CT	BAYTOWN	TX	77521-5010
231	RT BAYTOWN PARTNERS LLC	30242 ESPERANZA	RANCHO SANTA MARGARITA	CA	92688-2121
232	RUIZ ANTONIO	3700 BUFFALO SPEEDWAY STE 420	HOUSTON	TX	77098
233	SALAZAR OSCAR A & PATRICIA	3407 MICHIGAN ST	BAYTOWN	TX	77520-5933
234	SALDANA ELEAZAR & MERCE	1237 CHERRY ST	BAYTOWN	TX	77520-4110
235	SALINAS ELBERT	6703 HAIDER AVE	BAYTOWN	TX	77521-7007
236	SALINAS NOLBERTO & SANJUANA	416 ARBOR ST	BAYTOWN	TX	77520-1912
237	SAMUEL ELFREDA H	6601 BAYWAY DR	BAYTOWN	TX	77520-1717
238	SAN JACINTO RIVER AUTHORITY	P O BOX 329	CONROE	TX	77305-0329
239	SANCHEZ NOE	3411 MICHIGAN ST	BAYTOWN	TX	77520-5933
240	SAPP SHARON ESTATE OF	3415 MICHIGAN ST	BAYTOWN	TX	77520-5933
241	SEPULVEDA MIGUEL	5009 GLENHAVEN DR	BAYTOWN	TX	77521-2913
242	SI GROUP INC	1790 HUGHES LANDING BLVD STE 600	THE WOODLANDS	TX	77380-1691
243	SIARKOWSKI-BROWN REBECCA L	3228 ARKANSAS ST	BAYTOWN	TX	77520-5915
244	SIMMONS DANNY D & LUZ A	5707 BAYWAY DR	BAYTOWN	TX	77520-2110
245	SIMPSON CORY	2310 GARTH RD	BAYTOWN	TX	77520-2348
246	SMITH DONNA MARIE & TIMOTHY JOHN	1308 WEST GLEN ST	TUCSON	AZ	85705-4030
247	SMITH JIMMY D & LOLA J	5007 GLENHAVEN DR	BAYTOWN	TX	77521-2913
248	SORRENTO PROPERTY HOLDINGS LP	3917 RIGA BLVD	TAMPA	FL	33619-1345
249	SOUTHERN PACIFIC RAILROAD COMPANY	1400 DOUGLAS ST STOP 1640	OMAHA	NE	68179-1001

ATTACHMENT A-5-2
Adjacent Landowner List
WQ0001215000

MAP ID	OWNER NAME	ADDRESS	CITY	STATE	ZIP CODE
250	SOUTHWEST RESOURCE CREDIT UNION	PO BOX 3181	BAYTOWN	TX	77522-3181
251	SPOTO VIRGINIA	421 SCARLETT ST	BAYTOWN	TX	77520-1949
252	SR MOTORSPORTS LLC	5907 PATRICK HENRY ST	SAN ANTONIO	TX	78233-5220
253	SWEET DOUGLAS H	3415 MARKET ST	BAYTOWN	TX	77520-5954
254	T & B YOUNG LTD	410 W ERWIN ST	TYLER	TX	75702-7133
255	TARINA PROPERTIES LLC	3035 DAHLGREN TR	SUGAR LAND	TX	77479
256	TAYLOR TRENA & FRANK	315 ARBOR ST	BAYTOWN	TX	77520-1909
257	TEMPLE EMANUEL	1328 CHERRY ST	BAYTOWN	TX	77520-4113
258	TEPPCO TERMINALS COMPANY LLC	PO BOX 4018	HOUSTON	TX	77210-4018
259	TEXAS RE INVESTMENTS LLC	6315 GRAND PROMINENCE CT	KATY	TX	77494-7685
260	THOMAS NERV ET UX	17422 NAREMORE CT	SPRING	TX	77379-4635
261	THOMAS RONNIE JR	915 AMARYLLIS RD	BAYTOWN	TX	77521-7013
262	TIJERINA FILBERTO A JR	221 ARBOR ST	BAYTOWN	TX	77520-1907
263	TORRES JUAN G	101 YORK ST	SOUTH HOUSTON	TX	77587-3435
264	TORRES RAYMUNDO	5015 SJOLANDER RD	BAYTOWN	TX	77521-9379
265	TORRES SALVADOR	412 WILLOW LN	BAYTOWN	TX	77520-1119
266	TYLER STACEY	3 BAYVILLA ST	BAYTOWN	TX	77520-2102
267	U S POST OFFICE	3508 MINNESOTA ST	BAYTOWN	TX	77520
268	UNITED STEELWORKERS	311 S HIGHWAY 146	BAYTOWN	TX	77520-2257
269	VAN HOUTEN WILLIAM	6817 BAYWAY DR	BAYTOWN	TX	77520-1501
270	VAZQUEZ ANA G	9821 KATY FWY STE 110	HOUSTON	TX	77024-1208
271	VELA EMILIA F	9510 VICKSBURG RD	BAYTOWN	TX	77521-1693
272	VENABLE J R	3416 WISCONSIN ST	BAYTOWN	TX	77520-5951
273	VERDUZCO OSCAR MANUEL	2720 MASSEY TOMPKINS RD # 12	BAYTOWN	TX	77521-4846
274	VILLA MARIANA	3405 MICHIGAN ST	BAYTOWN	TX	77520-5933
275	VILLEGAS ARTURO	2205 NEW YORK ST	BAYTOWN	TX	77520-6624
276	WALKER CHARLES R JR	220 NORTH ST	BAYTOWN	TX	77520-1946
277	WILLIAMS ARTHUR	5005 GLENHAVEN DR	BAYTOWN	TX	77521-2913
278	WILSON ALLEN L	424 INDEPENDENCE PKWY N	BAYTOWN	TX	77520-1037
279	WILSON WILLIAM E JR	2615 CALDER ST STE 1050	BEAUMONT	TX	77702-1935
280	WINDHAM ROBERT	242 LITTLE YORK RD	HOUSTON	TX	77076-1023
281	WOOD MELVIN C	3229 OHIO ST	BAYTOWN	TX	77520-5942
282	WOODCOX REED K	8 BAYVILLA ST	BAYTOWN	TX	77520-2103
283	YBARRA VICTOR P	3819 RIVER RUN DR	BAYTOWN	TX	77523-8566

2/7/25

ATTACHMENT A-6
Outfall 007 NOI Letters to City and County

ExxonMobil Chemical Company
5000 Bayway Drive
P.O. Box 4004
Baytown, Texas 77522-4004



CERTIFIED MAIL

November 4, 2016

Bob Allen, Director
Harris County Pollution Control Services
101 South Richey, Suite H
Pasadena, TX 77506

Re: ExxonMobil Baytown Chemical Plant
MSGP NOI TXR05N668

Dear Mr. Allen,

Attached please find a copy of the MSGP NOI for the ExxonMobil Baytown Chemical Plant submitted to TCEQ. We are submitting this document under the August 2016 MSGP TXR050000 Part II Section C 9 reference. This NOI was submitted to TCEQ to continue an active authorization under the reissued general permit.

If you have any questions, please contact me at (281) 834-5146 or at snigdha.n.joshi@exxonmobil.com.

Sincerely,

A handwritten signature in blue ink that reads "snigdha" followed by a stylized flourish.

Snigdha Joshi
Environmental Coordinator

ATTACHMENT A-6
Outfall 007 NOI Letters to City and County

ExxonMobil Chemical Company
5000 Bayway Drive
P.O. Box 4004
Baytown, Texas 77522-4004



CERTIFIED MAIL

November 4, 2016

City of Baytown
Health Department – Storm Water Division
P.O. Box 424
Baytown, TX 77522

Re: ExxonMobil Baytown Chemical Plant
MSGP NOI TXR05N668

City of Baytown,

Attached please find a copy of the MSGP NOI for the ExxonMobil Baytown Chemical Plant submitted to TCEQ. We are submitting this document under the August 2016 MSGP TXR050000 Part II Section C 9 reference. This NOI was submitted to TCEQ to continue an active authorization under the reissued general permit.

If you have any questions, please contact me at (281) 834-5146 or at snigdha.n.joshi@exxonmobil.com.

Sincerely,

A handwritten signature in blue ink, appearing to read "Snigdha Joshi".

Snigdha Joshi
Environmental Coordinator

ATTACHMENT T-1
EXXONMOBIL BAYTOWN CHEMICAL PLANT
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EXXONMOBIL BAYTOWN CHEMICAL PLANT FACILITY DESCRIPTION

This document has been prepared as a part of the 2025 TPDES Permit No. WQ001215000 renewal application and contains a description of the ExxonMobil Baytown Chemical Plant in relation to its wastewater discharge, including, outfall locations, discharges through the outfalls, wastewater and stormwater management, and applicability of national effluent guidelines.

The ExxonMobil Baytown Chemical Plant (BTCP) is located within the ExxonMobil Baytown Complex adjacent to the ExxonMobil Baytown Refinery (BTRF) and ExxonMobil Baytown Olefins Plant (BOP). Chemical feedstock and products are transferred between facilities; and certain utilities are shared including the water clarification system and the wastewater treatment plant, operated by BTRF under TPDES Permit No. WQ0000592000.

FACILITY OVERVIEW

The BTCP is divided into five business functions identified as Butyl Polymers (BPB), Polypropylene (BTPP), Olefins and Aromatics (O&A), Solution Polymers (SPU), and Linear-Alpha Olefins (LAU). The O&A units are operated under the Unicorn (UCO) and Northwest Chemicals (NWC) areas.

The BPB area consists of polymerization and finishing units that produce synthetic rubber. The NWC operating area consists of the Paraxylene Absorption Unit (PAU), Butene Processing Unit (BPU), Diene Hydrogenation Unit (DHU), Propylene Concentration Unit (PCU), Synthesis Gas Unit (SGU), and Metallocene Polyalphaolefin Unit (MPU), along with off-site utilities. The SPU combines monomers to generate a pelletized resin. The LAU prepares monomers for use in polymerization. The UCO and BTPP areas discharge all process wastewater and stormwater to the BTRF wastewater treatment plant.

A potential proposed ammonia production unit will produce anhydrous ammonia from hydrogen and nitrogen. The unit will be constructed within the boundary of the BTCP.

Table 1 lists raw materials, intermediates, and products associated with the BTCP.

WASTEWATER SOURCES AND OUTFALLS

Figure 1 is a flow diagram of the BTCP wastewater system showing wastewater sources from the process units, treatment units, and outfalls. Figure 2 is a wastewater flow diagram for the potential proposed ammonia unit.

Under the current TPDES Permit No. WQ0001215000, BTCP has two outfalls: Outfall 003 and Outfall 007. Outfall 003 receives non-process area stormwater from the majority of the BTCP facility in addition to infrequent discharges from the BPB area pump station downstream of the oil/water separator, the NWC area pump station downstream of the oil/water separator, and the SGU area first flush sump. Outfall 007 receives stormwater from non-process areas located on the north side of the BTCP (SPU and LAU area)

and infrequent discharges from the stormwater retention pond. Additionally BTCP has seven stormwater outfalls (004, 005, 006, 008, 009, 010, 011) authorized under the TCEQ's Multi-Sector General Permit (MSGP). Process wastewater, potentially contaminated stormwater and sanitary wastewater from the BTCP are routed to the BTRF for treatment and discharge under the BTRF's TPDES Permit No. WQ0000592000.

When a storm event generates excessive runoff, de minimis quantities of process and utility wastewaters may commingle with stormwater and discharge via the oil/water separator at Butyl, the oil/water separator at NWC or the SGU sump to Outfall 003. Similarly Outfall 007 may also experience de minimis discharges of process and utility wastewaters via the SPU and LAU stormwater retention pond. The current TPDES permit for the BTCP authorizes discharge of process and utility wastewaters from Outfalls 003 and 007 only following an excessive storm event or succession of events (Other Requirements, Provision 4), which result in runoff volumes that exceed the capabilities of the lift station pumps and exceed the storage capacity of the stormwater retention basins (BPB, NWC, SPU, and LAU), or the SGU's first flush sump. The BTCP has to take all reasonable steps to minimize these discharges from Outfall 003 and Outfall 007, and has to notify the TCEQ each time such discharges occur.

Outfalls 003 and 007 are described in more detail in the following sections.

OUTFALL 003

Outfall 003 routinely discharges stormwater from non-process and non-industrial areas of the BTCP. During high runoff events, it may also receive discharges of excess stormwater commingled with other wastewaters from the BPB area (formerly Outfall 103) and the NWC area (formerly Outfall 203) in addition to post-first flush stormwater from the SGU. Outfall 003 does not receive any type of continuous wastewater flow.

Under routine conditions, process wastewater from the BPB unit, potentially contaminated stormwater, and cooling tower blowdown gravity flow to the BPB oil/water separator, which pumps to the BTRF wastewater treatment plant via lift station. Similarly, process wastewater from the PCU, PBU, and PAU, and potentially contaminated stormwater and cooling tower blowdown are routed to the NWC oil/water separator under routine conditions. The NWC oil/water separator discharges to a collection box, which also receives wastewater from the DHU and MPU. The collection box discharges to the NWC lift station, which pumps to the BTRF.

When rainfall at either the BPB or NWC area exceeds the pump capacity, the lift station pumps continue to pump to the BTRF, but excess water is diverted to the BPB stormwater retention basin or NWC stormwater retention basin. If excess flow threatens the capacity of the BPB or NWC retention basin, flow to the retention basin is stopped, and while continuing to discharge to the BTRF, the excess flow is discharged to the 9-foot sewer system that ultimately discharges through Outfall 003. Once the rainfall has diminished, thereby reducing the pump system impact, water in the BPB or NWC retention basin is pumped back to the BTRF.

The SGU wastewater is routed to the process sewer and then to the BTRF for treatment and discharge under TPDES Permit No. WQ0000592000. The SGU first flush sump receives process area stormwater with a minimal amount of process wastewater such as filter back flush containing carbon soot and calcium. If heavy rainfall results in runoff flows that exceed the pumping and sump storage capacity, a valve must be opened to route the excess flow into a pipe that gravity drains directly to Outfall 003.

Process and utility wastewaters from the potential proposed ammonia unit will be designed to be routed to the ExxonMobil Baytown Refinery (BTRF) for treatment and discharge under BTRF's TPDES Permit No. WQ0000592000. Stormwater from the ammonia unit that would not require treatment prior to discharge will be routed to the ammonia unit stormwater retention pond(s). Potentially contaminated stormwater from the ammonia unit will be routed to the unit's first flush basin and then to the BTRF wastewater system. Excess stormwater from the first flush basin(s) would be routed through the ammonia unit stormwater retention pond(s). The site would determine if the water in the retention pond(s) would be acceptable for discharge to Outfall 003, or would be routed back to the first flush basin(s) and treatment.

Table 2 summarizes the wastewaters that may be discharged through Outfall 003. The utility and other miscellaneous wastewaters listed in the table may be discharged from various areas within the BTCP facility.

OUTFALL 007

Outfall 007 routinely discharges stormwater from non-process and non-industrial areas in the northern portion of the BTCP. During high runoff events, it may also receive discharges of excess stormwater commingled with other wastewaters from the SPU and LAU units.

Process wastewater from the SPU and LAU units which includes cooling tower blowdown, steam condensate blowdown, neutralized wash water, and other wastewater streams, flows to a process wastewater sump, which discharges to the BTRF for treatment and discharge under TPDES Permit No. WQ0000592000.

Stormwater from the SPU and LAU units is routed through diversion boxes to a first flush basin, which then discharges to the BTRF. The first flush basin was designed to receive the first inch of rainfall in paved areas (approximately 380,000 gallons). After the first flush basin is filled to capacity, any additional stormwater is routed to the SPU and LAU stormwater retention basin. If excess flow threatens the capacity of the retention basin, flow to the retention basin is stopped, and the excess flow is diverted to Outfall 007. The retention pond discharge is manually controlled and regulated with a sluice gate. Once the rainfall has diminished, thereby reducing first flush basin capacity impact, water in the retention basin is pumped back to the BTRF.

Table 3 summarizes the wastewaters that may be discharged through Outfall 007.

SANITARY WASTEWATER

Sanitary wastewater is primarily routed to the BTRF for treatment and discharge under the BTRF's TPDES Permit No. WQ0000592000. It may also be collected in holding tanks and transported by truck to the BTRF sanitary treatment plant or nearby municipal treatment plant.

TREATMENT CHEMICALS

Treatment chemicals are used in the cooling tower, boiler, and water/wastewater treatment systems to maintain water quality. Deicing chemicals may be used for freezing conditions and may be present in wash waters and stormwater runoff. A list of treatment chemicals is included in the TPDES application as Attachment T-4.

EFFLUENT GUIDELINES

National effluent guidelines for the Organic Chemicals, Plastics, and Synthetic Fibers (OCPSF) industry at 40 CFR 414 apply to process wastewaters at the Baytown Chemical Plant. Because all OCPSF process wastewaters and potentially contaminated stormwaters are normally routed to the BTRF for treatment and discharge under the BTRF's TPDES Permit No. WQ0000592000, the OCPSF limits are applied to the BTRF permit. However, de minimis quantities of OCPSF process wastewater are allowed in the BTCP's TPDES Permit No. WQ0001215000 (Other Requirement No. 4) to be discharged during excessive storm events through the BTCP's Outfall 003. The TCEQ has set concentration limits for de minimis OCPSF wastewater in Outfall 003 discharges based on OCPSF Subpart F (Commodity Organic Chemicals) and Subpart J (Direct Discharge Point Sources That Do Not Use End-of-Pipe Biological Treatment).

Process wastewaters from the potential proposed ammonia unit would be subject to 40 CFR 418 (Fertilizer Manufacturing), Subpart B (Ammonia). Process and potentially contaminated stormwaters will normally be routed to the BTRF for treatment and discharge under the BTRF's TPDES Permit No. WQ0000592000 and the §418 Subpart B limits would be applied to the BTRF permit. Because de minimis quantities of potentially contaminated wastewaters could be discharged through the BTCP's Outfall 003, the TCEQ may include a limit for ammonia. The §418 effluent guideline is meant to be based on ammonia production (weight of ammonia allowed in the discharge per weight of ammonia production), but cannot be reasonably applied to de minimis amounts of process wastewater (the calculated limit would be excessively high). For de minimis wastewaters commingled with intermittent, flow-variable stormwater discharges, the TCEQ typically sets concentration limits instead.

Table 1. Raw Materials, Major Intermediates, and Final Products

Raw Materials	Major Intermediates	Final Products
1-Decene [872-05-9]	Hydrogen [1333-74-0]	1-Decene [872-05-9]
1-Dodecene [112-41-4]	PAO [895164-30-4, 163149-29-9]	1-Dodecene [112-41-4]
1-Hexene [592-41-6]	Tertiary amyl methyl ether [994-05-08]	1-Hexadecene [629-73-2]
1-Octene [111-66-0]		1-Hexene [592-41-6]
1-Tetradecene [1120-36-1]		1-Octadecene [112-88-9]
Acid		1-Octene [111-66-0]
Additives		1-Tetradecene [1120-36-1]
Ammonia [7664-41-7]		A-100 (Arom, Solvesso) [64742-95-6]
Anti-oxidant		A150/200 [Arom, Solvesso], [64742-95-5]
Aqueous ammonia [7664-41-7]		Benzene [71-43-2]
BH-40 Cellulosic filter aid [9004-34-6]		Butenes [106-98-9]
Bromine [7726-95-6]		Butyl rubber [9010-85-9]
Butene [106-98-9]		C20-24 Linear Alpha Olefins [93924-10-8]
Butylated hydroxytoluene [128-37-0]		C24+ Linear Alpha Olefins [131459-42-2]
Calcium stearate [1592-23-0]		Chemgrade propylene [115-07-1]
Catalyst		Exact Polymers (EX5101,5171,5371) [26221-73-8]
Catalyst and Activator [No CAS Available]		Exxpro rubber
Caustic [sodium hydroxide] [1310-73-2]		Hydrogen [1333-74-0]
Celite 545 [diatomaceous earth] [68855-54-9]		Isoamylene [26760-64-5]
Cyclohexane [110-82-7]		Isobutylene [115-11-7]
D4 Activator [118612-00-3]		Light gases
De-asphalter Unit [DAU] Rock		Liquid purge
Dowtherm [component: diphenyl oxide [101-84-8], biphenyl [92-52-4]]		Organic products
Epoxidized soybean oil [8013-0708]		Orthoxylene [95-47-6]
Ethylene [74-85-1]		Polyalphaolefin [895164-30-4, 163149-29-9]
Ethylene glycol [107-21-1]		Polygrade propylene [115-07-1]
Genapol X 078 [9043-30-5]		Polymer
HDPE powder [9002-88-4]		Polypropylene [9003-07-0]
Hexane [110-54-3]		Propane [74-98-6]
Hydrocarbon feeds		p-Xylene [106-42-5]
Hydrogen [1333-74-0]		Raw syngas
Hydrogen peroxide [7722-84-1]		Tertiary amyl methyl ether [994-05-08]
Irganox 1076 [2082-79-3]		Toluene [108-88-3]

Table 1. Raw Materials, Major Intermediates, and Final Products

Raw Materials	Major Intermediates	Final Products
Irganox L57 [components: benzamine [68411-46-1], n-phenyl diphenylamine [122-39-4]]		Vistamaxx Polymers (VM6102,8380,6502,6102,3588,3980) [9010-79-1]
Irgastab FS 042-V [1374859-51-4]		Xylenes [1330-20-7]
Isobutyl alcohol [78-83-1]		
Isobutylene [115-11-7]		
Isohexane [107-83-5]		
Isoprene [78-79-5]		
Kerosene [8008-20-6]		
Methacrylate [80-62-6]		
Methanol [67-56-1]		
Methyl chloride [74-87-3]		
Naphtha [64741-67-9]		
Natural Gas		
Nitrogen [7727-37-9]		
Octene [111-66-0]		
Oxygen [7782-44-7]		
para-Methyl styrene [622-97-9]		
PDEB [105-05-5]		
Propene [115-07-1]		
Propylene glycol [57-55-6]		
Propylene, dilute [115-11-7]		
Raffinates [25167-67-3]		
S-CAT (126642-97-5)		
Sorbitan Monooleate [1338-43-8]		
Steam-cracked naphtha (SCN) [imported] [68606-10-0]		
Sulfolane [126-33-0]		
Talc Powder [14807-96-6]		
Tertiary butyl alcohol [75-65-0]		
Thermal cracked gas oil [TGO]		
TNOA [1070-00-4]		
Toluene [108-88-3]		
Vazo-52 [4419-11-8]		
Water		
Weston F5 [939402-02-5]		
Xylenes [1330-20-7]		

Table 2. Outfall 003 Wastewaters
Stormwater (commingled with other wastewaters) (as listed below)
Process and utility wastewaters (de minimis quantities during unplanned events or excessive storm events)
Fire water control system test and flush water*
De minimis losses from fire control system (freeze protection, minor leaks awaiting repair)*
De minimis losses from the decorative ponds*
Hydrostatic test water (new or clean equipment)*
Potable water system flush water*
Irrigation water from the landscape sprinkler system*
Steam condensate and air conditioning condensate*
De minimis losses of potable water*
De minimis losses of clarified water*
Wash water and stormwater containing deicing chemicals*
Construction stormwater*
Miscellaneous non-stormwater flows (MSGP list)*
*Under BTCP's TPDES Permit No. WQ0001215000 (Other Requirements Nos. 5 and 6), these wastewaters are authorized for discharge through Outfall 003 at any time.

Table 3. Outfall 007 Wastewaters
Stormwater (commingled with other wastewaters) (as listed below)
Process and utility wastewaters (de minimis quantities during unplanned events or excessive storm events)
Miscellaneous non-stormwater flows (MSGP list), including emergency firefighting wastewaters*
De minimis losses from fire control system (freeze protection, minor leaks awaiting repair)*
Irrigation water from the landscape sprinkler system*
Steam condensate and air conditioning condensate*
Hydrostatic test water (new or clean equipment)*
Potable water system flush water*
De minimis losses of potable water*
De minimis losses of clarified water*
Wash water and stormwater containing deicing chemicals*
Construction stormwater*
*Under BTCP's TPDES Permit No. WQ0001215000 (Other Requirements Nos. 5 and 6), these wastewaters are authorized for discharge through Outfall 007 at any time.

Figure 1. BTCP Wastewater Flow Diagram

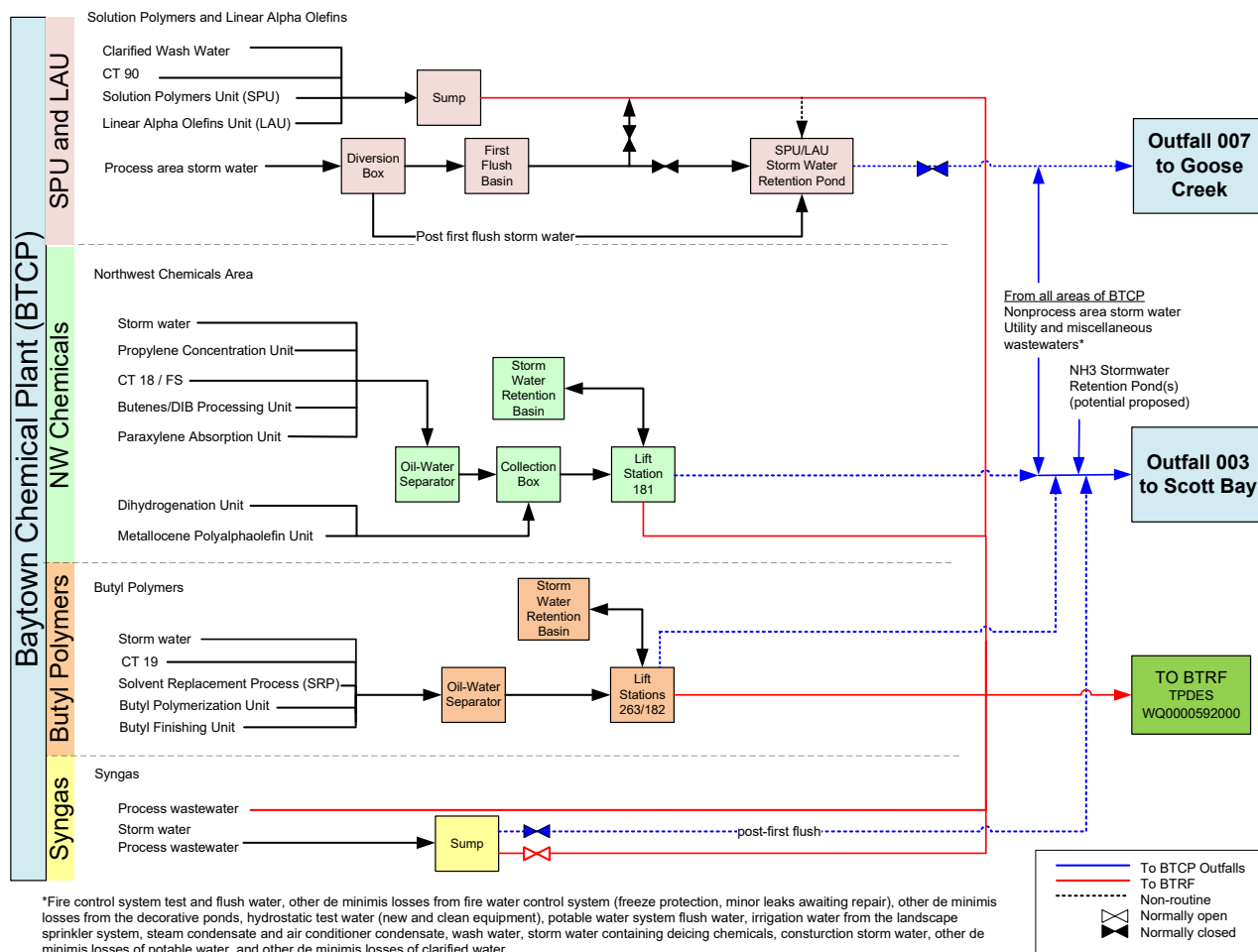
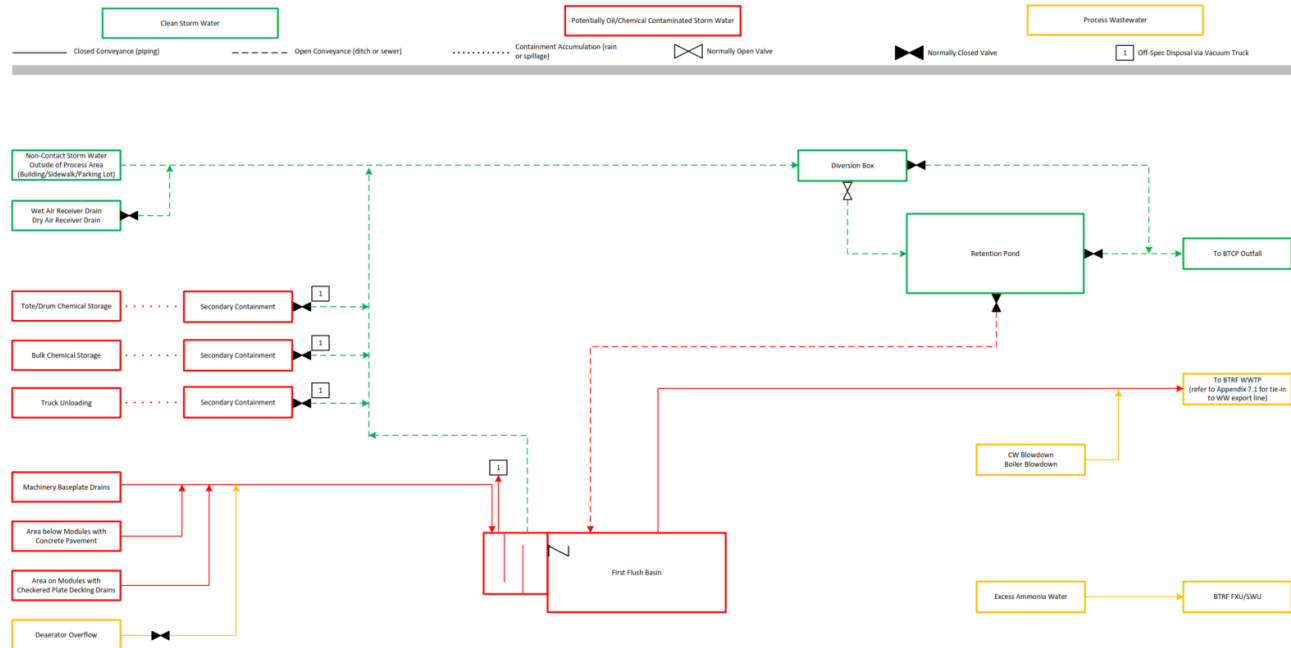


Figure 1. BTCP Wastewater Flow Diagram

Figure 2. Ammonia Unit Wastewater Flow Diagram

Preliminary NH3 Drainage Philosophy Conceptual Sketch



ATTACHMENT T-2
EXXONMOBIL BAYTOWN CHEMICAL PLANT
AMENDMENT REQUESTS

Additional Wastewater for Outfall 003..... 2
Modify Other Requirement No. 4..... 2
Ammonia Limit/Monitoring for Outfall 003 2

EXXONMOBIL BAYTOWN CHEMICAL PLANT AMENDMENT REQUESTS

Exxon Mobil Corporation (ExxonMobil) requests the following amendments to TPDES Permit No. WQ0001215000 for the ExxonMobil Baytown Chemical Plant (BTCP).

1. Add de minimis process wastewater from a potential proposed ammonia manufacturing unit to Outfall 003,
2. Modify Other Requirement No. 4 to include wastewater from potential proposed ammonia manufacturing unit, and
3. Add a daily maximum concentration limit for ammonia to Outfall 003 and monitoring only when there is a discharge from the ammonia unit.

Further discussion of the requested amendments is provided in the following sections.

ADDITIONAL WASTEWATER FOR OUTFALL 003 MODIFY OTHER REQUIREMENT NO. 4 AMMONIA LIMIT/MONITORING FOR OUTFALL 003

As described in Attachment T-1 Facility Description, a potential proposed ammonia manufacturing unit will be constructed within the boundary of the BTCP. As shown in the wastewater diagram for the unit in Figure 2 of Attachment T-1, process and utility wastewaters from the unit will be designed to be routed to the ExxonMobil Baytown Refinery (BTRF) for treatment and discharge under BTRF's TPDES Permit No. WQ0000592000. Stormwater from the ammonia unit that would not require treatment prior to discharge will be routed to the ammonia unit stormwater retention pond(s). Potentially contaminated stormwater from the ammonia unit will be routed to the unit's first flush basin and then to the BTRF wastewater system. Excess stormwater from the first flush basin(s) will be routed through the ammonia unit stormwater retention pond(s). The site would determine if the water in the retention pond(s) would be acceptable for discharge to Outfall 003, or would be routed back to the first flush basin(s) and treatment.

Potentially contaminated stormwater from the ammonia unit may come into contact with materials within the ammonia unit (primarily ammonia and oil), contaminants from minor leaks or spills, and residual contaminants after cleanup of spills/leaks. These contaminated wastewaters would normally be routed to the BTRF wastewater system via the ammonia unit first flush basin(s). Excess stormwater after the first flush volume could be routed through the ammonia unit retention pond(s). Stormwater that is collected after the first flush volume is not anticipated to contain contaminants at the level recovered by the first flush system(s) and is believed to be acceptable for discharge without treatment.

Process wastewater is usually considered to be wastewater that is generated directly from within the process itself. For the purpose of wastewater permitting, potentially contaminated stormwater may be considered to contain de minimis process wastewater when it is in contact with process materials. ExxonMobil requests that de minimis process wastewater from the ammonia unit be

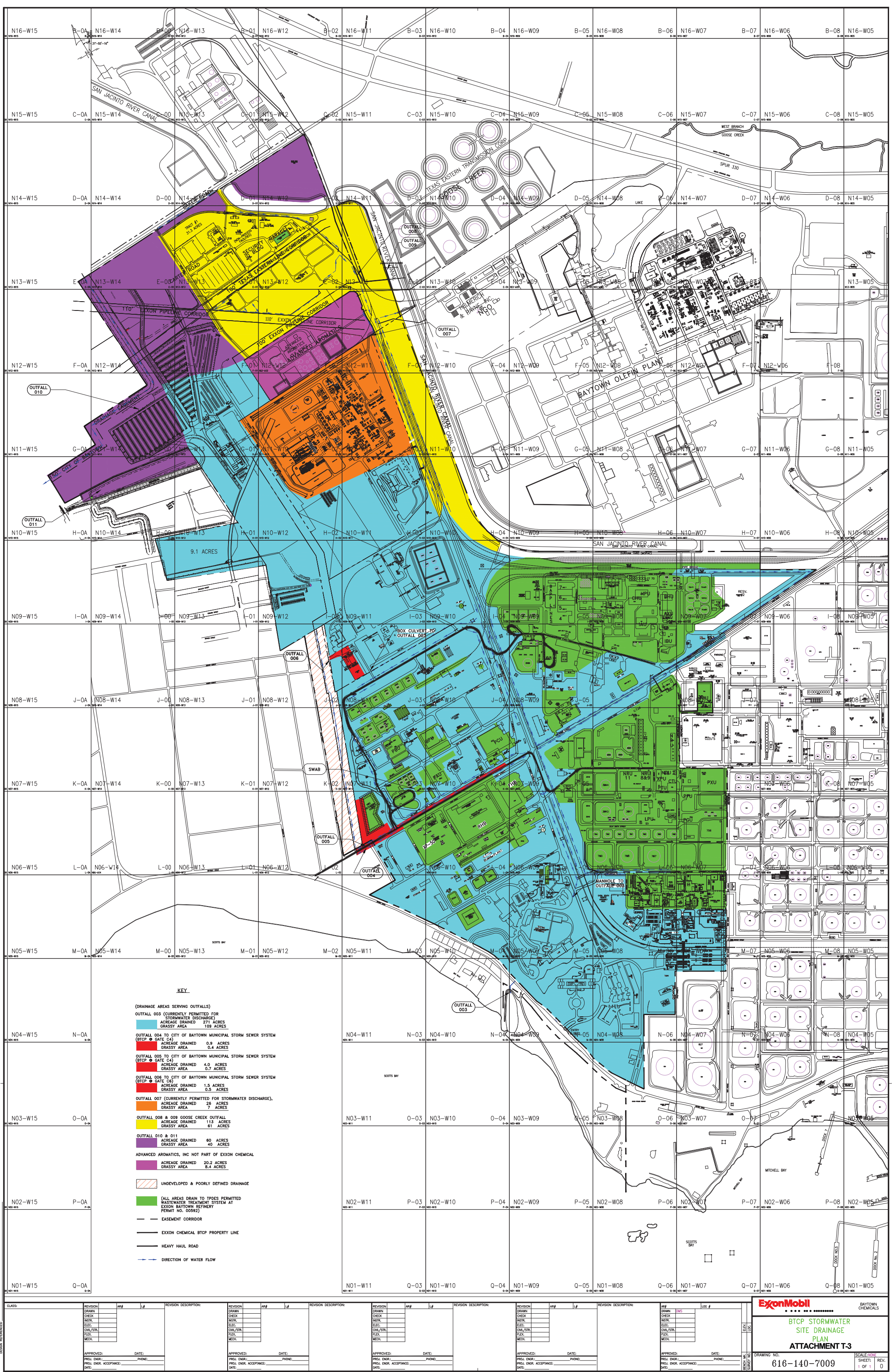
included as part of the de minimis process wastewaters that are allowed to be discharged from Outfall 003 under the restrictions in Other Requirement No. 4 of the BTCP current TPDES permit. ExxonMobil also requests that a daily maximum concentration limit for ammonia be added to Outfall 003, which can be used to determine when water from the ammonia unit stormwater retention pond(s) is acceptable for discharge through the BTCP Outfall 003, when process upset conditions occur.

Other Requirement No. 4 currently references de minimis process wastewater from existing units in the BTCP. The following highlighted additions to Other Requirement No. 4 are requested for the ammonia unit wastewaters.

- “4. Process wastewater is typically routed to the ExxonMobil Baytown Refinery (TPDES Permit No. WQ000592000) for treatment and discharge. De minimis quantities of process wastewater may commingle with stormwater and discharge via Outfalls 003 and 007 as a result of excessive storm events, or succession of storm events. Process wastewater is not authorized to be discharged under any conditions other than those storm events described below.

Discharges of de minimis quantities of process wastewater from Outfall 003 are only authorized following an excessive storm event or succession of storm events which results in runoff volumes that exceed the capabilities of the process wastewater lift station pumps and exceed the storage capacity of the stormwater retention ponds for the Butyl Polymers plant and/or the Northwest Chemical facility and/or the Ammonia Unit, or the Synthesis Gas Unit's first flush sump. **In addition, de minimis quantities of process wastewater from the Ammonia Unit may be discharged from Outfall 003 if the effluent limitation for ammonia on page 2 of the permit is met.**”

ExxonMobil requests that the addition of monitoring for ammonia for Outfall 003 be required only when there are discharges from the ammonia unit.



ATTACHMENT T-4
Treatment Chemicals
ExxonMobil Baytown Chemical Plant

Product	Use	Chemicals Listed in SDS [CAS]	Aquatic Toxicity Data in SDS	Bioaccumulation / Persistence Data in SDS
Aqua Ammonia 29%*	Disinfectant	Ammonium hydroxide [1336-21-6]	Yes	Yes
Caustic Soda 25-28%*	Disinfectant	Sodium hydroxide [1310-73-2]	Yes	No
Cortrol OS5607**	Dissolved oxygen scavenger/metal passivator	Carbohydrazide [497-18-7]	Yes	No
DIXICHLOR*	Disinfectant	Sodium hypochlorite [7681-52-9]	Yes	No
		Sodium hydroxide [1310-73-2]		
		Sodium chloride [7647-14-5]		
FLOGARD MS6222* **	Corrosion inhibitor	Phosphoric acid [7664-38-2]	Yes	Yes
GENGARD GN8020* **	Corrosion inhibitor	Maleic acid [110-16-7]	Yes	Yes
		Carboxylic acid polymer [TSRN 125438-5052P]		
INHIBITOR ECP8130 (Replaced INHIBITOR AZ8104)*	Corrosion Inhibitor	Sodium hydroxide [1310-73-2]	Yes	No
		Halogenated aromatic heterocycle [TSRN 125438 - 7795]		
		Reaction mass of sodium 4-chloro-5-alkylbenzotriazole and sodium 5-chloro-4-alkylbenzotriazole and sodium 4-chloro-7-alkylbenzotriazole and sodium 5-chloro-6-alkylbenzotriazole		
Optiguard MCA4288*	Internal boiler treatment	Sodium hydroxide [1310-73-2]	Yes	Yes
		2-Diethylaminoethanol [100-37-8]		
		Sodium carbonate [497-19-8]		
Optisperse PO5061**	Internal boiler treatment	Trisodium phosphate [7601-54-9]	No	No
Sodium Hypochlorite 12.5%* **	Disinfectant	Hypochlorous acid, sodium salt [7681-52-9]	Yes	No
Spectrus BD1501E**	Biodispersant	Alcohols, C10, alkoxyated [166736-08-9]	Yes	No
Spectrus NX1100**	Biocide	2-Bromo-2-nitropropane-1,3-diol (Bronopol) [52-51-7]	Yes	Yes
		Magnesium nitrate [10377-60-3]		
		Mixture of 5-chloro-2-methyl-4-isothiazolin-3-one and 2-methyl-4-isothiazolin-3-one [55965-84-9]		
		Magnesium chloride [7786-30-3]		
Steamate NA0660**	Neutralizing amine/BFW and condensate pH adjustment	3-Methoxypropylamine [5332-73-0]	Yes	Yes
		Cyclohexylamine [108-91-8]		
Steamate PAS4010*	Corrosion inhibitor	Methoxypropylamine, 3 [5332-73-0]	Yes	Yes
		Dimethylaminopropylamine (DMAPA) [109-55-7]		
		Cyclohexylamine [108-91-8]		
		Diethylhydroxylamine [3710-84-7]		
Sulfuric Acid* **	pH control	Sulfuric acid [7664-93-9]	Yes	Yes

* Current BTCP usage.

** Proposed ammonia unit.

2/11/25

2/11/25



SAFETY DATA SHEET

1. Identification

Product identifier SODIUM HYPOCHLORITE 12.5%

Other means of identification None.

Recommended use ALL PROPER AND LEGAL PURPOSES

Recommended restrictions None known.

Manufacturer/Importer/Supplier/Distributor information

Manufacturer

Company name Brenntag Mid-South, Inc.

Address 1405 Highway 136, West
Henderson, KY 42420

Telephone 270-830-1222

E-mail Not available.

Emergency phone number 800-424-9300 CHEMTREC

2. Hazard(s) identification

Physical hazards Not classified.

Health hazards Skin corrosion/irritation Category 1
Serious eye damage/eye irritation Category 1

Environmental hazards Hazardous to the aquatic environment, acute hazard Category 1
Hazardous to the aquatic environment, long-term hazard Category 1

OSHA defined hazards Not classified.

Label elements



Signal word Danger

Hazard statement Causes severe skin burns and eye damage. Causes serious eye damage. Very toxic to aquatic life. Very toxic to aquatic life with long lasting effects.

Precautionary statement

Prevention Do not breathe mist or vapor. Wash thoroughly after handling. Avoid release to the environment. Wear eye protection/face protection. Wear protective gloves/protective clothing/eye protection/face protection.

Response If swallowed: Rinse mouth. Do NOT induce vomiting. If on skin (or hair): Take off immediately all contaminated clothing. Rinse skin with water/shower. If inhaled: Remove person to fresh air and keep comfortable for breathing. If in eyes: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing. Immediately call a poison center/doctor. Wash contaminated clothing before reuse. Collect spillage.

Storage Store locked up.

Disposal Dispose of contents/container in accordance with local/regional/national/international regulations.

Hazard(s) not otherwise classified (HNOC) None known.

Supplemental information None.

3. Composition/information on ingredients

Mixtures

Chemical name	Common name and synonyms	CAS number	%
HYPOCHLOROUS ACID, SODIUM SALT (1:1)		7681-52-9	12.5
Other components below reportable levels			87.5

*Designates that a specific chemical identity and/or percentage of composition has been withheld as a trade secret.

4. First-aid measures

Inhalation	Move to fresh air. Call a physician if symptoms develop or persist.
Skin contact	Take off immediately all contaminated clothing. Rinse skin with water/shower. Call a physician or poison control center immediately. Chemical burns must be treated by a physician. Wash contaminated clothing before reuse.
Eye contact	Immediately flush eyes with plenty of water for at least 15 minutes. Remove contact lenses, if present and easy to do. Continue rinsing. Call a physician or poison control center immediately.
Ingestion	Call a physician or poison control center immediately. Rinse mouth. Do not induce vomiting. If vomiting occurs, keep head low so that stomach content doesn't get into the lungs.
Most important symptoms/effects, acute and delayed	Burning pain and severe corrosive skin damage. Causes serious eye damage. Symptoms may include stinging, tearing, redness, swelling, and blurred vision. Permanent eye damage including blindness could result.
Indication of immediate medical attention and special treatment needed	Provide general supportive measures and treat symptomatically. Chemical burns: Flush with water immediately. While flushing, remove clothes which do not adhere to affected area. Call an ambulance. Continue flushing during transport to hospital. Keep victim under observation. Symptoms may be delayed.
General information	Ensure that medical personnel are aware of the material(s) involved, and take precautions to protect themselves.

5. Fire-fighting measures

Suitable extinguishing media	Powder. Foam. Carbon dioxide (CO2).
Unsuitable extinguishing media	Do not use water jet as an extinguisher, as this will spread the fire.
Specific hazards arising from the chemical	During fire, gases hazardous to health may be formed.
Special protective equipment and precautions for firefighters	Self-contained breathing apparatus and full protective clothing must be worn in case of fire.
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.
General fire hazards	No unusual fire or explosion hazards noted.

6. Accidental release measures

Personal precautions, protective equipment and emergency procedures	Keep unnecessary personnel away. Keep people away from and upwind of spill/leak. Wear appropriate protective equipment and clothing during clean-up. Do not breathe mist or vapor. Do not touch damaged containers or spilled material unless wearing appropriate protective clothing. Ensure adequate ventilation. Local authorities should be advised if significant spillages cannot be contained. For personal protection, see section 8 of the SDS.
Methods and materials for containment and cleaning up	Large Spills: Stop the flow of material, if this is without risk. Use water spray to reduce vapors or divert vapor cloud drift. 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. Prevent entry into waterways, sewer, basements or confined areas. Following product recovery, flush area with water. Small Spills: Wipe up with absorbent material (e.g. cloth, fleece). Clean surface thoroughly to remove residual contamination. Never return spills to original containers for re-use. For waste disposal, see section 13 of the SDS.
Environmental precautions	Avoid release to the environment. Prevent further leakage or spillage if safe to do so. Avoid discharge into drains, water courses or onto the ground. Inform appropriate managerial or supervisory personnel of all environmental releases.

7. Handling and storage

Precautions for safe handling	Provide adequate ventilation. Do not breathe mist or vapor. Do not get in eyes, on skin, or on clothing. Avoid prolonged exposure. Wear appropriate personal protective equipment. Avoid release to the environment. Observe good industrial hygiene practices.
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Conditions for safe storage, including any incompatibilities Store locked up. Store in original tightly closed container. Store away from incompatible materials (see Section 10 of the SDS).

8. Exposure controls/personal protection

Occupational exposure limits

US. Workplace Environmental Exposure Level (WEEL) Guides

Components	Type	Value
HYPOCHLOROUS ACID, SODIUM SALT (1:1) (CAS 7681-52-9)	STEL	2 mg/m3

Biological limit values No biological exposure limits noted for the ingredient(s).

Appropriate engineering controls Good general ventilation (typically 10 air changes per hour) should be used. Ventilation rates should be matched to conditions. If applicable, use process enclosures, local exhaust ventilation, or other engineering controls to maintain airborne levels below recommended exposure limits. If exposure limits have not been established, maintain airborne levels to an acceptable level. Eye wash facilities and emergency shower must be available when handling this product.

Individual protection measures, such as personal protective equipment

Eye/face protection Wear safety glasses with side shields (or goggles) and a face shield.

Skin protection

Hand protection Wear appropriate chemical resistant gloves. Suitable gloves can be recommended by the glove supplier.

Other

Wear appropriate chemical resistant clothing.

Respiratory protection In case of insufficient ventilation, wear suitable respiratory equipment.

Thermal hazards Wear appropriate thermal protective clothing, when necessary.

General hygiene considerations Always observe good personal hygiene measures, such as washing after handling the material and before eating, drinking, and/or smoking. Routinely wash work clothing and protective equipment to remove contaminants.

9. Physical and chemical properties

Appearance

Physical state Liquid.
Form Liquid.
Color CLEAR PALE YELLOW

Odor CHLORINE

Odor threshold Not available.

pH Not available.

Melting point/freezing point 20 °F (-6.67 °C)

Initial boiling point and boiling range 212 °F (100 °C) estimated

Flash point Not available.

Evaporation rate Not available.

Flammability (solid, gas) Not applicable.

Upper/lower flammability or explosive limits

Flammability limit - lower (%) Not available.

Flammability limit - upper (%) Not available.

Explosive limit - lower (%) Not available.

Explosive limit - upper (%) Not available.

Vapor pressure 0.00001 hPa estimated

Vapor density Not available.

Relative density Not available.

Solubility(ies)

Solubility (water) Not available.

Partition coefficient (n-octanol/water)	Not available.
Auto-ignition temperature	Not available.
Decomposition temperature	Not available.
Viscosity	Not available.
Other information	
Density	10.10 lbs/gal estimated
Explosive properties	Not explosive.
Oxidizing properties	Not oxidizing.
Percent volatile	87.5 % estimated
Specific gravity	1.21 estimated

10. Stability and reactivity

Reactivity	The product is stable and non-reactive under normal conditions of use, storage and transport.
Chemical stability	Material is stable under normal conditions.
Possibility of hazardous reactions	Hazardous polymerization does not occur.
Conditions to avoid	Contact with incompatible materials.
Incompatible materials	Strong oxidizing agents.
Hazardous decomposition products	No hazardous decomposition products are known.

11. Toxicological information

Information on likely routes of exposure

Inhalation	May cause irritation to the respiratory system. Prolonged inhalation may be harmful.
Skin contact	Causes severe skin burns.
Eye contact	Causes serious eye damage.
Ingestion	Causes digestive tract burns.

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

Components	Species	Test Results
HYPOCHLOROUS ACID, SODIUM SALT (1:1) (CAS 7681-52-9)		
<u>Acute</u>		
Oral		
LD50	Mouse	5800 mg/kg
	Rat	8.91 g/kg

* Estimates for product may be based on additional component data not shown.

Skin corrosion/irritation Causes severe skin burns and eye damage.

Serious eye damage/eye irritation Causes serious eye damage.

Respiratory or skin sensitization

Respiratory sensitization Not a respiratory sensitizer.

Skin sensitization This product is not expected to cause skin sensitization.

Germ cell mutagenicity No data available to indicate product or any components present at greater than 0.1% are mutagenic or genotoxic.

Carcinogenicity This product is not considered to be a carcinogen by IARC, ACGIH, NTP, or OSHA.

OSHA Specifically Regulated Substances (29 CFR 1910.1001-1050)

Not listed.

Reproductive toxicity This product is not expected to cause reproductive or developmental effects.

Specific target organ toxicity - single exposure	Not classified.
Specific target organ toxicity - repeated exposure	Not classified.
Aspiration hazard	Not an aspiration hazard.
Chronic effects	Prolonged inhalation may be harmful.

12. Ecological information

Ecotoxicity Very toxic to aquatic life with long lasting effects.

Components	Species	Test Results
HYPOCHLOROUS ACID, SODIUM SALT (1:1) (CAS 7681-52-9)		
Aquatic		
Fish	LC50 Chinook salmon (<i>Oncorhynchus tshawytscha</i>)	0.038 - 0.065 mg/l, 96 hours

* Estimates for product may be based on additional component data not shown.

Persistence and degradability	No data is available on the degradability of this product.
Bioaccumulative potential	No data available.
Mobility in soil	No data available.
Other adverse effects	No other adverse environmental effects (e.g. ozone depletion, photochemical ozone creation potential, endocrine disruption, global warming potential) are expected from this component.

13. Disposal considerations

Disposal instructions	Collect and reclaim or dispose in sealed containers at licensed waste disposal site. Do not allow this material to drain into sewers/water supplies. Do not contaminate ponds, waterways or ditches with chemical or used container. 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	Dispose of in accordance with local regulations. Empty containers or liners may retain some product residues. This material and its container must be disposed of in a safe manner (see: Disposal instructions).
Contaminated packaging	Since emptied containers may retain product residue, follow label warnings even after container is emptied. Empty containers should be taken to an approved waste handling site for recycling or disposal.

14. Transport information

DOT

UN number	UN1791
UN proper shipping name	HYPOCHLORITE SOLUTIONS
Transport hazard class(es)	
Class	8
Subsidiary risk	-
Packing group	III
Special precautions for user	Read safety instructions, SDS and emergency procedures before handling.
ERG number	154
DOT information on packaging may be different from that listed.	

DOT



General information

IMDG Regulated Marine Pollutant.

15. Regulatory information**US federal regulations**

This product is a "Hazardous Chemical" as defined by the OSHA Hazard Communication Standard, 29 CFR 1910.1200.

TSCA Section 12(b) Export Notification (40 CFR 707, Subpt. D)

Not regulated.

CERCLA Hazardous Substance List (40 CFR 302.4)

HYPOCHLOROUS ACID, SODIUM SALT (1:1) (CAS 7681-52-9) Listed.

SARA 304 Emergency release notification

Not regulated.

OSHA Specifically Regulated Substances (29 CFR 1910.1001-1050)

Not listed.

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

Not listed.

SARA 311/312 Hazardous chemical No

SARA 313 (TRI reporting)

Not regulated.

Other federal regulations**Clean Air Act (CAA) Section 112 Hazardous Air Pollutants (HAPs) List**

Not regulated.

Clean Air Act (CAA) Section 112(r) Accidental Release Prevention (40 CFR 68.130)

Not regulated.

Safe Drinking Water Act (SDWA) Not regulated.

US state regulations**US. California Controlled Substances. CA Department of Justice (California Health and Safety Code Section 11100)**

Not listed.

US. Massachusetts RTK - Substance List

HYPOCHLOROUS ACID, SODIUM SALT (1:1) (CAS 7681-52-9)

US. New Jersey Worker and Community Right-to-Know Act

HYPOCHLOROUS ACID, SODIUM SALT (1:1) (CAS 7681-52-9)

US. Pennsylvania Worker and Community Right-to-Know Law

HYPOCHLOROUS ACID, SODIUM SALT (1:1) (CAS 7681-52-9)

US. Rhode Island RTK

HYPOCHLOROUS ACID, SODIUM SALT (1:1) (CAS 7681-52-9)

US. California Proposition 65

California Safe Drinking Water and Toxic Enforcement Act of 1986 (Proposition 65): This material is not known to contain any chemicals currently listed as carcinogens or reproductive toxins.

International Inventories

Country(s) or region	Inventory name	On inventory (yes/no)*
Australia	Australian Inventory of Chemical Substances (AICS)	Yes
Canada	Domestic Substances List (DSL)	Yes
Canada	Non-Domestic Substances List (NDSL)	No
China	Inventory of Existing Chemical Substances in China (IECSC)	Yes
Europe	European Inventory of Existing Commercial Chemical Substances (EINECS)	Yes
Europe	European List of Notified Chemical Substances (ELINCS)	No

Country(s) or region	Inventory name	On inventory (yes/no)*
Japan	Inventory of Existing and New Chemical Substances (ENCS)	Yes
Korea	Existing Chemicals List (ECL)	Yes
New Zealand	New Zealand Inventory	Yes
Philippines	Philippine Inventory of Chemicals and Chemical Substances (PICCS)	Yes
United States & Puerto Rico	Toxic Substances Control Act (TSCA) Inventory	Yes

*A "Yes" indicates that all components of this product comply with the inventory requirements administered by the governing country(s)

A "No" indicates that one or more components of the product are not listed or exempt from listing on the inventory administered by the governing country(s).

16. Other information, including date of preparation or last revision

Issue date	06-06-2015
Revision date	06-16-2015
Version #	16
HMIS® ratings	Health: 3 Flammability: 0 Physical hazard: 0
NFPA ratings	Health: 3 Flammability: 0 Instability: 0
Disclaimer	While Brenntag believes the information contained herein to be accurate, Brenntag makes no representation or warranty, express or implied, regarding, and assumes no liability for, the accuracy or completeness of the information. The Buyer assumes all responsibility for handling, using and/or reselling the Product in accordance with applicable federal, state, and local law. This SDS shall not in any way limit or preclude the operation and effect of any of the provisions of Brenntag's terms and conditions of sale.

SECTION 1: IDENTIFICATION

1.1. Product Identifier

Product Name: Aqua Ammonia 29%

CAS No: 1336-21-6

Synonyms: Ammonia water, Aqueous ammonia, Household ammonia, Ammonium hydrate

STCC: 4935280

1.2. Intended Use of the Product

Fertilizer

1.3. Name, Address, and Telephone of the Responsible Party

Company

CF Industries Sales, LLC

4 Parkway North, Suite 400

Deerfield, Illinois 60015-2590

847-405-2400

www.cfindustries.com

1.4. Emergency Telephone Number

Emergency Number : 800-424-9300

For Chemical Emergency, Spill, Leak, Fire, Exposure, or Accident, call CHEMTREC – Day or Night

SECTION 2: HAZARDS IDENTIFICATION

2.1. Classification of the Substance or Mixture

Classification (GHS-US)

Acute Tox. 4 (Oral) H302

Acute Tox. 4 (Inhalation:gas) H332

Skin Corr. 1A H314

Eye Dam. 1 H318

STOT SE 3 H335

Aquatic Acute 1 H400

Aquatic Chronic 3 H412

Full text of H-phrases: see section 16

2.2. Label Elements

GHS-US Labeling

Hazard Pictograms (GHS-US)

:



GHS05



GHS07



GHS09

Signal Word (GHS-US)

: Danger

Hazard Statements (GHS-US)

: H302+H332 - Harmful if swallowed or if inhaled.
H314 - Causes severe skin burns and eye damage.
H318 - Causes serious eye damage.
H335 - May cause respiratory irritation.
H400 - Very toxic to aquatic life.
H412 - Harmful to aquatic life with long lasting effects.

Precautionary Statements (GHS-US)

: P260 - Do not breathe mist, spray, vapors, gas.
P261 - Avoid breathing vapors, mist, or spray.
P264 - Wash hands, forearms, and exposed areas thoroughly after handling.
P270 - Do not eat, drink or smoke when using this product.
P271 - Use only outdoors or in a well-ventilated area.
P273 - Avoid release to the environment.
P280 - Wear eye protection, protective clothing, protective gloves, face protection.

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P301+P330+P331+P310 - IF SWALLOWED: Rinse mouth. Do NOT induce vomiting. Immediately call a poison center or doctor.
P303+P361+P353+P310 - IF ON SKIN (OR HAIR): Take off immediately all contaminated clothing. Rinse skin with water/shower. Immediately call a poison center or doctor.
P304+P340+P310 - IF INHALED: Remove person to fresh air and keep at rest in a position comfortable for breathing. Immediately call a poison center or doctor.
P305+P351+P338+P310 - IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing. Immediately call a poison center or doctor.
P363 - Wash contaminated clothing before reuse.
P391 - Collect spillage.
P403+P233 - Store in a well-ventilated place. Keep container tightly closed.
P405 - Store locked up.
P501 - Dispose of contents/container in accordance with local, regional, provincial, territorial, national, and international regulations.

2.3. Other Hazards

Ammonium hydroxide is very volatile and may release ammonia as a gas. Ammonia vapor, in concentrations of 16-25% volume by weight in air, is flammable, toxic by inhalation and corrosive. Take all appropriate precautions.

2.4. Unknown Acute Toxicity (GHS-US)

No data available

SECTION 3: COMPOSITION/INFORMATION ON INGREDIENTS

3.1. Substances

Not applicable

3.2. Mixture

Name	Product Identifier	% (w/w)	Classification (GHS-US)
Ammonium hydroxide	(CAS No) 1336-21-6	100	Acute Tox. 4 (Oral), H302 Skin Corr. 1B, H314 Eye Dam. 1, H318 Aquatic Acute 1, H400
Contains	Product Identifier	% (w/w)	Classification (GHS-US)
Water	(CAS No) 7732-18-5	69.6 - 70.6	Not classified
Ammonia	(CAS No) 7664-41-7	29.4 - 30.4	Flam. Gas 2, H221 Compressed gas, H280 Acute Tox. 3 (Inhalation:gas), H331 Skin Corr. 1B, H314 Eye Dam. 1, H318 Aquatic Acute 1, H400 Aquatic Chronic 2, H411

Full text of H-phrases: see section 16

SECTION 4: FIRST AID MEASURES

4.1. Description of First Aid Measures

General: Never give anything by mouth to an unconscious person. Seek medical attention immediately. Show label if possible.

Inhalation: When symptoms occur: go into open air and ventilate suspected area. Immediately call a POISON CENTER or doctor/physician.

Skin Contact: Immediately flush skin with plenty of water for at least 60 minutes. Remove/Take off immediately all contaminated clothing. Immediately call a POISON CENTER or doctor/physician. Wash contaminated clothing before reuse.

Eye Contact: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing for at least 60 minutes. Immediately call a POISON CENTER or doctor/physician.

Ingestion: Rinse mouth. Do NOT induce vomiting. Immediately call a POISON CENTER or doctor/physician.

4.2. Most Important Symptoms and Effects Both Acute and Delayed

General: Harmful if swallowed. Corrosive to eyes, respiratory system and skin. Harmful if inhaled.

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Inhalation: Symptoms may include: Sneezing, coughing, burning sensation of throat with constricting sensation of the larynx and difficulty in breathing. Damage to lungs. Harmful if inhaled.

Skin Contact: Corrosive. Causes burns. Symptoms may include: Redness. Pain. Serious skin burns. Blisters.

Eye Contact: Causes serious eye damage. Symptoms may include: Redness. Pain. Blurred vision. Severe burns. Causes permanent damage to the cornea, iris, or conjunctiva.

Ingestion: Harmful if swallowed. May cause burns or irritation of the linings of the mouth, throat, and gastrointestinal tract.

Chronic Symptoms: None known.

4.3. Indication of Any Immediate Medical Attention and Special Treatment Needed

If exposed or concerned, get medical advice and attention.

SECTION 5: FIRE-FIGHTING MEASURES

5.1. Extinguishing Media

Suitable Extinguishing Media: Water spray, fog.

Unsuitable Extinguishing Media: Do not use a heavy water stream. Use of heavy stream of water may spread fire.

5.2. Special Hazards Arising From the Substance or Mixture

Fire Hazard: Ammonia vapor concentrations in the range of 16-25% by volume in air can be ignited if heated to the auto-ignition temperature. Oil or other combustible materials increases the fire hazard. Emits toxic fumes under fire conditions.

Explosion Hazard: Forms explosive compounds with calcium hypochlorite, bleaches, gold, mercury, silver, chlorine and other halogens.

Reactivity: Corrosive to copper and aluminum, including their alloys, and galvanized surfaces.

5.3. Advice for Firefighters

Precautionary Measures Fire: Exercise caution when fighting any chemical fire.

Firefighting Instructions: Stop leak if safe to do so. Use water spray or fog for cooling exposed containers. In case of major fire and large quantities: Evacuate area. Fight fire remotely due to the risk of explosion.

Protection During Firefighting: Firefighters must use full bunker gear including NIOSH-approved positive-pressure self-contained breathing apparatus to protect against potential hazardous combustion and decomposition products.

Hazardous Combustion Products: Nitrogen oxides. Ammonia.

Reference to Other Sections

Refer to section 9 for flammability properties.

SECTION 6: ACCIDENTAL RELEASE MEASURES

6.1. Personal Precautions, Protective Equipment and Emergency Procedures

General Measures: Keep away from open flames, hot surfaces and sources of ignition. No smoking. Avoid all contact with skin, eyes, or clothing. Do not breathe vapor, mist or spray.

6.1.1. For Non-Emergency Personnel

Protective Equipment: Use appropriate personal protection equipment (PPE).

Emergency Procedures: Evacuate unnecessary personnel. Eliminate ignition sources.

6.1.2. For Emergency Personnel

Protective Equipment: Equip cleanup crew with proper protection.

Emergency Procedures: Stop leak if safe to do so. Ventilate area.

6.2. Environmental Precautions

Prevent entry to sewers and public waters. Notify authorities if product enters sewers or public waters.

6.3. Methods and Material for Containment and Cleaning Up

For Containment: Stop the flow of material, if this is without risk. Ventilate area. Contain any spills with dikes or absorbents.

Methods for Cleaning Up: Clear up spills immediately and dispose of waste safely. Never neutralize spill with acid. Absorb and/or contain spill with inert material, then place in suitable container. Use only non-sparking tools. After cleaning, flush traces away with water.

6.4. Reference to Other Sections

See heading 8, Exposure Controls and Personal Protection. See Section 13, Disposal Considerations.

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SECTION 7: HANDLING AND STORAGE

7.1. Precautions for Safe Handling

Additional Hazards When Processed: Do NOT enter (storage areas, confined spaces) unless adequately ventilated. Emits ammonia vapors. Ammonium hydroxide reacts with many heavy metals and their salts forming explosive compounds. It attacks many metals forming flammable/explosive gas. The solution in water is a strong base, it reacts violently with acids.

Hygiene Measures: Handle in accordance with good industrial hygiene and safety procedures. Wash hands and other exposed areas with mild soap and water before eating, drinking, or smoking and again when leaving work. Wash contaminated clothing before reuse.

7.2. Conditions for Safe Storage, Including Any Incompatibilities

Technical Measures: Any proposed use of this product in elevated-temperature processes should be thoroughly evaluated to assure that safe operating conditions are established and maintained. Ensure adequate ventilation. Comply with applicable regulations.

Storage Conditions: Store in a dry, cool and well-ventilated place. Detached outside storage is preferable. Keep in fireproof place. Store away from oxidizers, combustible materials, and all ignition sources. Store in corrosive resistant container with a resistant inner liner. Storage containers should have safety relief valves. Store locked up.

Incompatible Materials: Strong acids. Strong oxidizers. Organic materials. Heavy metals. Metal salts. Hypochlorites.

Storage Area: Post readily visible warning signs in the storage area listing emergency measures. Water hoses should be readily available to disperse vapors in case of a spill.

7.3. Specific End Use(s)

Fertilizer

SECTION 8: EXPOSURE CONTROLS/PERSONAL PROTECTION

8.1. Control Parameters

For substances listed in section 3 that are not listed here, there are no established Exposure limits from the manufacturer, supplier, importer, or the appropriate advisory agency including: ACGIH (TLV), NIOSH (REL), OSHA (PEL), Canadian provincial governments, or the Mexican government.

Ammonia (7664-41-7)		
Mexico	OEL TWA (mg/m ³)	18 mg/m ³
Mexico	OEL TWA (ppm)	25 ppm
Mexico	OEL STEL (mg/m ³)	27 mg/m ³
Mexico	OEL STEL (ppm)	35 ppm
USA ACGIH	ACGIH TWA (ppm)	25 ppm
USA ACGIH	ACGIH STEL (ppm)	35 ppm
USA OSHA	OSHA PEL (TWA) (mg/m ³)	35 mg/m ³
USA OSHA	OSHA PEL (TWA) (ppm)	50 ppm
USA NIOSH	NIOSH REL (TWA) (mg/m ³)	18 mg/m ³
USA NIOSH	NIOSH REL (TWA) (ppm)	25 ppm
USA NIOSH	NIOSH REL (STEL) (mg/m ³)	27 mg/m ³
USA NIOSH	NIOSH REL (STEL) (ppm)	35 ppm
USA IDLH	US IDLH (ppm)	300 ppm
Alberta	OEL STEL (mg/m ³)	24 mg/m ³
Alberta	OEL STEL (ppm)	35 ppm
Alberta	OEL TWA (mg/m ³)	17 mg/m ³
Alberta	OEL TWA (ppm)	25 ppm
British Columbia	OEL STEL (ppm)	35 ppm
British Columbia	OEL TWA (ppm)	25 ppm
Manitoba	OEL STEL (ppm)	35 ppm
Manitoba	OEL TWA (ppm)	25 ppm
New Brunswick	OEL STEL (mg/m ³)	24 mg/m ³
New Brunswick	OEL STEL (ppm)	35 ppm
New Brunswick	OEL TWA (mg/m ³)	17 mg/m ³
New Brunswick	OEL TWA (ppm)	25 ppm
Newfoundland & Labrador	OEL STEL (ppm)	35 ppm

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Newfoundland & Labrador	OEL TWA (ppm)	25 ppm
Nova Scotia	OEL STEL (ppm)	35 ppm
Nova Scotia	OEL TWA (ppm)	25 ppm
Nunavut	OEL STEL (mg/m ³)	24 mg/m ³
Nunavut	OEL STEL (ppm)	35 ppm
Nunavut	OEL TWA (mg/m ³)	17 mg/m ³
Nunavut	OEL TWA (ppm)	25 ppm
Northwest Territories	OEL STEL (mg/m ³)	24 mg/m ³
Northwest Territories	OEL STEL (ppm)	35 ppm
Northwest Territories	OEL TWA (mg/m ³)	17 mg/m ³
Northwest Territories	OEL TWA (ppm)	25 ppm
Ontario	OEL STEL (ppm)	35 ppm
Ontario	OEL TWA (ppm)	25 ppm
Prince Edward Island	OEL STEL (ppm)	35 ppm
Prince Edward Island	OEL TWA (ppm)	25 ppm
Québec	VECD (mg/m ³)	24 mg/m ³
Québec	VECD (ppm)	35 ppm
Québec	VEMP (mg/m ³)	17 mg/m ³
Québec	VEMP (ppm)	25 ppm
Saskatchewan	OEL STEL (ppm)	35 ppm
Saskatchewan	OEL TWA (ppm)	25 ppm
Yukon	OEL STEL (mg/m ³)	30 mg/m ³
Yukon	OEL STEL (ppm)	40 ppm
Yukon	OEL TWA (mg/m ³)	18 mg/m ³
Yukon	OEL TWA (ppm)	25 ppm

8.2. Exposure Controls

Appropriate Engineering Controls: Emergency eye wash fountains and safety showers should be available in the immediate vicinity of any potential exposure. Gas detectors should be used when toxic gases may be released. Use explosion-proof equipment.

Personal Protective Equipment: Gloves. Protective goggles. Insufficient ventilation: wear respiratory protection. Protective clothing. Face shield.



Materials for Protective Clothing: Chemically resistant materials and fabrics.

Hand Protection: Wear chemically resistant protective gloves.

Eye Protection: Chemical safety goggles and face shield.

Skin and Body Protection: Wear suitable protective clothing.

Respiratory Protection: If exposure limits are exceeded or irritation is experienced, approved respiratory protection should be worn.

Other Information: When using, do not eat, drink or smoke.

SECTION 9: PHYSICAL AND CHEMICAL PROPERTIES

9.1. Information on Basic Physical and Chemical Properties

Physical State	: Liquid
Appearance	: Colorless
Odor	: Pungent
Odor Threshold	: 1 - 50 ppm
pH	: 10.6 - 11.6 (0.02-1.7% aqueous ammonia solution)
Evaporation Rate	: Not available
Melting Point	: -77 °C (-106 °F) (<44% NH ₃)
Freezing Point	: -78 °C (-108 °F)

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Boiling Point	: 37.4 °C (99.3°F) (25% NH ₃)
Flash Point	: Not available
Auto-ignition Temperature	: 651 °C (1,204°F) (ammonia vapor)
Decomposition Temperature	: Not available
Flammability (solid, gas)	: Not available
Lower Flammable Limit	: 16 % (ammonia vapor)
Upper Flammable Limit	: 25 % (ammonia vapor)
Vapor Pressure	: 49642.2 Pa at 68°F (20°C)
Relative Vapor Density at 20 °C	: 0.6 (for ammonia vapor over aqua ammonia at 0°C and 760 mm Hg)
Relative Density	: Not available
Specific Gravity	: 0.90 at 60 °F (19% NH ₃)
Solubility	: Soluble in water.
Partition Coefficient: N-Octanol/Water	: -1.14 at 25° C
Viscosity	: Not available
Explosion Data – Sensitivity to Mechanical Impact	: Not expected to present an explosion hazard due to mechanical impact.
Explosion Data – Sensitivity to Static Discharge	: Not expected to present an explosion hazard due to static discharge.

SECTION 10: STABILITY AND REACTIVITY

- 10.1. Reactivity:** Corrosive to copper and aluminum, including their alloys, and galvanized surfaces.
- 10.2. Chemical Stability:** Stable under recommended handling and storage conditions (see section 7).
- 10.3. Possibility of Hazardous Reactions:** Hazardous polymerization will not occur.
- 10.4. Conditions to Avoid:** Direct sunlight. Extremely high or low temperatures. Heat. Sources of ignition.
- 10.5. Incompatible Materials:** Strong acids. Strong oxidizers. Organic materials. Hypochlorites. Heavy metals. Metal salts.
- 10.6. Hazardous Decomposition Products:** Thermal decomposition generates: Carbon oxides (CO, CO₂). Nitrogen oxides. Emits ammonia vapors.

SECTION 11: TOXICOLOGICAL INFORMATION

11.1. Information on Toxicological Effects - Product

Acute Toxicity: Oral: Harmful if swallowed. Inhalation: gas: Harmful if inhaled.

LD50 and LC50 Data:

Aqua Ammonia 29% (\f)1336-21-6	
ATE US (oral)	350.00 mg/kg body weight
ATE US (gases)	10,256.41 ppmV/4h

Skin Corrosion/Irritation: Causes severe skin burns and eye damage.

pH: 10.6 - 11.6 (0.02-1.7% aqueous ammonia solution)

Serious Eye Damage/Irritation: Causes serious eye damage.

pH: 10.6 - 11.6 (0.02-1.7% aqueous ammonia solution)

Respiratory or Skin Sensitization: Not classified

Germ Cell Mutagenicity: Not classified

Teratogenicity: Not available

Carcinogenicity: Not classified

Specific Target Organ Toxicity (Repeated Exposure): Not classified

Reproductive Toxicity: Not classified

Specific Target Organ Toxicity (Single Exposure): May cause respiratory irritation.

Aspiration Hazard: Not classified

Symptoms/Injuries After Inhalation: Symptoms may include: Sneezing, coughing, burning sensation of throat with constricting sensation of the larynx and difficulty in breathing. Damage to lungs. Harmful if inhaled.

Symptoms/Injuries After Skin Contact: Corrosive. Causes burns. Symptoms may include: Redness. Pain. Serious skin burns. Blisters.

Symptoms/Injuries After Eye Contact: Causes serious eye damage. Symptoms may include: Redness. Pain. Blurred vision. Severe burns. Causes permanent damage to the cornea, iris, or conjunctiva.

Symptoms/Injuries After Ingestion: Harmful if swallowed. May cause burns or irritation of the linings of the mouth, throat, and gastrointestinal tract.

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Chronic Symptoms: None known.

11.2. Information on Toxicological Effects - Ingredient(s)

LD50 and LC50 Data:

Ammonia (7664-41-7)	
LC50 Inhalation Rat	5.1 mg/l (Exposure time: 1 h)
LC50 Inhalation Rat	2000 ppm/4h (Exposure time: 4 h)
Water (7732-18-5)	
LD50 Oral Rat	> 90000 mg/kg
Ammonium hydroxide (1336-21-6)	
LD50 Oral Rat	350 mg/kg

SECTION 12: ECOLOGICAL INFORMATION

12.1. Toxicity

Ecology - General: Toxic to aquatic life. Harmful to aquatic life with long lasting effects.

Ammonia (7664-41-7)	
LC50 Fish 1	0.44 mg/l (Exposure time: 96 h - Species: Cyprinus carpio)
EC50 Daphnia 1	25.4 mg/l (Exposure time: 48 h - Species: Daphnia magna)
LC 50 Fish 2	0.26 - 4.6 mg/l (Exposure time: 96 h - Species: Lepomis macrochirus)
Ammonium hydroxide (1336-21-6)	
LC50 Fish 1	8.2 mg/l (Exposure time: 96 h - Species: Pimephales promelas)
EC50 Daphnia 1	0.66 mg/l (Exposure time: 48 h - Species: water flea)
EC50 Daphnia 2	0.66 mg/l (Exposure time: 48 h - Species: Daphnia pulex)

12.2. Persistence and Degradability

Aqua Ammonia 29% (1336-21-6)	
Persistence and Degradability	Biodegradation of ammonia occurs in water under aerobic conditions.

12.3. Bioaccumulative Potential

Aqua Ammonia 29% (1336-21-6)	
Log Pow	-1.14
Bioaccumulative Potential	Not established.
Ammonia (7664-41-7)	
Log Pow	-1.14 (at 25 °C)

12.4. Mobility in Soil Not available

12.5. Other Adverse Effects

Other Information: Avoid release to the environment.

SECTION 13: DISPOSAL CONSIDERATIONS

13.1. Waste treatment methods

Sewage Disposal Recommendations: Do not empty into drains; dispose of this material and its container in a safe way.

Waste Disposal Recommendations: Dispose of waste material in accordance with all local, regional, national, provincial, territorial and international regulations.

Additional Information: Prevent runoff from entering drains, sewers or waterways.

Ecology – Waste Materials: This material is hazardous to the aquatic environment. Keep out of sewers and waterways.

SECTION 14: TRANSPORT INFORMATION

14.1. In Accordance with DOT

Proper Shipping Name	: AMMONIA SOLUTIONS(with more than 10% but not more than 35% ammonia)
Hazard Class	: 8
Identification Number	: UN2672
Label Codes	: 8
Packing Group	: III
ERG Number	: 154



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14.2. In Accordance with IMDG

Proper Shipping Name : AMMONIA SOLUTION(with more than 10% but not more than 35% ammonia)
Hazard Class : 8
Identification Number : UN2672
Packing Group : III
Label Codes : 8
EmS-No. (Fire) : F-A
EmS-No. (Spillage) : S-B



14.3. In Accordance with IATA

Proper Shipping Name : AMMONIA SOLUTION(with more than 10% but not more than 35% ammonia)
Hazard Class : 8
Identification Number : UN2672
Label Codes : 8
Packing Group : III
ERG Code (IATA) : 8L



14.4. In Accordance with TDG

Proper Shipping Name : AMMONIA SOLUTION(with more than 10% but not more than 35% ammonia)
Hazard Class : 8
Identification Number : UN2672
Label Codes : 8
Packing Group : III



SECTION 15: REGULATORY INFORMATION

15.1. US Federal Regulations

Aqua Ammonia 29% (1336-21-6)	
SARA Section 311/312 Hazard Classes	Immediate (acute) health hazard
Ammonia (7664-41-7)	
Listed on the United States TSCA (Toxic Substances Control Act) inventory	
Listed on the United States SARA Section 302	
Listed on United States SARA Section 313	
SARA Section 302 Threshold Planning Quantity (TPQ)	500
SARA Section 311/312 Hazard Classes	Fire hazard Immediate (acute) health hazard Sudden release of pressure hazard
SARA Section 313 - Emission Reporting	1.0 % (includes anhydrous Ammonia and aqueous Ammonia from water dissociable Ammonium salts and other sources, 10% of total aqueous Ammonia is reportable under this listing)
Water (7732-18-5)	
Listed on the United States TSCA (Toxic Substances Control Act) inventory	
Ammonium hydroxide (1336-21-6)	
Listed on the United States TSCA (Toxic Substances Control Act) inventory	

15.2. US State Regulations

Ammonia (7664-41-7)	
U.S. - California - SCAQMD - Toxic Air Contaminants - Non-Cancer Acute	
U.S. - California - SCAQMD - Toxic Air Contaminants - Non-Cancer Chronic	
U.S. - California - Toxic Air Contaminant List (AB 1807, AB 2728)	
U.S. - Connecticut - Hazardous Air Pollutants - HLVs (30 min)	
U.S. - Connecticut - Hazardous Air Pollutants - HLVs (8 hr)	
U.S. - Connecticut - Water Quality Standards - Acute Freshwater Aquatic Life Criteria	
U.S. - Connecticut - Water Quality Standards - Acute Saltwater Aquatic Life Criteria	

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U.S. - Connecticut - Water Quality Standards - Chronic Freshwater Aquatic Life Criteria
U.S. - Connecticut - Water Quality Standards - Chronic Saltwater Aquatic Life Criteria
U.S. - Delaware - Accidental Release Prevention Regulations - Sufficient Quantities
U.S. - Delaware - Accidental Release Prevention Regulations - Threshold Quantities
U.S. - Delaware - Accidental Release Prevention Regulations - Toxic Endpoints
U.S. - Delaware - Pollutant Discharge Requirements - Reportable Quantities
U.S. - Florida - Essential Chemicals List
U.S. - Idaho - Non-Carcinogenic Toxic Air Pollutants - Acceptable Ambient Concentrations
U.S. - Idaho - Non-Carcinogenic Toxic Air Pollutants - Emission Levels (ELs)
U.S. - Idaho - Occupational Exposure Limits - TWAs
U.S. - Louisiana - Reportable Quantity List for Pollutants
U.S. - Maine - Air Pollutants - Criteria Pollutants
U.S. - Massachusetts - Allowable Ambient Limits (AALs)
U.S. - Massachusetts - Allowable Threshold Concentrations (ATCs)
U.S. - Massachusetts - Oil & Hazardous Material List - Groundwater Reportable Concentration - Reporting Category 1
U.S. - Massachusetts - Oil & Hazardous Material List - Groundwater Reportable Concentration - Reporting Category 2
U.S. - Massachusetts - Oil & Hazardous Material List - Reportable Quantity
U.S. - Massachusetts - Oil & Hazardous Material List - Soil Reportable Concentration - Reporting Category 1
U.S. - Massachusetts - Oil & Hazardous Material List - Soil Reportable Concentration - Reporting Category 2
RTK - U.S. - Massachusetts - Right To Know List
U.S. - Massachusetts - Threshold Effects Exposure Limits (TEELs)
U.S. - Massachusetts - Toxics Use Reduction Act
U.S. - Michigan - Occupational Exposure Limits - STELs
U.S. - Michigan - Polluting Materials List
U.S. - Michigan - Process Safety Management Highly Hazardous Chemicals
U.S. - Minnesota - Chemicals of High Concern
U.S. - Minnesota - Hazardous Substance List
U.S. - Minnesota - Permissible Exposure Limits - STELs
U.S. - New Hampshire - Regulated Toxic Air Pollutants - Ambient Air Levels (AALs) - 24-Hour
U.S. - New Hampshire - Regulated Toxic Air Pollutants - Ambient Air Levels (AALs) - Annual
U.S. - New Jersey - Discharge Prevention - List of Hazardous Substances
U.S. - New Jersey - Environmental Hazardous Substances List
RTK - U.S. - New Jersey - Right to Know Hazardous Substance List
U.S. - New Jersey - Special Health Hazards Substances List
U.S. - New Jersey - TCPA - Extraordinarily Hazardous Substances (EHS)
U.S. - New Jersey - Water Quality - Ground Water Quality Criteria
U.S. - New Jersey - Water Quality - Practical Quantitation Levels (PQLs)
U.S. - New Mexico - Precursor Chemicals
U.S. - New York - Reporting of Releases Part 597 - List of Hazardous Substances
U.S. - North Carolina - Control of Toxic Air Pollutants
U.S. - North Dakota - Air Pollutants - Guideline Concentrations - 1-Hour
U.S. - North Dakota - Air Pollutants - Guideline Concentrations - 8-Hour
U.S. - Ohio - Accidental Release Prevention - Threshold Quantities
U.S. - Ohio - Extremely Hazardous Substances - Threshold Quantities
U.S. - Oregon - Permissible Exposure Limits - TWAs
U.S. - Oregon - Precursor Chemicals
RTK - U.S. - Pennsylvania - RTK (Right to Know) - Environmental Hazard List
RTK - U.S. - Pennsylvania - RTK (Right to Know) List
U.S. - Rhode Island - Air Toxics - Acceptable Ambient Levels - 1-Hour
U.S. - Rhode Island - Air Toxics - Acceptable Ambient Levels - 24-Hour
U.S. - Rhode Island - Air Toxics - Acceptable Ambient Levels - Annual
U.S. - Rhode Island - Water Quality Standards - Acute Freshwater Aquatic Life Criteria
U.S. - Rhode Island - Water Quality Standards - Acute Saltwater Aquatic Life Criteria
U.S. - Rhode Island - Water Quality Standards - Chronic Freshwater Aquatic Life Criteria

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U.S. - Rhode Island - Water Quality Standards - Chronic Saltwater Aquatic Life Criteria
U.S. - Tennessee - Occupational Exposure Limits - STELs
U.S. - Texas - Effects Screening Levels - Long Term
U.S. - Texas - Effects Screening Levels - Short Term
U.S. - Vermont - Permissible Exposure Limits - STELs
U.S. - Virginia - Water Quality Standards - Acute Freshwater Aquatic Life
U.S. - Virginia - Water Quality Standards - Acute Saltwater Aquatic Life
U.S. - Virginia - Water Quality Standards - Chronic Freshwater Aquatic Life
U.S. - Virginia - Water Quality Standards - Chronic Saltwater Aquatic Life
U.S. - Virginia - Water Quality Standards - Public Water Supply Effluent Limits
U.S. - Virginia - Water Quality Standards - Surface Waters Not Used for the Public Water Supply Effluent Limits
U.S. - Washington - Permissible Exposure Limits - STELs
U.S. - Washington - Permissible Exposure Limits - TWAs
U.S. - Wisconsin - Hazardous Air Contaminants - All Sources - Emissions From Stack Heights 25 Feet to Less Than 40 Feet
U.S. - Wisconsin - Hazardous Air Contaminants - All Sources - Emissions From Stack Heights 40 Feet to Less Than 75 Feet
U.S. - Wisconsin - Hazardous Air Contaminants - All Sources - Emissions From Stack Heights 75 Feet or Greater
U.S. - Wisconsin - Hazardous Air Contaminants - All Sources - Emissions From Stack Heights Less Than 25 Feet
U.S. - Wyoming - Process Safety Management - Highly Hazardous Chemicals
U.S. - Alaska - Water Quality Standards - Acute Aquatic Life Criteria for Fresh Water
U.S. - Alaska - Water Quality Standards - Chronic Aquatic Life Criteria for Fresh Water
U.S. - Alaska - Water Quality Standards - Acute Aquatic Life Criteria for Marine Water
U.S. - Alaska - Water Quality Standards - Chronic Aquatic Life Criteria for Marine Water
U.S. - Alaska - Ambient Air Quality Standards

Ammonium hydroxide (1336-21-6)

U.S. - Delaware - Pollutant Discharge Requirements - Reportable Quantities
U.S. - Louisiana - Reportable Quantity List for Pollutants
U.S. - Massachusetts - Oil & Hazardous Material List - Groundwater Reportable Concentration - Reporting Category 1
U.S. - Massachusetts - Oil & Hazardous Material List - Groundwater Reportable Concentration - Reporting Category 2
U.S. - Massachusetts - Oil & Hazardous Material List - Reportable Quantity
U.S. - Massachusetts - Oil & Hazardous Material List - Soil Reportable Concentration - Reporting Category 1
U.S. - Massachusetts - Oil & Hazardous Material List - Soil Reportable Concentration - Reporting Category 2
RTK - U.S. - Massachusetts - Right To Know List
U.S. - Massachusetts - Toxics Use Reduction Act
U.S. - Michigan - Polluting Materials List
U.S. - New Jersey - Discharge Prevention - List of Hazardous Substances
RTK - U.S. - New Jersey - Right to Know Hazardous Substance List
U.S. - New Jersey - Special Health Hazards Substances List
U.S. - New Jersey - TCPA - Extraordinarily Hazardous Substances (EHS)
U.S. - New York - Reporting of Releases Part 597 - List of Hazardous Substances
RTK - U.S. - Pennsylvania - RTK (Right to Know) - Environmental Hazard List
RTK - U.S. - Pennsylvania - RTK (Right to Know) List
U.S. - Texas - Effects Screening Levels - Long Term
U.S. - Texas - Effects Screening Levels - Short Term

15.3. Canadian Regulations

Aqua Ammonia 29% (1336-21-6)

WHMIS Classification	Class E - Corrosive Material Class D Division 1 Subdivision A - Very toxic material causing immediate and serious toxic effects
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Aqua Ammonia 29%

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Ammonia (7664-41-7)	
Listed on the Canadian DSL (Domestic Substances List)	
Listed on the Canadian IDL (Ingredient Disclosure List)	
IDL Concentration 1 %	
WHMIS Classification	Class A - Compressed Gas Class B Division 1 - Flammable Gas Class D Division 1 Subdivision A - Very toxic material causing immediate and serious toxic effects Class E - Corrosive Material
Water (7732-18-5)	
Listed on the Canadian DSL (Domestic Substances List)	
WHMIS Classification	Uncontrolled product according to WHMIS classification criteria
Ammonium hydroxide (1336-21-6)	
Listed on the Canadian DSL (Domestic Substances List)	
Listed on the Canadian IDL (Ingredient Disclosure List)	
IDL Concentration 1 %	
WHMIS Classification	Class E - Corrosive Material Class D Division 1 Subdivision B - Toxic material causing immediate and serious toxic effects

This product has been classified in accordance with the hazard criteria of the Controlled Products Regulations (CPR) and the SDS contains all of the information required by CPR.

SECTION 16: OTHER INFORMATION, INCLUDING DATE OF PREPARATION OR LAST REVISION

Revision Date : 1 September 2015
Revision Comments : Section 1.1 updated
Section 14.1, 14.3, 14.4 updated

GHS Full Text Phrases:

Acute Tox. 3 (Inhalation:gas)	Acute toxicity (inhalation:gas) Category 3
Acute Tox. 4 (Inhalation:gas)	Acute toxicity (inhalation:gas) Category 4
Acute Tox. 4 (Oral)	Acute toxicity (oral) Category 4
Aquatic Acute 1	Hazardous to the aquatic environment - Acute Hazard Category 1
Aquatic Chronic 2	Hazardous to the aquatic environment - Chronic Hazard Category 2
Aquatic Chronic 3	Hazardous to the aquatic environment - Chronic Hazard Category 3
Compressed gas	Gases under pressure Compressed gas
Eye Dam. 1	Serious eye damage/eye irritation Category 1
Flam. Gas 2	Flammable gases Category 2
Skin Corr. 1A	Skin corrosion/irritation Category 1A
Skin Corr. 1B	Skin corrosion/irritation Category 1B
STOT SE 3	Specific target organ toxicity (single exposure) Category 3
H221	Flammable gas
H280	Contains gas under pressure; may explode if heated
H302	Harmful if swallowed
H314	Causes severe skin burns and eye damage
H318	Causes serious eye damage
H331	Toxic if inhaled
H332	Harmful if inhaled
H335	May cause respiratory irritation
H400	Very toxic to aquatic life
H411	Toxic to aquatic life with long lasting effects
H412	Harmful to aquatic life with long lasting effects

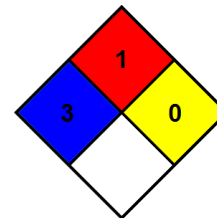
Aqua Ammonia 29%

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NFPA

Health Hazard : 3 - Short exposure could cause serious temporary or residual injury even though prompt medical attention was given.



Fire Hazard : 1 - Must be preheated before ignition can occur.

Reactivity : 0 - Normally stable, even under fire exposure conditions, and are not reactive with water.

HMIS III Rating

Health : 3 Serious Hazard - Major injury likely unless prompt action is taken and medical treatment is given

Flammability : 1 Slight Hazard

Physical : 0 Minimal Hazard

Party Responsible for the Preparation of This Document

CF Industries, Corporate EHS Department, 847-405-2400

This information is based on our current knowledge and is intended to describe the product for the purposes of health, safety and environmental requirements only. It should not therefore be construed as guaranteeing any specific property of the product.

CF believes the information contained herein is accurate; however, CF makes no guarantees or warranties with respect to such accuracy and assumes no liability in connection with the use of the information contained herein by any party. The provision of the information contained herein by CF is not intended to be and should not be construed as legal advice or as ensuring compliance by other parties. Judgments as to the suitability of the information contained herein for the party's own use or purposes are solely the responsibility of that party. Any party handling, transferring, transporting, storing, applying or otherwise using this product should review thoroughly all applicable laws, rules, regulations, standards and good engineering practices. Such thorough review should occur before the party handles, transfers, transports, stores, applies or otherwise uses this product.

North America GHS US 2012 & WHMIS 2



Univar USA Inc Safety Data Sheet

3075 Highland Pkwy, Ste 200, Downers Grove, IL 60515
(425) 889 3400

Emergency Assistance

For emergency assistance involving chemicals call
Chemtrec - (800) 424-9300



Univar
3075 Highland Pkwy STE 200
Downers Grove, IL 60515
425-889-3400

SAFETY DATA SHEET

1. Identification

Product identifier: - CAUSTIC SODA 25 - 28%

Other means of identification

Synonyms: Sodium Hydroxide

CAS NUMBERS: 1310-73-2

SDS number: 000100000085

Recommended use and restriction on use

Recommended use: Reserved for industrial and professional use.

Restrictions on use: Not known.

Manufacturer/Importer/Supplier/Distributor Information

Univar

3075 Highland Pkwy STE 200

Downers Grove, IL 60515

425-889-3400

Emergency telephone number: For emergency assistance Involving chemicals

call CHEMTREC day or night at: 1-800-424-9300. CHEMTREC INTERNATIONAL Tel# 703-527-3887

2. Hazard(s) identification

Hazard Classification

Health Hazards

Skin Corrosion/Irritation Category 1A

Serious Eye Damage/Eye Irritation Category 1

Environmental Hazards Acute Category 3
hazards to the aquatic environment

Label Elements

Hazard Symbol



Signal Word

Danger

Hazard Statement

Causes severe skin burns and eye damage.

Causes serious eye damage.

Harmful to aquatic life.

Precautionary Statements

Prevention

Do not breathe dust or mists. Wash thoroughly after handling. Wear protective gloves/protective clothing/eye protection/face protection. Avoid release to the environment.

Response

IF INHALED: Remove person to fresh air and keep comfortable for breathing. IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing. IF ON SKIN (or hair): Take off immediately all contaminated clothing. Rinse skin with water/shower. If swallowed: Rinse mouth. Do NOT induce vomiting. Immediately call a POISON CENTER/doctor. Wash contaminated clothing before reuse.

Storage

Store locked up.

Disposal

Dispose of contents/container to an appropriate treatment and disposal facility in accordance with applicable laws and regulations, and product

characteristics at time of disposal.

Other hazards which do not result in GHS classification

None.

3. Composition/information on ingredients

Substances

Chemical Identity	Common name and synonyms	CAS number	Content in percent (%)*
Sodium hydroxide		1310-73-2	>=25 - <=28%
Water		7732-18-5	>=72 - <=75%

* All concentrations are percent by weight unless ingredient is a gas. Gas concentrations are in percent by volume.

Composition Comments:

The components are not hazardous or are below required disclosure limits.

4. First-aid measures

General information:

CAUTION! First aid personnel must be aware of own risk during rescue!

Ingestion:

Call a physician or poison control center immediately. Rinse mouth. Never give liquid to an unconscious person. Do not induce vomiting without advice from poison control center.

Inhalation:

Call a physician or poison control center immediately. If breathing stops, provide artificial respiration. Move to fresh air. If breathing is difficult, give oxygen.

Skin Contact:

Call a physician or poison control center immediately. Immediately flush with plenty of water for at least 15 minutes while removing contaminated clothing and shoes. Destroy or thoroughly clean contaminated shoes.

Eye contact:

Immediately flush with plenty of water for at least 15 minutes. If easy to do, remove contact lenses. Call a physician or poison control center immediately.

Most important symptoms/effects, acute and delayed

Symptoms:

No data available.

Indication of immediate medical attention and special treatment needed

Treatment:

Symptoms may be delayed.

5. Fire-fighting measures

General Fire Hazards: No unusual fire or explosion hazards noted.

Suitable (and unsuitable) extinguishing media

Suitable extinguishing media: Use: Powder. In case of fire in the surroundings: all extinguishing agents allowed.

Unsuitable extinguishing media: No data available.

Specific hazards arising from the chemical: During fire, gases hazardous to health may be formed.

Special protective equipment and precautions for firefighters

Special fire fighting procedures: No data available.

Special protective equipment for fire-fighters: Self-contained breathing apparatus and full protective clothing must be worn in case of fire.

6. Accidental release measures

Personal precautions, protective equipment and emergency procedures: Use personal protective equipment. Keep unauthorized personnel away. See Section 8 of the SDS for Personal Protective Equipment. Do not touch damaged containers or spilled material unless wearing appropriate protective clothing. Keep unauthorized personnel away.

Methods and material for containment and cleaning up: Absorb spillage with non-combustible, absorbent material. Dike for later disposal.

Notification Procedures: Dike for later disposal. Prevent entry into waterways, sewer, basements or confined areas. Stop the flow of material, if this is without risk.

Environmental Precautions: Avoid release to the environment. Prevent further leakage or spillage if safe to do so. Do not contaminate water sources or sewer.

7. Handling and storage

Precautions for safe handling: Do not get in eyes. Wash hands thoroughly after handling. Do not get in eyes, on skin, on clothing. Use personal protective equipment as required.

Conditions for safe storage, including any incompatibilities: Store locked up.

8. Exposure controls/personal protection

Control Parameters

Occupational Exposure Limits

Chemical Identity	Type	Exposure Limit Values	Source
Sodium hydroxide	Ceiling	2 mg/m ³	US. Tennessee. OELs. Occupational Exposure Limits, Table Z1A (06 2008)
Sodium hydroxide - Particulate.	ST ESL	20 µg/m ³	US. Texas. Effects Screening Levels (Texas Commission on Environmental Quality) (02 2013)
	AN ESL	2 µg/m ³	US. Texas. Effects Screening Levels (Texas Commission on Environmental Quality) (02 2013)
Sodium hydroxide	Ceiling	2 mg/m ³	US. California Code of Regulations, Title 8, Section 5155. Airborne Contaminants (02 2012)
	Ceiling	2 mg/m ³	US. ACGIH Threshold Limit Values (03 2016)
	Ceil_Time	2 mg/m ³	US. NIOSH: Pocket Guide to Chemical Hazards (2010)
	PEL	2 mg/m ³	US. OSHA Table Z-1 Limits for Air Contaminants (29 CFR 1910.1000) (03 2016)
	Ceiling	2 mg/m ³	US. OSHA Table Z-1-A (29 CFR 1910.1000) (1989)

Appropriate Engineering Controls

No data available.

Individual protection measures, such as personal protective equipment

General information:	Use personal protective equipment as required. Always observe good personal hygiene measures, such as washing after handling the material and before eating, drinking, and/or smoking. Routinely wash work clothing to remove contaminants. Discard contaminated footwear that cannot be cleaned. Practice good housekeeping. Provide easy access to water supply and eye wash facilities. Good general ventilation (typically 10 air changes per hour) should be used. Ventilation rates should be matched to conditions. If applicable, use process enclosures, local exhaust ventilation, or other engineering controls to maintain airborne levels below recommended exposure limits. If exposure limits have not been established, maintain airborne levels to an acceptable level. If exposure limits have not been established, maintain airborne levels to an acceptable level.
Eye/face protection:	Use personal protective equipment as required. Wear goggles/face shield. Wear a full-face respirator, if needed. Wear safety glasses with side shields (or goggles) and a face shield.
Skin Protection	
Hand Protection:	No data available.
Other:	Wear chemical-resistant gloves, footwear, and protective clothing appropriate for the risk of exposure. Contact health and safety professional or manufacturer for specific information.
Respiratory Protection:	In case of inadequate ventilation use suitable respirator. Seek advice from local supervisor.
Hygiene measures:	Do not get in eyes. Observe good industrial hygiene practices. Wash contaminated clothing before reuse. Do not get this material in contact with skin. Wash hands before breaks and immediately after handling the product.

9. Physical and chemical properties

Physical state:	liquid
Form:	No data available.
Color:	Colorless
Odor:	Odorless
Odor threshold:	No data available.
pH:	14
Melting point/freezing point:	-18 - 0 °C 0 - 32 °F
Initial boiling point and boiling range:	115 °C

Flash Point:	No data available.
Evaporation rate:	No data available.
Flammability (solid, gas):	No data available.
Upper/lower limit on flammability or explosive limits	
Flammability limit - upper (%):	No data available.
Flammability limit - lower (%):	No data available.
Explosive limit - upper (%):	No data available.
Explosive limit - lower (%):	No data available.
Vapor pressure:	No data available.
Vapor density:	No data available.
Relative density:	1.236 - 1.309 (20 °C)
Solubility(ies)	
Solubility in water:	Miscible with water.
Solubility (other):	No data available.
Partition coefficient (n-octanol/water):	No data available.
Auto-ignition temperature:	No data available.
Decomposition temperature:	No data available.
Viscosity:	No data available.

10. Stability and reactivity

Reactivity:	No data available.
Chemical Stability:	Material is stable under normal conditions.
Possibility of hazardous reactions:	No data available.
Conditions to avoid:	Avoid heat or contamination.
Incompatible Materials:	No data available.
Hazardous Decomposition Products:	No data available.

11. Toxicological information

Symptoms related to the physical, chemical and toxicological characteristics

Ingestion:	No data available.
Inhalation:	No data available.
Skin Contact:	No data available.

Eye contact: No data available.

Information on toxicological effects

Acute toxicity (list all possible routes of exposure)

Oral

Product: No data available.

Dermal

Product: No data available.

Inhalation

Product: No data available.

Repeated dose toxicity

Product: No data available.

Skin Corrosion/Irritation

Product: No data available.

Serious Eye Damage/Eye Irritation

Product: No data available.

Respiratory or Skin Sensitization

Product: No data available.

Carcinogenicity

Product: No data available.

IARC Monographs on the Evaluation of Carcinogenic Risks to Humans:

No carcinogenic components identified

US. National Toxicology Program (NTP) Report on Carcinogens:

No carcinogenic components identified

US. OSHA Specifically Regulated Substances (29 CFR 1910.1001-1050):

No carcinogenic components identified

Germ Cell Mutagenicity

In vitro

Product: No data available.

In vivo

Product: No data available.

Reproductive toxicity

Product: No data available.

Specific Target Organ Toxicity - Single Exposure

Product: No data available.

Specific Target Organ Toxicity - Repeated Exposure

Product: No data available.

Aspiration Hazard

Product: No data available.

Other effects: No data available.

12. Ecological information

Ecotoxicity:

Acute hazards to the aquatic environment:

Fish

Product: No data available.

Specified substance(s):

Sodium hydroxide LC 50 (Western mosquitofish (*Gambusia affinis*), 24 h): 125 mg/l Mortality
LC 50 (Guppy (*Poecilia reticulata*), 24 h): 145 mg/l Mortality LC 50 (Western mosquitofish (*Gambusia affinis*), 48 h): 125 mg/l Mortality LC 50 (Goldfish (*Carassius auratus*), 24 h): 160 mg/l Mortality LC 50 (Western mosquitofish (*Gambusia affinis*), 96 h): 125 mg/l Mortality

Aquatic Invertebrates

Product: No data available.

Specified substance(s):

Sodium hydroxide EC 50 (Water flea (*Ceriodaphnia dubia*), 48 h): 34.59 - 47.13 mg/l
Intoxication LC 50 (Cockle (*Cerastoderma edule*), 48 h): 330 - 1,000 mg/l
Mortality LC 50 (Common shrimp, sand shrimp (*Crangon crangon*), 48 h): 33 - 100 mg/l Mortality

Chronic hazards to the aquatic environment:

Fish

Product: No data available.

Aquatic Invertebrates

Product: No data available.

Toxicity to Aquatic Plants

Product: No data available.

Persistence and Degradability

Biodegradation

Product: No data available.

BOD/COD Ratio

Product: No data available.

Bioaccumulative potential

Bioconcentration Factor (BCF)

Product: No data available.

Partition Coefficient n-octanol / water (log K_{ow})

Product: No data available.

Mobility in soil:

No data available.

Known or predicted distribution to environmental compartments

Sodium hydroxide	No data available.
Water	No data available.

Known or predicted distribution to environmental compartments

Sodium hydroxide	No data available.
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13. Disposal considerations

Disposal instructions: Discharge, treatment, or disposal may be subject to national, state, or local laws.

Contaminated Packaging: Since emptied containers retain product residue, follow label warnings even after container is emptied.

14. Transport information

DOT

UN Number:	UN 1824
UN Proper Shipping Name:	Sodium hydroxide solution
Transport Hazard Class(es)	
Class:	8
Label(s):	8
Packing Group:	II
Marine Pollutant:	Not regulated.
Special precautions for user:	—

IMDG

UN Number:	UN 1824
UN Proper Shipping Name:	SODIUM HYDROXIDE SOLUTION
Transport Hazard Class(es)	
Class:	8
Label(s):	8
EmS No.:	F-A, S-B
Packing Group:	II
Marine Pollutant:	Not regulated.

Special precautions for user: –

IATA

UN Number: UN 1824
Proper Shipping Name: Sodium hydroxide solution
Transport Hazard Class(es):
Class: 8
Label(s): 8
Packing Group: II
Environmental Hazards: Not regulated.
Special precautions for user: –
Other information
Passenger and cargo aircraft: Allowed.
Cargo aircraft only: Allowed.

15. Regulatory information

US Federal RegulationsUS. OSHA Specifically Regulated Substances (29 CFR 1910.1001-1050)

None present or none present in regulated quantities.

CERCLA Hazardous Substance List (40 CFR 302.4):

Sodium hydroxide Reportable quantity: 1000 lbs.

Superfund Amendments and Reauthorization Act of 1986 (SARA)

Hazard categories

☒ Acute (Immediate) ☐ Chronic (Delayed) ☐ Fire ☐ Reactive ☐ Pressure Generating

SARA 302 Extremely Hazardous Substance

None present or none present in regulated quantities.

SARA 304 Emergency Release Notification

Chemical Identity	RQ
Sodium hydroxide	1000 lbs.

SARA 311/312 Hazardous Chemical

Chemical Identity	Threshold Planning Quantity
Water	500 lbs
Sodium hydroxide	500 lbs

SARA 313 (TRI Reporting)

None present or none present in regulated quantities.

Clean Water Act Section 311 Hazardous Substances (40 CFR 117.3)

Sodium hydroxide Reportable quantity: 1000 lbs.

Clean Air Act (CAA) Section 112(r) Accidental Release Prevention (40 CFR 68.130):

None present or none present in regulated quantities.

US State Regulations

US. California Proposition 65

No ingredient regulated by CA Prop 65 present.

US. New Jersey Worker and Community Right-to-Know Act

Sodium hydroxide Listed

US. Massachusetts RTK - Substance List

Sodium hydroxide Listed

US. Pennsylvania RTK - Hazardous Substances

Sodium hydroxide Listed

US. Rhode Island RTK

Sodium hydroxide Listed

Inventory Status: Australia AICS:	On or in compliance with the inventory
Canada DSL Inventory List:	On or in compliance with the inventory
EINECS, ELINCS or NLP:	On or in compliance with the inventory
Japan (ENCS) List:	On or in compliance with the inventory
China Inv. Existing Chemical Substances:	On or in compliance with the inventory
Korea Existing Chemicals Inv. (KECI):	On or in compliance with the inventory
Philippines PICCS:	On or in compliance with the inventory
US TSCA Inventory:	On or in compliance with the inventory
New Zealand Inventory of Chemicals:	On or in compliance with the inventory
Mexico INSQ:	On or in compliance with the inventory

16. Other information, including date of preparation or last revision

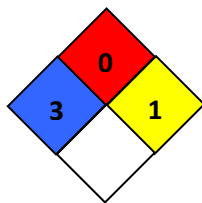
HMIS Hazard ID





Health	*	3
Flammability		0
Physical Hazards		1
PERSONAL PROTECTION	B	

B - Safety Glasses & Gloves

Hazard rating: 0 - Minimal; 1 - Slight; 2 - Moderate; 3 - Serious; 4 - Severe; RNP - Rating not possible; *Chronic health effect

NFPA Hazard ID



	Flammability
	Health
	Reactivity
	Special hazard.

Hazard rating: 0 - Minimal; 1 - Slight; 2 - Moderate; 3 - Serious; 4 - Severe; RNP - Rating not possible

Issue Date: 03/15/2018
Revision Date: No data available.
Version #: 1.1
Further Information: No data available.

Univar USA Inc Safety Data Sheet

For Additional Information contact SDS Coordinator during business hours, Pacific time: (425) 889-3400

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All information appearing herein is based upon data obtained from the manufacturer and/or recognized technical sources. While the information is believed to be accurate, Univar makes no representations as to its accuracy or sufficiency. Conditions of use are beyond Univar's control and therefore users are responsible to verify this data under their own operating conditions to determine whether the product is suitable for their particular purposes and they assume all risks of their use, handling, and disposal of the product, or from the publication or use of, or reliance upon, information contained herein.

This information relates only to the product designated herein, and does not relate to its use in combination with any other material or in any other process

Safety Data Sheet

1. CHEMICAL PRODUCT AND COMPANY IDENTIFICATION

Product identifier: **DIXICHLOR**
Synonyms: Bleach, Sodium Hypochlorite, Sodium Hypochlorite 10%
Intended use: Swimming pool chlorinator, Hard surface cleaner, Water treatment chemical, Biocides
Uses Advised Against: None identified. This is a pesticide product, do not use in a pesticide application that is not included on the label.

Company Identification
PVS DX, Inc
1919 Jacintoport
Blvd. Houston, TX
77015
Petra Chemical
2929 Storey Lane
Dallas, TX 75220

Emergency
CHEMTREC (USA) (800) 424-9300
24 hour Emergency Telephone No. (281) 457-4888
www.dxgroup.com

2. Hazard identification of the product

Physical hazards	Corrosive to metals	Category 1
Health hazards	Causes severe skin burns and eye damage Causes serious eye damage Specific target organ toxicity, single exposure	Category 1A Category 1 Category 3 respiratory tract irritation
Environmental hazards	Very toxic to aquatic life Toxic to aquatic life with long lasting effects	Category 1 Acute Category 2 Chronic

Label elements

Using the Toxicity Data listed in section 11 and 12 the product is labeled as follows.



Signal Word	Danger
Hazard Statements	CORROSIVE. Causes serious eye damage. Causes severe skin burns. Causes damage to respiratory system when inhaled. Very toxic to aquatic life. Toxic to aquatic life with long lasting effects. May be corrosive to metals.
Precautionary Statements	
Prevention	Do not breathe mist / vapors / spray. Avoid contact with skin, eyes and clothing. Wash thoroughly after handling. Avoid release to the environment. Wear protective gloves / eye protection / face protection. Keep only in original container. Use in well ventilated area. Store in corrosive resistant container with a resistant inner liner.
Response	IF SWALLOWED: Rinse mouth. Do NOT induce vomiting. IF ON SKIN: Remove / Take off immediately all contaminated clothing. Wash with plenty of soap and water. IF INHALED: Remove to fresh air and keep at rest in a position comfortable for breathing. Call a POISON CENTER or doctor / physician if you feel unwell. IF IN EYES: Rinse continuously with water for several minutes. Remove contact lenses if present and easy to do - continue rinsing. Immediately call a POISON CENTER or doctor / physician. Wash contaminated clothing before reuse. Collect spillage.
Storage	Store in a well-ventilated place. Keep container tightly closed. Store locked up. Protect from sunlight.
Disposal	Dispose of contents / container in accordance with local / national regulations.

Safety Data Sheet

3. Composition/information on ingredients

Synonyms: Bleach, Sodium Hypochlorite, Sodium Hypochlorite 10%

Ingredient	CAS Number	Percent (%)	GHS Classification	NOTES
Sodium hypochlorite	7681-52-9	10 – 12.49	Skin Corr. 1B; Aquatic Acute 1; Eye Dam. 1 .	[1]
Sodium chloride	7647-14-5	7 - 8	Not classified	[1]
Sodium hydroxide	1310-73-2	0.5 - 2	Skin Corr. 1A;H314 Met. Corr. 1;H290	[1][2]

In accordance with paragraph (i) of §1910.1200, the specific chemical identity and/or exact percentage (concentration) of composition has been withheld as a trade secret.

[1] Substance classified with a health or environmental hazard.

[2] Substance with a workplace exposure limit.

*The full texts of the phrases are shown in Section 16.

4. First aid measures

General	Effects of exposure (inhalation, ingestion or skin contact) to substance may be delayed. Ensure that medical personnel are aware of the material(s) involved and take precautions to protect themselves.
Inhalation	Move victim to fresh air. Call emergency medical care. Apply artificial respiration if victim is not breathing. Do not use mouth-to-mouth method if victim ingested or inhaled the substance; induce artificial respiration with the aid of a pocket mask equipped with a one-way valve or other proper respiratory medical device. Administer oxygen if breathing is difficult.
Eyes	Irrigate copiously with clean fresh water for at least 10 minutes, holding the eyelids apart. Get medical attention. Remove contact lenses if present and easy to do - continue rinsing.
Skin	Remove contaminated clothing. Wash skin thoroughly with soap and water or use a recognized skin cleanser. Do NOT use solvents or thinners.
Ingestion	If accidentally swallowed obtain immediate medical attention. Rinse mouth. Keep at rest. Do NOT induce vomiting. If vomiting occurs, keep head low so that stomach content does not get into lungs.
Most important symptoms and effects, both acute and delayed	
Overview	Corrosive effects. 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 symptomatically. Chemical burns: Flush with water immediately. While flushing, remove clothes which do not adhere to affected area. Call an ambulance. Continue flushing during transport to hospital
General information	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.

5. Fire-fighting measures

Recommended Extinguishing media	Alcohol resistant foam, CO ² , dry chemical powder, water spray. Do not use water jet.
Special hazards arising from the substance or mixture	Hydrogen chloride and chlorine. Chlorine gas rate of decomposition increases with the concentration with temperatures above 85 °F (30 °C). Do not breathe mist / vapors / spray.
Advice for fire-fighters	Wear positive pressure self-contained breathing apparatus (SCBA). Wear chemical protective clothing that is specifically recommended by the manufacturer. It may provide little or no thermal protection. Structural firefighters' protective clothing provides limited protection in fire situations ONLY; it is not effective in spill situations where direct contact with the substance is possible. Non-combustible, substance itself does not burn but may decompose upon heating to produce corrosive and/or toxic fumes. Some are oxidizers and may ignite combustibles (wood, paper, oil, clothing, etc.). Contact with metals may evolve flammable hydrogen gas. Containers may explode when heated. TOXIC; inhalation, ingestion or skin contact with material may cause severe injury or death. Avoid any skin contact. Contact with molten substance may cause severe burns to skin and eyes. Effects of contact or inhalation may be delayed. Fire may produce irritating, corrosive and/or toxic gases. Runoff from fire control or dilution water may be corrosive and/or toxic and cause pollution. ERG Guide No. 154

Safety Data Sheet

6. Accidental release measures

Personal precautions, protective equipment and emergency procedures	ELIMINATE all ignition sources (no smoking, flares, sparks or flames in immediate area). Do not touch damaged containers or spilled material unless wearing appropriate protective clothing. Wash hands before eating, drinking, smoking or using toilet. Promptly remove soiled clothing and wash thoroughly before reuse. Stop leak if you can do it without risk. Prevent entry into waterways, sewers, basements or confined areas. Absorb or cover with dry earth, sand or other non-combustible material and transfer to containers. Local authorities should be contacted if significant spill cannot be contained.
Environmental precautions	Do not allow spills to enter drains or watercourses.
Methods and material for containment and cleaning up	Large Spills: Stop the flow of material, if this is without risk. Dike the spilled material, where this is possible. Absorb in vermiculite, dry sand or earth and place into containers. Following product recovery, flush area with water. Small Spills: Wipe up with absorbent material (e.g. cloth, fleece). Clean surface thoroughly to remove residual contamination. Never return spills in original containers for re-use. For waste disposal, see Section 13 of the SDS.

7. Handling and storage

Precautions for safe handling	Wear appropriate personal protective equipment. Do not get in eyes, on skin, on clothing. Chemical attack increases with solution strength. Use with adequate ventilation. Observe good industrial hygiene practices. Do not apply heat or direct sunlight. Temperature and product concentration affect product quality and decomposition rates.
Conditions for safe storage, including any incompatibilities	Handle containers carefully to prevent damage and spillage. Keep container tightly closed. Store in a cool and well-ventilated place. Store in a corrosive resistant container. Consult container manufacturer for additional guidance. Store away from and do not mix with incompatible materials such as acids, ammonia, urea, oxidizers, organics and metals such as nickel, copper, tin, aluminum and iron.

8. Exposure controls and personal protection

Exposure Control parameters

CAS No.	Ingestion	Source	Value
1310-73-2	Sodium hydroxide	OSHA	TWA 2 mg/m3
		ACGIH	Ceiling: 2 mg/m3
		NIOSH	C 2 mg/m3
7647-14-5	Sodium chloride	OSHA	No Established Limit
		ACGIH	No Established Limit
		NIOSH	No Established Limit
7681-52-9	Sodium hypochlorite.	OSHA	No Established Limit
		ACGIH	No Established Limit
		NIOSH	No Established Limit

Individual protection measures, such as personal protective equipment

Respiratory	Use NIOSH/MSHA approved respirator, following manufacturer's recommendations when concentrations exceed permissible exposure limits.
Eyes	Wear face shield with safety glasses with side shields and/or safety goggles.
Skin	Chemical resistant clothing such as coveralls/apron boots should be worn. Chemical Impervious gloves.
Engineering Controls	Provide adequate ventilation. Where reasonably practicable this should be achieved by the use of local exhaust ventilation and good general extraction. If these are not sufficient to maintain concentrations of particulates and any vapor below occupational exposure limits suitable respiratory protection must be worn. Eye wash and safety shower must be available when handling this product
Other Work Practices	Use good personal hygiene practices. Wash hands before eating, drinking, smoking or using toilet. Promptly remove soiled clothing and wash thoroughly before reuse.

Safety Data Sheet

9. Physical and chemical properties

Appearance	Clear, pale yellow, or greenish Liquid
Odor	Pungent, chlorine odor
Odor threshold	0.9 mg/m ³
pH	12 - 13
Melting point / freezing point	7 °F (-13.9 °C)
Initial boiling point and boiling range	Decomposes above 230 °F (110 °C)
Flash Point	Nonflammable
Evaporation rate (Ether = 1)	Not Established
Flammability (solid, gas)	Not Applicable
Upper/lower flammability or explosive limits	Lower Explosive Limit: Not Measured Upper Explosive Limit: Not Measured
Vapor pressure (mmHg)	17.5 (@ 20 °C)
Vapor Density	Not Established
Specific Gravity	1.20 - 1.40
Solubility in Water	Complete
Partition coefficient n-octanol/water (Log Kow)	Not Measured
Auto-ignition temperature (°C)	Not Measured
Decomposition temperature	Not Measured
Viscosity (cSt)	Not Measured
VOC %	Not Measured
Other information	No other relevant information.

10. Stability and reactivity

Reactivity:	Hazardous Polymerization will not occur.
Chemical stability:	Stable under normal circumstances.
Possibility of hazardous reactions:	No data available.
Conditions to avoid:	Contact with incompatible materials. Acid contact will produce chlorine gas.
Incompatible materials:	Any acidic material, ammonia, urea, oxidizers, organics and metals such as nickel, copper, tin, aluminum and iron.
Hazardous decomposition products:	No hazardous decomposition products are known.

11. Toxicological information

Acute toxicity

Ingredient	Oral LD50, mg/kg	Skin LD50, mg/kg	Inhalation Vapor LC50, mg/L/4hr	Inhalation Dust/Mist LC50, mg/L/4hr	Inhalation Gas LC50, ppm
Sodium hypochlorite (7681-52-9)	5,000.00, Rat - Category: 5	10,000.00, Rabbit - Category: NA	10.50, Rat - Category: 4	No data available	No data available
Sodium chloride (7647-14-5)	1,350.00, Rabbit - Category: 4	100.00, Rat - Category: 2	40.00, Mouse - Category: NA	10,500.00, Rat - Category: NA	No data available
Sodium hydroxide (1310-73-2)	6,600.00, Mouse - Category: NA	1,350.00, Rabbit - Category: 4	600.00, Mouse - Category: NA	No data available	No data available

Safety Data Sheet

11. Toxicological information Acute toxicity (cont.)

Item	Hazard
Acute Toxicity (mouth)	Ingestion may cause gastrointestinal irritation, nausea, vomiting and diarrhea. Ingestion may produce burns to the lips, oral cavity, upper airway, esophagus and possibly the digestive tract.
Acute Toxicity (skin)	Harmful in contact with skin.
Acute Toxicity (inhalation)	Vapors and spray mist may irritate throat and respiratory system and cause coughing.
Skin corrosion/irritation	Causes severe skin burns and eye damage
Eye damage/irritation	Causes serious eye damage.
Sensitization (respiratory)	No data available.
Sensitization (skin)	No data available.
Germ toxicity	No data available.
Carcinogenicity	Not considered to be a carcinogen by IARC, ACGIH, NTP or OSHA.
Reproductive Toxicity	No data available.
Specific target organ systemic toxicity (single exposure)	May cause respiratory irritation.
Specific target organ systemic Toxicity (repeated exposure)	Not Applicable.
Aspiration hazard	Not classified; however droplets of product may be aspirated into lungs, through ingestion or vomiting and may cause serious chemical pneumonia.

12. Ecological information

Toxicity: Very toxic to aquatic life. Toxic to aquatic life with long lasting effects.

Aquatic Ecotoxicity

Ingredient	96 hr LC50 fish, mg/l	48 hr EC50 crustacea, mg/l	ErC50 algae, mg/l
Sodium hypochlorite (7681-52-9)	0.08, Pimephales promelas	0.032, Daphnia magna	0.40 (72 hr), Dunaliella primolecta
Sodium chloride (7647-14-5)	1,100.00, Freshwater Fish	3,310.00, Daphnia magna	Not Available
Sodium hydroxide (1310-73-2)	196.00, Poecilia reticulata	40.38, Ceriodaphnia dubia	Not Available

Persistence and degradability	There is no data available on the preparation itself.
Bioaccumulative potential	Not Measured
Mobility in soil	No data available.
Results of PBT and vPvB assessment	This product contains no PBT/vPvB chemicals.
Other adverse effects	No other effects are expected.

13. Disposal considerations

Waste treatment methods:	Do not allow into drains or water courses. Wastes and emptied containers should be disposed of in accordance with regulations made under the Control of Pollution Act and the Environmental Protection Act. Using information provided in this data sheet, advice should be obtained from the Waste Regulation Authority, whether the special waste regulations apply.
Waste from material:	The waste determination should be made in discussion between the user and the waste disposal company.
Container Management:	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.

Safety Data Sheet

14. Transport information

UN number:	UN1791
UN proper shipping name:	Hypochlorite solutions
Transport hazard class(es)	
DOT (Domestic Surface Transportation)	
DOT Proper Shipping Name:	Hypochlorite solutions
DOT Hazard Class	8
DOT Label:	8
UN / NA Number:	UN1791
DOT Packing Group:	III
CERCLA/DOT RQ:	100 lbs.
Environmental hazards:	IMDG Marine Pollutant: Yes (Sodium hypochlorite)
Special precautions for user:	Not Applicable

15. Regulatory information

Regulatory Overview:	The regulatory data in Section 15 is not intended to be all-inclusive, only selected regulations are represented. All ingredients of this product are listed on the TSCA (Toxic Substance Control Act) Inventory.	
WHMIS Classification	D2B E	
US EPA Tier II Hazards:	Fire:	No
	Sudden Release of Pressure:	No
	Reactive:	No
	Immediate (Acute):	Yes
	Delayed (Chronic):	No
SARA 302 Extremely Hazardous Substance:	No	
SARA 311/312 Chemicals and RQs (lbs) (>0.1%) :	100	
SARA 313 (TRI)	No	
CAA Section 112 Hazardous Air Pollutant	No	
CAA Section 112R Risk Management Plan	No	
State Regulations:	N.J. RTK Substances (>1%)	Listed
	Penn RTK Substances (>1%)	Listed
	California Prop 65	Not Listed

16. Other information:

EPA Registration Number: 813-16

NSF Maximum Use Level (STD 60): Check BOL for facility Data. (46 to 105 mg/L)

H314 Causes severe skin burns and eye damage.

H290. May be corrosive to metals

Revision Information: This is the first version of this SDS.

The information and recommendations contained herein are based upon data believed to be correct. However, no guarantee or warranty of any kind, expressed or implied, is made with respect to the information contained herein. We accept no responsibility and disclaim all liability for any harmful effects which may be caused by exposure to our products. Customers/users of this product must comply with all applicable health and safety laws, regulations, and orders.

THE USER IS CAUTIONED TO PERFORM HIS OWN HAZARD EVALUATION AND TO RELY ON HIS OWN DETERMINATIONS.



SAFETY DATA SHEET

FLOGARD* MS6222

1. Identification

Product identifier	FLOGARD MS6222
Other means of identification	None.
Recommended use	Water-based corrosion inhibitor
Recommended restrictions	None known.

Company/undertaking identification

SUEZ WTS USA, Inc.
4636 Somerton Road
Trevose, PA 19053
T 215 355 3300, F 215 953 5524

Emergency telephone

(800) 877 1940

2. Hazard(s) identification

Physical hazards	Corrosive to metals	Category 1
Health hazards	Skin corrosion/irritation	Category 1B
	Serious eye damage/eye irritation	Category 1
	Specific target organ toxicity, single exposure	Category 3 respiratory tract irritation
OSHA defined hazards	Not classified.	

Label elements



Signal word Danger

Hazard statement May be corrosive to metals. Causes severe skin burns and eye damage. Causes serious eye damage. May cause respiratory irritation. May cause damage to organs.

Precautionary statement

Prevention Keep only in original container. Do not breathe mist or vapor. Wash thoroughly after handling. Do not eat, drink or smoke when using this product. Use only outdoors or in a well-ventilated area. Wear protective gloves/protective clothing/eye protection/face protection.

Response If swallowed: Rinse mouth. Do NOT induce vomiting. If on skin (or hair): Take off immediately all contaminated clothing. Rinse skin with water/shower. If inhaled: Remove person to fresh air and keep comfortable for breathing. If in eyes: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing. Immediately call a poison center/doctor/. Specific treatment (see on this label). Wash contaminated clothing before reuse. Absorb spillage to prevent material damage.

Storage Store in a well-ventilated place. Keep container tightly closed. Store locked up. Store in corrosive resistant/ container with a resistant inner liner.

Disposal Dispose of contents/container in accordance with local/regional/national/international regulations.

Hazard(s) not otherwise classified (HNOC) None known.

3. Composition/information on ingredients

Mixtures

Components	CAS #	Percent
Phosphoric Acid	7664-38-2	60 - 80

Composition comments Information for specific product ingredients as required by the U.S. OSHA HAZARD COMMUNICATION STANDARD is listed. Refer to additional sections of this SDS for our assessment of the potential hazards of this formulation.

4. First-aid measures

Inhalation Remove victim to fresh air and keep at rest in a position comfortable for breathing. Call a POISON CENTER or doctor/physician if you feel unwell.

Skin contact Take off immediately all contaminated clothing. Rinse skin with water/shower. Call a physician or poison control center immediately. Chemical burns must be treated by a physician. Wash contaminated clothing before reuse.

Eye contact Immediately flush eyes with plenty of water for at least 15 minutes. Remove contact lenses, if present and easy to do. Continue rinsing. Call a physician or poison control center immediately.

Ingestion Call a physician or poison control center immediately. Rinse mouth. Do not induce vomiting. If vomiting occurs, keep head low so that stomach content doesn't get into the lungs.

Most important symptoms/effects, acute and delayed Burning pain and severe corrosive skin damage. Causes serious eye damage. Symptoms may include stinging, tearing, redness, swelling, and blurred vision. Permanent eye damage including blindness could result. May cause respiratory irritation.

Indication of immediate medical attention and special treatment needed Provide general supportive measures and treat symptomatically. Chemical burns: Flush with water immediately. While flushing, remove clothes which do not adhere to affected area. Call an ambulance. Continue flushing during transport to hospital. Keep victim under observation. Symptoms may be delayed.

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.

5. Fire-fighting measures

Suitable extinguishing media Water fog. Foam. Dry chemical powder. Carbon dioxide (CO2).

Unsuitable extinguishing media Do not use water jet as an extinguisher, as this will spread the fire.

Specific hazards arising from the chemical During fire, gases hazardous to health may be formed.

Special protective equipment and precautions for firefighters Self-contained breathing apparatus and full protective clothing must be worn in case of fire.

Fire fighting equipment/instructions In case of fire and/or explosion do not breathe fumes. Use standard firefighting procedures and consider the hazards of other involved materials. Move containers from fire area if you can do so without risk. Cool containers / tanks with water spray.

Specific methods Use standard firefighting procedures and consider the hazards of other involved materials.

6. Accidental release measures

Personal precautions, protective equipment and emergency procedures Keep unnecessary personnel away. Keep people away from and upwind of spill/leak. Wear appropriate protective equipment and clothing during clean-up. Do not breathe mist or vapor. Do not touch damaged containers or spilled material unless wearing appropriate protective clothing. Ensure adequate ventilation. Local authorities should be advised if significant spillages cannot be contained. For personal protection, see section 8 of the SDS.

Methods and materials for containment and cleaning up Prevent entry into waterways, sewer, basements or confined areas.

Large Spills: Stop the flow of material, if this is without risk. Dike the spilled material, where this is possible. Cover with plastic sheet to prevent spreading. Absorb spillage to prevent material damage. Use a non-combustible material like vermiculite, sand or earth to soak up the product and place into a container for later disposal. Following product recovery, flush area with water.

Small Spills: Wipe up with absorbent material (e.g. cloth, fleece). Clean surface thoroughly to remove residual contamination.

Never return spills to original containers for re-use. For waste disposal, see section 13 of the SDS.

Environmental precautions Avoid discharge into drains, water courses or onto the ground.

7. Handling and storage

Precautions for safe handling

Acidic. Do not mix with alkaline material. Do not breathe mist or vapor. Do not get in eyes, on skin, or on clothing. Avoid prolonged exposure. When using, do not eat, drink or smoke. Provide adequate ventilation. Wear appropriate personal protective equipment. Wash hands thoroughly after handling. Observe good industrial hygiene practices.

Conditions for safe storage, including any incompatibilities

Do not freeze. If frozen, thaw completely and mix thoroughly prior to use. Contact with metals may release flammable hydrogen gas. Store locked up. Store in a cool, dry place out of direct sunlight. Store in corrosive resistant container with a resistant inner liner. Keep only in the original container. Store away from incompatible materials (see Section 10 of the SDS).

8. Exposure controls/personal protection

Occupational exposure limits

US. OSHA Table Z-1 Limits for Air Contaminants (29 CFR 1910.1000)

Components	Type	Value
Phosphoric Acid (CAS 7664-38-2)	PEL	1 mg/m3

US. ACGIH Threshold Limit Values

Components	Type	Value
Phosphoric Acid (CAS 7664-38-2)	STEL	3 mg/m3
	TWA	1 mg/m3

US. NIOSH: Pocket Guide to Chemical Hazards

Components	Type	Value
Phosphoric Acid (CAS 7664-38-2)	STEL	3 mg/m3
	TWA	1 mg/m3

Biological limit values

No biological exposure limits noted for the ingredient(s).

Appropriate engineering controls

Good general ventilation (typically 10 air changes per hour) should be used. Ventilation rates should be matched to conditions. If applicable, use process enclosures, local exhaust ventilation, or other engineering controls to maintain airborne levels below recommended exposure limits. If exposure limits have not been established, maintain airborne levels to an acceptable level. Eye wash facilities and emergency shower must be available when handling this product.

Individual protection measures, such as personal protective equipment

Eye/face protection

Wear safety glasses with side shields (or goggles) and a face shield.

Skin protection

Hand protection

Wear appropriate chemical resistant gloves. The choice of an appropriate glove does not only depend on its material but also on other quality features and is different from one producer to the other. Glove selection must take into account any solvents and other hazards present.

Other

Wear appropriate chemical resistant clothing. Use of an impervious apron is recommended.

Respiratory protection

If engineering controls do not maintain airborne concentrations below recommended exposure limits (where applicable) or to an acceptable level (in countries where exposure limits have not been established), an approved respirator must be worn. A RESPIRATORY PROTECTION PROGRAM THAT MEETS OSHA'S 29 CFR 1910.134 AND ANSI Z88.2 REQUIREMENTS MUST BE FOLLOWED WHENEVER WORKPLACE CONDITIONS WARRANT A RESPIRATOR'S USE.

Thermal hazards

Wear appropriate thermal protective clothing, when necessary. Not applicable.

General hygiene considerations

Always observe good personal hygiene measures, such as washing after handling the material and before eating, drinking, and/or smoking. Routinely wash work clothing and protective equipment to remove contaminants.

9. Physical and chemical properties

Appearance

Color

Colorless to light yellow

Physical state

Liquid

Odor

Mild

pH (concentrated product)

< 1 Neat

pH in aqueous solution

1.2 (5% Solution)

Initial boiling point and boiling range

Not available.

Flash point

> 199 °F (> 93 °C) P-M(CC)

Evaporation rate	Slower than Ether
Flammability (solid, gas)	Not applicable.
Upper/lower flammability or explosive limits	
Explosive limit - lower (%)	Not available.
Explosive limit - upper (%)	Not available.
Vapor pressure	15 mmHg
Vapor pressure temp.	70 °F (21 °C)
Vapor density	> 1
Relative density	1.58
Relative density temperature	70 °F (21 °C)
Solubility(ies)	
Solubility (water)	100 %
Viscosity	44 mPa.s
Viscosity temperature	70 °F (21 °C)
Other information	
Percent volatile	25
Pour point	< -25 °F (< -32 °C)
Specific gravity	1.579
VOC	0 % ESTIMATED

10. Stability and reactivity

Reactivity	May be corrosive to metals. The product is stable and non-reactive under normal conditions of use, storage and transport.
Chemical stability	Material is stable under normal conditions.
Possibility of hazardous reactions	Hazardous polymerization does not occur. Contact with water reactive compounds may cause fire or explosion.
Conditions to avoid	Protect from freezing. Contact with metals may release flammable hydrogen gas.
Incompatible materials	Strong oxidizing agents. Metals. Avoid contact with strong bases.
Hazardous decomposition products	Oxides of carbon and phosphorus evolved in fire.

11. Toxicological information

Information on likely routes of exposure

Inhalation	May cause damage to organs by inhalation. May cause irritation to the respiratory system. Prolonged inhalation may be harmful.
Skin contact	Causes severe skin burns.
Eye contact	Causes serious eye damage.
Ingestion	Causes digestive tract burns.

Symptoms related to the physical, chemical and toxicological characteristics	Burning pain and severe corrosive skin damage. Causes serious eye damage. Symptoms may include stinging, tearing, redness, swelling, and blurred vision. Permanent eye damage including blindness could result. May cause respiratory irritation.
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Information on toxicological effects

Acute toxicity	May cause respiratory irritation.
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Product	Species	Test Results
FLOGARD MS6222 (CAS Mixture)		
Acute		
<i>Dermal</i>		
LD50	Rabbit	3650 mg/kg, (Calculated according to GHS additivity formula)
<i>Oral</i>		
LD50	Rat	400 mg/kg, (Calculated according to GHS additivity formula)

Components	Species	Test Results
Phosphoric Acid (CAS 7664-38-2)		
Acute		
<i>Dermal</i>		
LD50	Rabbit	2740 mg/kg
<i>Oral</i>		
LD50	Rat	300 mg/kg

* Estimates for product may be based on additional component data not shown.

Skin corrosion/irritation Prolonged skin contact may cause temporary irritation.

Serious eye damage/eye irritation Causes serious eye damage.

Respiratory or skin sensitization

Respiratory sensitization Not available.

Skin sensitization This product is not expected to cause skin sensitization.

Germ cell mutagenicity No data available to indicate product or any components present at greater than 0.1% are mutagenic or genotoxic.

Carcinogenicity This product is not considered to be a carcinogen by IARC, ACGIH, NTP, or OSHA.

IARC Monographs. Overall Evaluation of Carcinogenicity

Not listed.

OSHA Specifically Regulated Substances (29 CFR 1910.1001-1050)

Not regulated.

US. National Toxicology Program (NTP) Report on Carcinogens

Not listed.

Reproductive toxicity This product is not expected to cause reproductive or developmental effects.

Specific target organ toxicity - single exposure May cause damage to organs. May cause respiratory irritation.

Specific target organ toxicity - repeated exposure Not available.

Aspiration hazard Based on available data, the classification criteria are not met.

Chronic effects Prolonged inhalation may be harmful.

12. Ecological information

Ecotoxicity The product is not classified as environmentally hazardous. However, this does not exclude the possibility that large or frequent spills can have a harmful or damaging effect on the environment.

Product		Species	Test Results
FLOGARD MS6222 (CAS Mixture)			
	IC25	Ceriodaphnia	416.7 mg/l, Chronic Bioassay, 7 day, (pH adjusted)
	LC50	Ceriodaphnia	1387 mg/l, Static Renewal Bioassay, 48 hour, (pH adjusted)
		Fathead Minnow	4200 mg/l, Static Renewal Bioassay, 96 hour, (pH adjusted)
	NOEL	Ceriodaphnia	625 mg/l, Static Renewal Bioassay, 48 hour, (pH adjusted)
			125 mg/l, Chronic Bioassay, 7 day, (pH adjusted)
		Fathead Minnow	2100 mg/l, Static Renewal Bioassay, 96 hour, (pH adjusted)
Aquatic			
Crustacea	LC50	Daphnia magna	3540 mg/l, Static Renewal Bioassay, 48 hour, (pH adjusted)
	NOEL	Daphnia magna	2100 mg/l, Static Renewal Bioassay, 48 hour, (pH adjusted)

Product	Species	Test Results
Fish	LC50	Rainbow Trout
		7382 mg/l, Static Renewal Bioassay, 96 hour, (pH adjusted)
	NOEL	Rainbow Trout
		5000 mg/l, Static Renewal Bioassay, 96 hour, (pH adjusted)
Bioaccumulative potential	No information available.	
Mobility in soil	No data available.	
Other adverse effects	No other adverse environmental effects (e.g. ozone depletion, photochemical ozone creation potential, endocrine disruption, global warming potential) are expected from this component.	
Environmental fate	The product is not classified as environmentally hazardous. However, this does not exclude the possibility that large or frequent spills can have a harmful or damaging effect on the environment.	
Persistence and degradability	Product contains only inorganics that are not subject to typical biological degradation. Assimilation by microbes may occur in waste treatment or the environment. This product, being inorganic, has no TOC, BOD.	

13. Disposal considerations

Disposal instructions	Collect and reclaim or dispose in sealed containers at licensed waste disposal site. Incinerate the material under controlled conditions in an approved incinerator. Dispose of contents/container in accordance with local/regional/national/international regulations.
Local disposal regulations	Dispose in accordance with all applicable regulations.
Hazardous waste code	D002: Waste Corrosive material [pH <=2 or >=12.5, or corrosive to steel] The waste code should be assigned in discussion between the user, the producer and the waste disposal company.
Waste from residues / unused products	Dispose of in accordance with local regulations. Empty containers or liners may retain some product residues. This material and its container must be disposed of in a safe manner (see: Disposal instructions). Empty containers or liners may retain some product residues. This material and its container must be disposed of in a safe manner.
Contaminated packaging	Since emptied containers may retain product residue, follow label warnings even after container is emptied. Empty containers should be taken to an approved waste handling site for recycling or disposal.

14. Transport information

DOT

UN number	UN1805
UN proper shipping name	Phosphoric acid solution, RQ(Phosphoric acid)
Transport hazard class(es)	
Class	8
Subsidiary risk	-
Packing group	III
Special precautions for user	Read safety instructions, SDS and emergency procedures before handling.
ERG number	154
Some containers may be exempt from Dangerous Goods/Hazmat Transport Regulations, please check BOL for exact container classification.	

IATA

UN number	UN1805
UN proper shipping name	PHOSPHORIC ACID, SOLUTION
Transport hazard class(es)	
Class	8
Subsidiary risk	-
Packing group	III
Environmental hazards	No.
ERG Code	154
Special precautions for user	Read safety instructions, SDS and emergency procedures before handling.

IMDG

UN number	UN1805
UN proper shipping name	PHOSPHORIC ACID SOLUTION, RQ(Phosphoric acid)
Transport hazard class(es)	
Class	8
Subsidiary risk	-
Packing group	III

Environmental hazards**Marine pollutant**

No.

EmS

F-A, S-B

Special precautions for user Read safety instructions, SDS and emergency procedures before handling.**DOT****IATA; IMDG****15. Regulatory information****US federal regulations**

This product is a "Hazardous Chemical" as defined by the OSHA Hazard Communication Standard, 29 CFR 1910.1200.

TSCA Section 12(b) Export Notification (40 CFR 707, Subpt. D)

Not regulated.

CERCLA Hazardous Substance List (40 CFR 302.4)

Phosphoric Acid (CAS 7664-38-2)

Listed.

SARA 304 Emergency release notification

Not regulated.

OSHA Specifically Regulated Substances (29 CFR 1910.1001-1050)

Not regulated.

Superfund Amendments and Reauthorization Act of 1986 (SARA)**Hazard categories**Immediate Hazard - Yes
Delayed Hazard - No
Fire Hazard - No
Pressure Hazard - No
Reactivity Hazard - No**SARA 302 Extremely hazardous substance**

Not listed.

SARA 311/312 Hazardous chemical

Yes

SARA 313 (TRI reporting)

Not regulated.

Other federal regulations**Clean Air Act (CAA) Section 112 Hazardous Air Pollutants (HAPs) List**

Not regulated.

Clean Air Act (CAA) Section 112(r) Accidental Release Prevention (40 CFR 68.130)

Not regulated.

Clean Water Act (CWA) Section 112(r) (40 CFR 68.130)

Hazardous substance

Safe Drinking Water Act (SDWA) Not regulated.

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)

A "No" indicates that one or more components of the product are not listed or exempt from listing on the inventory administered by the governing country(s).

US state regulations

US - California Proposition 65 - CRT: Listed date/Carcinogenic substance

No ingredient listed.

US - California Proposition 65 - CRT: Listed date/Developmental toxin

No ingredient listed.

US - California Proposition 65 - CRT: Listed date/Female reproductive toxin

No ingredient listed.

US - California Proposition 65 - CRT: Listed date/Male reproductive toxin

No ingredient listed.

US - Massachusetts RTK - Substance List

Phosphoric Acid (CAS 7664-38-2)

US - Pennsylvania RTK - Hazardous Substances

Phosphoric Acid (CAS 7664-38-2) Listed.

US - Rhode Island RTK

Phosphoric Acid (CAS 7664-38-2)

US. New Jersey Worker and Community Right-to-Know Act

Phosphoric Acid (CAS 7664-38-2) Listed.

US. California Proposition 65

California Safe Drinking Water and Toxic Enforcement Act of 1986 (Proposition 65): This material is not known to contain any chemicals currently listed as carcinogens or reproductive toxins.

16. Other information, including date of preparation or last revision

Issue date Jun-15-2015

Revision date Dec-20-2017

Version # 2.4

List of abbreviations

CAS: Chemical Abstract Service Registration Number
TWA: Time Weighted Average
STEL: Short Term Exposure Limit
LD50: Lethal Dose, 50%
LC50: Lethal Concentration, 50%
NOEL: No Observed Effect Level
COD: Chemical Oxygen Demand
BOD: Biochemical Oxygen Demand
TOC: Total Organic Carbon
IATA: International Air Transport Association
IMDG: International Maritime Dangerous Goods Code
ACGIH: American Conference of Governmental Industrial Hygienists
TSRN indicates a Trade Secret Registry Number is used in place of the CAS number.

References: No data available

Disclaimer

The information in the sheet was written based on the best knowledge and experience currently available. The information provided in this Safety Data Sheet is correct to the best of our knowledge, information and belief at the date of its publication. The information given is designed only as a guidance for safe handling, use, processing, storage, transportation, disposal and release and is not to be considered a warranty or quality specification. The information relates only to the specific material designated and may not be valid for such material used in combination with any other materials or in any process, unless specified in the text.

Revision information Physical & Chemical Properties: Multiple Properties

Prepared by This SDS has been prepared by SUEZ Regulatory Department (1-215-355-3300).

* Trademark of SUEZ. May be registered in one or more countries.



SAFETY DATA SHEET

FLOGARD* MS6222

1. Identification

Product identifier	FLOGARD MS6222
Other means of identification	None.
Recommended use	Water-based corrosion inhibitor
Recommended restrictions	None known.

Company/undertaking identification

Veolia WTS USA, Inc.
3600 Horizon Blvd.
Trevose, PA 19053
T 215 355 3300, F 215 953 5524

Emergency telephone

(800) 877 1940

2. Hazard(s) identification

Physical hazards	Corrosive to metals	Category 1
Health hazards	Skin corrosion/irritation	Category 1B
	Serious eye damage/eye irritation	Category 1
	Specific target organ toxicity, single exposure	Category 3 respiratory tract irritation
OSHA defined hazards	Not classified.	

Label elements



Signal word Danger

Hazard statement May be corrosive to metals. Causes severe skin burns and eye damage. Causes serious eye damage. May cause respiratory irritation. May cause damage to organs.

Precautionary statement

Prevention Keep only in original container. Do not breathe mist or vapor. Do not eat, drink or smoke when using this product. Use only outdoors or in a well-ventilated area. Wear protective gloves/protective clothing/eye protection/face protection.

Response If swallowed: Rinse mouth. Do NOT induce vomiting. If on skin (or hair): Take off immediately all contaminated clothing. Rinse skin with water/shower. If inhaled: Remove person to fresh air and keep comfortable for breathing. If in eyes: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing. Immediately call a poison center/doctor/. Specific treatment (see on this label). Wash contaminated clothing before reuse. Absorb spillage to prevent material damage.

Storage Store in a well-ventilated place. Keep container tightly closed. Store locked up. Store in corrosive resistant/ container with a resistant inner liner.

Disposal Dispose of contents/container in accordance with local/regional/national/international regulations.

Hazard(s) not otherwise classified (HNOC) None known.

Supplemental information None.

3. Composition/information on ingredients

Mixtures

Components	CAS #	Percent
Phosphoric Acid	7664-38-2	60 - 80

Composition comments Information for specific product ingredients as required by the U.S. OSHA HAZARD COMMUNICATION STANDARD is listed. Refer to additional sections of this SDS for our assessment of the potential hazards of this formulation.

4. First-aid measures

Inhalation Remove victim to fresh air and keep at rest in a position comfortable for breathing. Call a POISON CENTER or doctor/physician if you feel unwell.

Skin contact Take off immediately all contaminated clothing. Rinse skin with water/shower. Call a physician or poison control center immediately. Chemical burns must be treated by a physician. Wash contaminated clothing before reuse.

Eye contact Immediately flush eyes with plenty of water for at least 15 minutes. Remove contact lenses, if present and easy to do. Continue rinsing. Call a physician or poison control center immediately.

Ingestion Call a physician or poison control center immediately. Rinse mouth. Do not induce vomiting. If vomiting occurs, keep head low so that stomach content doesn't get into the lungs.

Most important symptoms/effects, acute and delayed Burning pain and severe corrosive skin damage. Causes serious eye damage. Symptoms may include stinging, tearing, redness, swelling, and blurred vision. Permanent eye damage including blindness could result. May cause respiratory irritation.

Indication of immediate medical attention and special treatment needed Provide general supportive measures and treat symptomatically. Chemical burns: Flush with water immediately. While flushing, remove clothes which do not adhere to affected area. Call an ambulance. Continue flushing during transport to hospital. Keep victim under observation. Symptoms may be delayed.

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.

5. Fire-fighting measures

Suitable extinguishing media Water fog. Foam. Dry chemical powder. Carbon dioxide (CO₂).

Unsuitable extinguishing media Do not use water jet as an extinguisher, as this will spread the fire.

Specific hazards arising from the chemical During fire, gases hazardous to health may be formed.

Special protective equipment and precautions for firefighters Self-contained breathing apparatus and full protective clothing must be worn in case of fire.

Fire fighting equipment/instructions In case of fire and/or explosion do not breathe fumes. Use standard firefighting procedures and consider the hazards of other involved materials. Move containers from fire area if you can do so without risk. Cool containers / tanks with water spray.

Specific methods Use standard firefighting procedures and consider the hazards of other involved materials.

6. Accidental release measures

Personal precautions, protective equipment and emergency procedures Keep unnecessary personnel away. Keep people away from and upwind of spill/leak. Wear appropriate protective equipment and clothing during clean-up. Do not breathe mist or vapor. Do not touch damaged containers or spilled material unless wearing appropriate protective clothing. Ensure adequate ventilation. Local authorities should be advised if significant spillages cannot be contained.

Methods and materials for containment and cleaning up Prevent entry into waterways, sewer, basements or confined areas.

Large Spills: Stop the flow of material, if this is without risk. Dike the spilled material, where this is possible. Cover with plastic sheet to prevent spreading. Absorb spillage to prevent material damage. Use a non-combustible material like vermiculite, sand or earth to soak up the product and place into a container for later disposal. Following product recovery, flush area with water.

Small Spills: Wipe up with absorbent material (e.g. cloth, fleece). Clean surface thoroughly to remove residual contamination.

Never return spills to original containers for re-use.

Environmental precautions Avoid discharge into drains, water courses or onto the ground.

7. Handling and storage

Precautions for safe handling

Acidic. Do not mix with alkaline material. Do not breathe mist or vapor. Do not get in eyes, on skin, or on clothing. Avoid prolonged exposure. When using, do not eat, drink or smoke. Provide adequate ventilation. Wear appropriate personal protective equipment. Wash hands thoroughly after handling. Observe good industrial hygiene practices.

Conditions for safe storage, including any incompatibilities

Do not freeze. If frozen, thaw completely and mix thoroughly prior to use. Contact with metals may release flammable hydrogen gas. Store locked up. Store in a cool, dry place out of direct sunlight. Store in corrosive resistant container with a resistant inner liner. Keep only in the original container.

8. Exposure controls/personal protection

Occupational exposure limits

US. OSHA Table Z-1 Limits for Air Contaminants (29 CFR 1910.1000)

Components	Type	Value
Phosphoric Acid (CAS 7664-38-2)	PEL	1 mg/m3

US. ACGIH Threshold Limit Values

Components	Type	Value
Phosphoric Acid (CAS 7664-38-2)	STEL	3 mg/m3
	TWA	1 mg/m3

US. NIOSH: Pocket Guide to Chemical Hazards

Components	Type	Value
Phosphoric Acid (CAS 7664-38-2)	STEL	3 mg/m3
	TWA	1 mg/m3

Biological limit values

No biological exposure limits noted for the ingredient(s).

Appropriate engineering controls

Good general ventilation (typically 10 air changes per hour) should be used. Ventilation rates should be matched to conditions. If applicable, use process enclosures, local exhaust ventilation, or other engineering controls to maintain airborne levels below recommended exposure limits. If exposure limits have not been established, maintain airborne levels to an acceptable level. Eye wash facilities and emergency shower must be available when handling this product.

Individual protection measures, such as personal protective equipment

Eye/face protection

Wear safety glasses with side shields (or goggles) and a face shield.

Skin protection

Hand protection

Wear appropriate chemical resistant gloves. The choice of an appropriate glove does not only depend on its material but also on other quality features and is different from one producer to the other. Glove selection must take into account any solvents and other hazards present.

Other

Wear appropriate chemical resistant clothing. Use of an impervious apron is recommended.

Respiratory protection

If engineering controls do not maintain airborne concentrations below recommended exposure limits (where applicable) or to an acceptable level (in countries where exposure limits have not been established), an approved respirator must be worn. A respiratory protection program that meets OSHA's 29 CFR 1910.34 and ANSI Z88.2 requirements must be followed whenever workplace conditions warrant a respirator's use.

Thermal hazards

Wear appropriate thermal protective clothing, when necessary. Not applicable.

General hygiene considerations

Always observe good personal hygiene measures, such as washing after handling the material and before eating, drinking, and/or smoking. Routinely wash work clothing and protective equipment to remove contaminants.

9. Physical and chemical properties

Appearance

Liquid

Physical state

Liquid.

Form

Not available.

Color

Colorless to light yellow

Odor

Mild

Odor threshold

Not available.

pH (concentrated product)

< 1 Neat

Material name: FLOGARD* MS6222

Version number: 2.5

Melting point/freezing point	< -30 °F (< -34 °C)
Initial boiling point and boiling range	Not available.
Flash point	Not Applicable
Evaporation rate	Slower than Ether
Flammability (solid, gas)	Not applicable.
Upper/lower flammability or explosive limits	
Explosive limit - lower (%)	Not available.
Explosive limit - upper (%)	Not available.
Vapor pressure	15 mmHg
Vapor pressure temp.	70 °F (21 °C)
Vapor density	> 1
Relative density	1.58
Relative density temperature	70 °F (21 °C)
Solubility(ies)	
Solubility (water)	100 %
Partition coefficient (n-octanol/water)	Not available.
Auto-ignition temperature	Not available.
Decomposition temperature	Not available.
Viscosity	19 mPa.s
Viscosity temperature	70 °F (21 °C)
Other information	
Percent volatile	25
pH in aqueous solution	1.2 (5% Solution)
Pour point	< -25 °F (< -32 °C)
VOC	0 % ESTIMATED

10. Stability and reactivity

Reactivity	May be corrosive to metals. The product is stable and non-reactive under normal conditions of use, storage and transport.
Chemical stability	Material is stable under normal conditions.
Possibility of hazardous reactions	Hazardous polymerization does not occur. Contact with water reactive compounds may cause fire or explosion.
Conditions to avoid	Protect from freezing. Contact with metals may release flammable hydrogen gas.
Incompatible materials	Strong oxidizing agents. Metals. Avoid contact with strong bases.
Hazardous decomposition products	Oxides of carbon and phosphorus evolved in fire.

11. Toxicological information

Information on likely routes of exposure

Inhalation	May cause damage to organs by inhalation. May cause irritation to the respiratory system. Prolonged inhalation may be harmful.
Skin contact	Causes severe skin burns.
Eye contact	Causes serious eye damage.
Ingestion	Causes digestive tract burns.
Symptoms related to the physical, chemical and toxicological characteristics	Burning pain and severe corrosive skin damage. Causes serious eye damage. Symptoms may include stinging, tearing, redness, swelling, and blurred vision. Permanent eye damage including blindness could result. May cause respiratory irritation.

Information on toxicological effects

Acute toxicity	May cause respiratory irritation.
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Product	Species	Test Results
FLOGARD MS6222		
<u>Acute</u>		
Dermal		
LD50	Rabbit	3650 mg/kg (Calculated according to GHS additivity formula)
Oral		
LD50	Rat	400 mg/kg (Calculated according to GHS additivity formula)

Components	Species	Test Results
Phosphoric Acid (CAS 7664-38-2)		
<u>Acute</u>		
Dermal		
LD50	Rabbit	2740 mg/kg
Oral		
LD50	Rat	300 mg/kg
Skin corrosion/irritation	Prolonged skin contact may cause temporary irritation.	
Serious eye damage/eye irritation	Causes serious eye damage.	
Respiratory or skin sensitization		
Respiratory sensitization	Not a respiratory sensitizer.	
Skin sensitization	This product is not expected to cause skin sensitization.	
Germ cell mutagenicity	No data available to indicate product or any components present at greater than 0.1% are mutagenic or genotoxic.	
Carcinogenicity	This product is not considered to be a carcinogen by IARC, ACGIH, NTP, or OSHA.	
IARC Monographs. Overall Evaluation of Carcinogenicity	Not listed.	
OSHA Specifically Regulated Substances (29 CFR 1910.1001-1053)	Not listed.	
US. National Toxicology Program (NTP) Report on Carcinogens	Not listed.	
Reproductive toxicity	This product is not expected to cause reproductive or developmental effects.	
Specific target organ toxicity - single exposure	May cause damage to organs. May cause respiratory irritation.	
Specific target organ toxicity - repeated exposure	Not available.	
Aspiration hazard	Based on available data, the classification criteria are not met.	
Chronic effects	Prolonged inhalation may be harmful.	

12. Ecological information

Ecotoxicity	The product is not classified as environmentally hazardous. However, this does not exclude the possibility that large or frequent spills can have a harmful or damaging effect on the environment.
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Product	Species	Test Results
Aquatic	Crustacea	IC25 Ceriodaphnia 416.7 mg/l, 7 day (pH adjusted)
		LC50 Ceriodaphnia 1387 mg/l, 48 hour (pH adjusted)
		Daphnia magna 3540 mg/l, 48 hour (pH adjusted)
	NOEL	Ceriodaphnia 625 mg/l, 48 hour (pH adjusted)
		125 mg/l, 7 day (pH adjusted)
		Daphnia magna 2100 mg/l, 48 hour (pH adjusted)
Fish	LC50	Fathead Minnow 4200 mg/l, 96 hour (pH adjusted)
		Rainbow Trout 7382 mg/l, 96 hour (pH adjusted)
		NOEL Fathead Minnow 2100 mg/l, 96 hour (pH adjusted)

Product	Species	Test Results
	Rainbow Trout	5000 mg/l, 96 hour (pH adjusted)
Persistence and degradability	<p>Product contains only inorganics that are not subject to typical biological degradation. Assimilation by microbes may occur in waste treatment or the environment. This product, being inorganic, has no TOC, BOD.</p> <p>Product contains only inorganics that are not subject to typical biological degradation. Assimilation by microbes may occur in waste treatment or the environment. This product, being inorganic, has no TOC, BOD.</p>	
Bioaccumulative potential	No information available.	
Mobility in soil	No data available.	
Other adverse effects	No other adverse environmental effects (e.g. ozone depletion, photochemical ozone creation potential, endocrine disruption, global warming potential) are expected from this component.	

13. Disposal considerations

Disposal instructions	Collect and reclaim or dispose in sealed containers at licensed waste disposal site. Incinerate the material under controlled conditions in an approved incinerator. Dispose of contents/container in accordance with local/regional/national/international regulations.
Local disposal regulations	Dispose in accordance with all applicable regulations.
Hazardous waste code	D002: Waste Corrosive material [pH ≤2 or ≥12.5, or corrosive to steel] The waste code should be assigned in discussion between the user, the producer and the waste disposal company.
Waste from residues / unused products	Dispose of in accordance with local regulations. Empty containers or liners may retain some product residues. This material and its container must be disposed of in a safe manner (see: Disposal instructions). Empty containers or liners may retain some product residues. This material and its container must be disposed of in a safe manner.
Contaminated packaging	Since emptied containers may retain product residue, follow label warnings even after container is emptied. Empty containers should be taken to an approved waste handling site for recycling or disposal.

14. Transport information

DOT

UN number	UN1805
UN proper shipping name	Phosphoric acid solution, RQ(Phosphoric acid)
Transport hazard class(es)	
Class	8
Subsidiary risk	-
Packing group	III
Special precautions for user	Not available.
ERG number	154
Some containers may be exempt from Dangerous Goods/Hazmat Transport Regulations, please check BOL for exact container classification.	

IATA

UN number	UN1805
UN proper shipping name	Phosphoric acid, solution
Transport hazard class(es)	
Class	8
Subsidiary risk	-
Packing group	III
Environmental hazards	No.
ERG Code	154
Special precautions for user	Not available.

IMDG

UN number	UN1805
UN proper shipping name	PHOSPHORIC ACID SOLUTION, RQ(Phosphoric acid)
Transport hazard class(es)	
Class	8
Subsidiary risk	-
Packing group	III
Environmental hazards	
Marine pollutant	No.
EmS	F-A, S-B

Special precautions for user Not available.

DOT



IATA; IMDG



15. Regulatory information

US federal regulations

This product is a "Hazardous Chemical" as defined by the OSHA Hazard Communication Standard, 29 CFR 1910.1200.

Toxic Substances Control Act (TSCA)

TSCA Section 12(b) Export Notification (40 CFR 707, Subpt. D)

Not regulated.

CERCLA Hazardous Substance List (40 CFR 302.4)

Phosphoric Acid (CAS 7664-38-2)

Listed.

SARA 304 Emergency release notification

Not regulated.

OSHA Specifically Regulated Substances (29 CFR 1910.1001-1053)

Not listed.

Superfund Amendments and Reauthorization Act of 1986 (SARA)

SARA 302 Extremely hazardous substance

Not listed.

SARA 311/312 Hazardous chemical

Yes

Classified hazard categories

Corrosive to metal
Skin corrosion or irritation
Serious eye damage or eye irritation
Specific target organ toxicity (single or repeated exposure)

SARA 313 (TRI reporting)

Not regulated.

Other federal regulations

Clean Air Act (CAA) Section 112 Hazardous Air Pollutants (HAPs) List

Not regulated.

Clean Air Act (CAA) Section 112(r) Accidental Release Prevention (40 CFR 68.130)

Not regulated.

Clean Water Act (CWA) Section 112(r) (40 CFR 68.130)

Hazardous substance

Safe Drinking Water Act (SDWA)

Not regulated.

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)

A "No" indicates that one or more components of the product are not listed or exempt from listing on the inventory administered by the governing country(s).

US state regulations

US. California. Candidate Chemicals List. Safer Consumer Products Regulations (Cal. Code Regs, tit. 22, 69502.3, subd. (a))

Phosphoric Acid (CAS 7664-38-2)

California Proposition 65

California Safe Drinking Water and Toxic Enforcement Act of 1986 (Proposition 65): This material is not known to contain any chemicals currently listed as carcinogens or reproductive toxins.

US - California Proposition 65 - CRT: Listed date/Carcinogenic substance

No ingredient listed.

US - California Proposition 65 - CRT: Listed date/Developmental toxin

No ingredient listed.

US - California Proposition 65 - CRT: Listed date/Female reproductive toxin

No ingredient listed.

US - California Proposition 65 - CRT: Listed date/Male reproductive toxin

No ingredient listed.

16. Other information, including date of preparation or last revision

Issue date	Jun-15-2015
Revision date	Feb-19-2023
Version #	2.5
NFPA ratings	Health: 3 Flammability: 0 Instability: 0
NFPA ratings	



List of abbreviations

CAS: Chemical Abstract Service Registration Number
TWA: Time Weighted Average
STEL: Short Term Exposure Limit
LD50: Lethal Dose, 50%
LC50: Lethal Concentration, 50%
NOEL: No Observed Effect Level
COD: Chemical Oxygen Demand
BOD: Biochemical Oxygen Demand
TOC: Total Organic Carbon
IATA: International Air Transport Association
IMDG: International Maritime Dangerous Goods Code
ACGIH: American Conference of Governmental Industrial Hygienists
TSRN indicates a Trade Secret Registry Number is used in place of the CAS number.

References: No data available

Disclaimer The information provided in this Safety Data Sheet is correct to the best of our knowledge, information and belief at the date of its publication. The information given is designed only as a guidance for safe handling, use, processing, storage, transportation, disposal and release and is not to be considered a warranty or quality specification. The information relates only to the specific material designated and may not be valid for such material used in combination with any other materials or in any process, unless specified in the text. The information in the sheet was written based on the best knowledge and experience currently available.

Revision information This document has undergone significant changes and should be reviewed in its entirety.

Prepared by This SDS has been prepared by Veolia Water Technologies & Solutions' Regulatory Department (1-215-355-3300).

* Trademark of Veolia. May be registered in one or more countries.

Material name: FLOGARD* MS6222

Version number: 2.5



SAFETY DATA SHEET

GENGARD* GN8020

1. Identification

Product identifier GENGARD GN8020
Other means of identification None.
Recommended use Deposit control agent
Recommended restrictions None known.

Company/undertaking identification

SUEZ WTS USA, Inc.
4636 Somerton Road
Trevose, PA 19053
T 215 355 3300, F 215 953 5524

Emergency telephone

(800) 877 1940

2. Hazard(s) identification

Physical hazards Not classified.
Health hazards Skin corrosion/irritation Category 2
Serious eye damage/eye irritation Category 2
Sensitization, skin Category 1A
OSHA defined hazards Not classified.

Label elements



Signal word Warning

Hazard statement Causes skin irritation. Causes serious eye irritation. May cause an allergic skin reaction.

Precautionary statement

Prevention

Avoid breathing mist/vapor. Wash thoroughly after handling. Contaminated work clothing should not be allowed out of the workplace. Wear eye protection/face protection. Wear protective gloves.

Response

If skin irritation or rash occurs: Get medical advice/attention. If eye irritation persists: Get medical advice/attention. Take off contaminated clothing and wash before reuse. If on skin: Wash with plenty of water. If in eyes: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.

Storage

Store away from incompatible materials.

Disposal

Dispose of contents/container in accordance with local/regional/national/international regulations.

Hazard(s) not otherwise classified (HNOC) None known.

Supplemental information None.

3. Composition/information on ingredients

Mixtures

Components	CAS #	Percent
Maleic acid	110-16-7	0.1 - 1
CARBOXYLIC ACID POLYMER	TSRN 125438 - 5052P	

Composition comments Information for specific product ingredients as required by the U.S. OSHA HAZARD COMMUNICATION STANDARD is listed. Refer to additional sections of this SDS for our assessment of the potential hazards of this formulation.

4. First-aid measures

Inhalation Move to fresh air. Call a physician if symptoms develop or persist.

Skin contact Remove contaminated clothing immediately and wash skin with soap and water. In case of eczema or other skin disorders: Seek medical attention and take along these instructions. Wash contaminated clothing before reuse.

Eye contact Immediately flush eyes with water for 15 minutes. Remove contact lenses, if present and easy to do. Continue rinsing. Get medical attention if irritation develops and persists.

Ingestion Rinse mouth. Get medical attention if symptoms occur.

Most important symptoms/effects, acute and delayed Severe eye irritation. Skin irritation. May cause an allergic skin reaction. Dermatitis. Rash.

Indication of immediate medical attention and special treatment needed Provide general supportive measures and treat symptomatically. Keep victim under observation. Symptoms may be delayed.

General information Ensure that medical personnel are aware of the material(s) involved, and take precautions to protect themselves. Wash contaminated clothing before reuse.

5. Fire-fighting measures

Suitable extinguishing media Water fog. Foam. Carbon dioxide (CO2). Dry chemical powder.

Unsuitable extinguishing media Do not use water jet as an extinguisher, as this will spread the fire.

Specific hazards arising from the chemical During fire, gases hazardous to health may be formed.

Special protective equipment and precautions for firefighters Wear full protective clothing, including helmet, self-contained positive pressure or pressure demand breathing apparatus, protective clothing and face mask.

Fire fighting equipment/instructions In case of fire and/or explosion do not breathe fumes. Move containers from fire area if you can do so without risk. Cool containers / tanks with water spray. Use standard firefighting procedures and consider the hazards of other involved materials.

Specific methods Use standard firefighting procedures and consider the hazards of other involved materials.

General fire hazards No unusual fire or explosion hazards noted.

6. Accidental release measures

Personal precautions, protective equipment and emergency procedures Keep unnecessary personnel away. Wear appropriate protective equipment and clothing during clean-up. Keep people away from and upwind of spill/leak. Do not touch damaged containers or spilled material unless wearing appropriate protective clothing. Avoid contact with spilled material. Ensure adequate ventilation. Avoid breathing mist/vapor. For personal protection, see section 8 of the SDS.

Methods and materials for containment and cleaning up **Small Spills:** Place in waste disposal container. Wet area may be slippery. Spread sand/grit. Following product recovery, flush area with water. Wipe up with absorbent material (e.g. cloth, fleece). Clean surface thoroughly to remove residual contamination.

Large Spills: Cover with plastic sheet to prevent spreading. Stop the flow of material, if this is without risk. Dike the spilled material, where this is possible. Absorb with earth, sand or other non-combustible material and transfer to containers for later disposal. Ventilate the area.

Environmental precautions Never return spills to original containers for re-use. For waste disposal, see section 13 of the SDS. Avoid discharge into drains, water courses or onto the ground. Water contaminated with this product may be sent to a sanitary sewer treatment facility, or a permitted waste treatment facility, in accordance with any local agreements.

7. Handling and storage

Precautions for safe handling Observe good industrial hygiene practices. Do not get in eyes, on skin, on clothing. Provide adequate ventilation. Wear appropriate personal protective equipment. Avoid contact with eyes, skin, and clothing. Wash hands thoroughly after handling.

Conditions for safe storage, including any incompatibilities

Store in tightly closed container. Store away from incompatible materials (see Section 10 of the SDS). Store in cool, well ventilated area. Store containers closed when not in use. Avoid high temperatures. Protect from freezing. If frozen, thaw completely and mix thoroughly prior to use.

8. Exposure controls/personal protection

Biological limit values

No biological exposure limits noted for the ingredient(s).

Appropriate engineering controls

Good general ventilation should be used. Ventilation rates should be matched to conditions. If applicable, use process enclosures, local exhaust ventilation, or other engineering controls to maintain airborne levels below recommended exposure limits. If exposure limits have not been established, maintain airborne levels to an acceptable level. Eye wash facilities and emergency shower must be available when handling this product.

Individual protection measures, such as personal protective equipment

Eye/face protection

Wear safety glasses with side shields (or goggles).

Skin protection

Hand protection

Wear appropriate chemical resistant gloves. The choice of an appropriate glove does not only depend on its material but also on other quality features and is different from one producer to the other. Glove selection must take into account any solvents and other hazards present.

Other

Wear appropriate chemical resistant clothing. Use of an impervious apron is recommended. Wash off after each use. Replace as necessary.

Respiratory protection

If engineering controls do not maintain airborne concentrations below recommended exposure limits (where applicable) or to an acceptable level (in countries where exposure limits have not been established), an approved respirator must be worn. A RESPIRATORY PROTECTION PROGRAM THAT MEETS OSHA'S 29 CFR 1910.134 AND ANSI Z88.2 REQUIREMENTS MUST BE FOLLOWED WHENEVER WORKPLACE CONDITIONS WARRANT A RESPIRATOR'S USE.

Thermal hazards

Wear appropriate thermal protective clothing, when necessary.

General hygiene considerations

Always observe good personal hygiene measures, such as washing after handling the material and before eating, drinking, and/or smoking. Routinely wash work clothing and protective equipment to remove contaminants. Contaminated work clothing should not be allowed out of the workplace.

9. Physical and chemical properties

Appearance

Color

Amber to brown

Physical state

Liquid

Odor

Slight sweet

Odor threshold

Not available.

pH (concentrated product)

2.6

pH in aqueous solution

3 (5% SOL.)

Melting point/freezing point

27 °F (-3 °C)

Initial boiling point and boiling range

212 °F (100 °C)

Flash point

Not applicable.

Evaporation rate

< 1 (Water = 1)

Flammability (solid, gas)

Not applicable.

Upper/lower flammability or explosive limits

Flammability limit - lower (%)

Not available.

Flammability limit - upper (%)

Not available.

Explosive limit - lower (%)

Not available.

Explosive limit - upper (%)

Not available.

Vapor pressure

18 mm Hg

Vapor pressure temp.

70 °F (21 °C)

Vapor density

< 1 (Air = 1)

Relative density

1.17

Relative density temperature

70 °F (21 °C)

Solubility(ies)	
Solubility (water)	100 %
Partition coefficient (n-octanol/water)	Not available.
Auto-ignition temperature	Not available.
Decomposition temperature	Not available.
Viscosity	17 cps
Viscosity temperature	70 °F (21 °C)
Other information	
Explosive properties	Not explosive.
Oxidizing properties	Not oxidizing.
Pour point	32 °F (0 °C)
Specific gravity	1.166
VOC	0 % (Estimated)

10. Stability and reactivity

Reactivity	The product is stable and non-reactive under normal conditions of use, storage and transport.
Chemical stability	Material is stable under normal conditions.
Possibility of hazardous reactions	Hazardous polymerization does not occur.
Conditions to avoid	Contact with incompatible materials. Keep away from heat, hot surfaces, sparks, open flames and other ignition sources.
Incompatible materials	Strong oxidizing agents.
Hazardous decomposition products	Oxides of carbon, nitrogen, and sulphur evolved in fire.

11. Toxicological information

Information on likely routes of exposure

Inhalation	Prolonged inhalation may be harmful.
Skin contact	Causes skin irritation. May cause an allergic skin reaction.
Eye contact	Causes serious eye irritation.
Ingestion	Ingestion of large amounts may produce gastrointestinal disturbances including irritation, nausea, and diarrhea.

Symptoms related to the physical, chemical and toxicological characteristics	Severe eye irritation. Skin irritation. May cause redness and pain. May cause an allergic skin reaction. Dermatitis. Rash.
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Information on toxicological effects

Acute toxicity

Product	Species	Test Results
GENGARD GN8020 (CAS Mixture)		
Acute		
<i>Dermal</i>		
LD50	Rabbit	> 5000 mg/kg, (Calculated according to GHS additivity formula)
<i>Oral</i>		
LD50	Rat	> 5000 mg/kg, (Calculated according to GHS additivity formula)
Components	Species	Test Results
CARBOXYLIC ACID POLYMER (CAS TSNR 125438 - 5052P)		
Acute		
<i>Oral</i>		
LD50	Rat	4563 mg/kg

Components	Species	Test Results
Maleic acid (CAS 110-16-7)		
Acute		
Dermal		
LD50	Rabbit	1560 mg/kg
Inhalation		
LC50	Rat	> 2.88 mg/L, 4 Hour
Oral		
LD50	Rat	708 mg/kg
Skin corrosion/irritation	Causes skin irritation.	
Serious eye damage/eye irritation	Causes eye irritation.	
Respiratory or skin sensitization		
Respiratory sensitization	This product is not expected to cause respiratory sensitization.	
Skin sensitization	May cause an allergic skin reaction.	
Germ cell mutagenicity	Not classified.	
Carcinogenicity	This product is not considered to be a carcinogen by IARC, ACGIH, NTP, or OSHA.	
IARC Monographs. Overall Evaluation of Carcinogenicity		
Not listed.		
OSHA Specifically Regulated Substances (29 CFR 1910.1001-1052)		
Not regulated.		
US. National Toxicology Program (NTP) Report on Carcinogens		
Not listed.		
Reproductive toxicity	Not classified.	
Specific target organ toxicity - single exposure	Not classified.	
Specific target organ toxicity - repeated exposure	Not classified.	
Aspiration hazard	Based on available data, the classification criteria are not met.	

12. Ecological information

Ecotoxicity

Product		Species	Test Results	
GENGARD GN8020 (CAS Mixture)				
Aquatic	IC50	Selenastrum (algae)	3872 mg/l, Growth Inhibition, 96 hour, (pH adjusted)	
	LC50	Fathead Minnow	5814 mg/l, Static Renewal Bioassay, 96 hour, (pH adjusted)	
	NOEL	Fathead Minnow	5000 mg/l, Static Renewal Bioassay, 96 hour, (pH adjusted)	
		Selenastrum (algae)	2000 mg/l, Growth Inhibition, 96 hour, (pH adjusted)	
	Crustacea	LC50	Daphnia magna	3628 mg/l, Static Renewal Bioassay, 48 hour, (pH adjusted)
		NOEL	Daphnia magna	1250 mg/l, Static Renewal Bioassay, 48 hour, (pH adjusted)
	Fish	LC50	Rainbow Trout	7071 mg/l, Static Renewal Bioassay, 96 hour, (pH adjusted)
		NOEL	Rainbow Trout	5000 mg/l, Static Renewal Bioassay, 96 hour, (pH adjusted)
	Persistence and degradability		Not available.	
	Bioaccumulative potential			

Partition coefficient n-octanol / water (log Kow)		-0.48
Maleic acid		
Mobility in soil	No data available.	
Other adverse effects	Not available.	
Persistence and degradability		
- COD (mgO2/g)	359	
- BOD 5 (mgO2/g)	21	
- BOD 28 (mgO2/g)	3	
- Closed Bottle Test (%)	1 OECD 301D	
Degradation in 28 days)		
- TOC (mg C/g)	142 (calculated data)	
13. Disposal considerations		
Disposal instructions	Dispose of contents/container in accordance with local/regional/national/international regulations. Collect and reclaim or dispose in sealed containers at licensed waste disposal site.	
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	Dispose of in accordance with local regulations. Empty containers or liners may retain some product residues. This material and its container must be disposed of in a safe manner. 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	Via an authorized waste disposal contractor to an approved waste disposal site, observing all local and national regulations. Since emptied containers may retain product residue, follow label warnings even after container is emptied. Empty containers should be taken to an approved waste handling site for recycling or disposal.	

14. Transport information

DOT

Not regulated as dangerous goods.

IATA

Not regulated as dangerous goods.

IMDG

Not regulated as dangerous goods.

15. Regulatory information

US federal regulations This product is a "Hazardous Chemical" as defined by the OSHA Hazard Communication Standard, 29 CFR 1910.1200.

TSCA Section 12(b) Export Notification (40 CFR 707, Subpt. D)

Not regulated.

CERCLA Hazardous Substance List (40 CFR 302.4)

Maleic acid (CAS 110-16-7) Listed.

SARA 304 Emergency release notification

Not regulated.

OSHA Specifically Regulated Substances (29 CFR 1910.1001-1052)

Not regulated.

Superfund Amendments and Reauthorization Act of 1986 (SARA)

SARA 302 Extremely hazardous substance

Not listed.

SARA 311/312 Hazardous chemical

Yes
Classified hazard categories Skin corrosion or irritation
 Serious eye damage or eye irritation
 Respiratory or skin sensitization

SARA 313 (TRI reporting)

Not regulated.

Other federal regulations

Clean Air Act (CAA) Section 112 Hazardous Air Pollutants (HAPs) List

Acrylic acid (CAS 79-10-7)

Clean Air Act (CAA) Section 112(r) Accidental Release Prevention (40 CFR 68.130)

Not regulated.

Safe Drinking Water Act (SDWA) Not regulated.

Inventory status

Country(s) or region	Inventory name	On inventory (yes/no)*
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)

A "No" indicates that one or more components of the product are not listed or exempt from listing on the inventory administered by the governing country(s).

NSF Registered and/or meets Registration No. – 144523
USDA (according to 1998 Category Code(s):
guidelines): G5 Cooling and retort water treatment products
G7 Boiler, steam line treatment products – nonfood contact

US state regulations

US. California Proposition 65

California Safe Drinking Water and Toxic Enforcement Act of 2016 (Proposition 65): This material is not known to contain any chemicals currently listed as carcinogens or reproductive toxins. For more information go to www.P65Warnings.ca.gov.

US - California Proposition 65 - CRT: Listed date/Carcinogenic substance

No ingredient listed.

US - California Proposition 65 - CRT: Listed date/Developmental toxin

No ingredient listed.

US - California Proposition 65 - CRT: Listed date/Female reproductive toxin

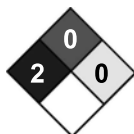
No ingredient listed.

US - California Proposition 65 - CRT: Listed date/Male reproductive toxin

No ingredient listed.

16. Other information, including date of preparation or last revision

Issue date Sep-26-2014
Revision date Feb-19-2019
Version # 5.0
NFPA ratings Health: 2
Flammability: 0
Instability: 0
NFPA ratings



List of abbreviations

CAS: Chemical Abstract Service Registration Number
NFPA: National Fire Protection Association
ACGIH: American Conference of Governmental Industrial Hygienists
TWA: Time Weighted Average
STEL: Short Term Exposure Limit
LD50: Lethal Dose, 50%
LC50: Lethal Concentration, 50%
EC50: Effect Concentration, 50%
NOEL: No Observed Effect Level
COD: Chemical Oxygen Demand
BOD: Biochemical Oxygen Demand
TOC: Total Organic Carbon
CEN: European Committee for Standardisation
IATA: International Air Transport Association
IMDG: International Maritime Dangerous Goods Code
TSRN indicates a Trade Secret Registry Number is used in place of the CAS number.

References: No data available

Material name: GENGARD* GN8020

Version number: 5.0

Disclaimer

The information provided in this Safety Data Sheet is correct to the best of our knowledge, information and belief at the date of its publication. The information given is designed only as a guidance for safe handling, use, processing, storage, transportation, disposal and release and is not to be considered a warranty or quality specification. The information relates only to the specific material designated and may not be valid for such material used in combination with any other materials or in any process, unless specified in the text.

Revision information

Hazard(s) identification: Prevention
Composition / Information on Ingredients: Disclosure Overrides
Accidental release measures: Methods and materials for containment and cleaning up
Accidental release measures: Personal precautions, protective equipment and emergency procedures
Handling and storage: Conditions for safe storage, including any incompatibilities
Exposure controls/personal protection: Appropriate engineering controls
Physical & Chemical Properties: Multiple Properties
Stability and reactivity: Conditions to avoid
Regulatory information: California Prop 65
Other information, including date of preparation or last revision: Bibliography
HazReg Data: Europe - EU
GHS: Classification

Prepared by

This SDS has been prepared by SUEZ Regulatory Department (1-215-355-3300).

* Trademark of SUEZ. May be registered in one or more countries.



SAFETY DATA SHEET

GENGARD* GN8020

1. Identification

Product identifier	GENGARD GN8020
Other means of identification	None.
Recommended use	Deposit control agent
Recommended restrictions	None known.

Company/undertaking identification

Veolia WTS USA, Inc.
3600 Horizon Blvd.
Trevose, PA 19053
T 215 355 3300, F 215 953 5524

Emergency telephone

(800) 877 1940

2. Hazard(s) identification

Physical hazards	Not classified.	
Health hazards	Skin corrosion/irritation	Category 2
	Serious eye damage/eye irritation	Category 2
	Sensitization, skin	Category 1A
OSHA defined hazards	Not classified.	

Label elements



Signal word	Warning
Hazard statement	Causes skin irritation. Causes serious eye irritation. May cause an allergic skin reaction.
Precautionary statement	
Prevention	Avoid breathing mist or vapor. Wash thoroughly after handling. Contaminated work clothing should not be allowed out of the workplace. Wear protective gloves, protective clothing, eye protection and face protection.
Response	IF ON SKIN: Wash with plenty of water. IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing. If skin irritation or rash occurs: Get medical advice or attention. If eye irritation persists: Get medical advice or attention. Take off contaminated clothing and wash it before reuse.
Storage	Store away from incompatible materials.
Disposal	Not available.
Hazard(s) not otherwise classified (HNOC)	None known.
Supplemental information	None.

3. Composition/information on ingredients

Mixtures

Components	CAS #	Percent
Maleic acid	110-16-7	0.1 - 1
CARBOXYLIC ACID POLYMER	TSRN 125438 - 5052P	

Composition comments Information for specific product ingredients as required by the U.S. OSHA HAZARD COMMUNICATION STANDARD is listed. Refer to additional sections of this SDS for our assessment of the potential hazards of this formulation.

4. First-aid measures

Inhalation Move to fresh air. Call a physician if symptoms develop or persist.

Skin contact Remove contaminated clothing. Wash immediately with plenty of water. In case of eczema or other skin disorders: Seek medical attention and take along these instructions. Wash contaminated clothing before reuse.

Eye contact Immediately flush eyes with water for 15 minutes. Remove contact lenses, if present and easy to do. Continue rinsing. Get medical attention if irritation develops and persists.

Ingestion Rinse mouth. Get medical attention if symptoms occur.

Most important symptoms/effects, acute and delayed Severe eye irritation. Skin irritation. May cause an allergic skin reaction. Dermatitis. Rash.

Indication of immediate medical attention and special treatment needed Provide general supportive measures and treat symptomatically. Keep victim under observation. Symptoms may be delayed.

General information Ensure that medical personnel are aware of the material(s) involved, and take precautions to protect themselves. Wash contaminated clothing before reuse.

5. Fire-fighting measures

Suitable extinguishing media Water fog. Foam. Carbon dioxide (CO₂). Dry chemical powder.

Unsuitable extinguishing media Do not use water jet as an extinguisher, as this will spread the fire.

Specific hazards arising from the chemical During fire, gases hazardous to health may be formed.

Special protective equipment and precautions for firefighters Wear full protective clothing, including helmet, self-contained positive pressure or pressure demand breathing apparatus, protective clothing and face mask.

Fire fighting equipment/instructions Move containers from fire area if you can do so without risk. In case of fire and/or explosion do not breathe fumes. Cool containers / tanks with water spray. Use standard firefighting procedures and consider the hazards of other involved materials.

Specific methods Use standard firefighting procedures and consider the hazards of other involved materials.

General fire hazards No unusual fire or explosion hazards noted.

6. Accidental release measures

Personal precautions, protective equipment and emergency procedures Keep unnecessary personnel away. Wear appropriate protective equipment and clothing during clean-up. Keep people away from and upwind of spill/leak. Do not touch damaged containers or spilled material unless wearing appropriate protective clothing. Avoid contact with spilled material. Ensure adequate ventilation. Avoid breathing mist/vapor. For personal protection, see section 8 of the SDS.

Methods and materials for containment and cleaning up Small Spills: Place in waste disposal container. Wet area may be slippery. Spread sand/grit. Following product recovery, flush area with water. Wipe up with absorbent material (e.g. cloth, fleece). Clean surface thoroughly to remove residual contamination.

Large Spills: Cover with plastic sheet to prevent spreading. Stop the flow of material, if this is without risk. Dike the spilled material, where this is possible. Absorb with earth, sand or other non-combustible material and transfer to containers for later disposal. Ventilate the area.

Never return spills to original containers for re-use. For waste disposal, see section 13 of the SDS.

Environmental precautions Avoid discharge into drains, water courses or onto the ground.

7. Handling and storage

Precautions for safe handling Observe good industrial hygiene practices. Do not get in eyes, on skin, on clothing. Provide adequate ventilation. Wear appropriate personal protective equipment. Avoid contact with eyes, skin, and clothing. Wash hands thoroughly after handling.

Conditions for safe storage, including any incompatibilities

Store in tightly closed container. Store away from incompatible materials (see Section 10 of the SDS). Store in cool, well ventilated area. Store containers closed when not in use. Avoid high temperatures. Protect from freezing. If frozen, thaw completely and mix thoroughly prior to use.

8. Exposure controls/personal protection**Biological limit values**

No biological exposure limits noted for the ingredient(s).

Appropriate engineering controls

Provide adequate ventilation. Provide eyewash station and safety shower.

Individual protection measures, such as personal protective equipment**Eye/face protection**

Wear safety glasses with side shields (or goggles).

Skin protection**Hand protection**

Wear appropriate chemical resistant gloves. The choice of an appropriate glove does not only depend on its material but also on other quality features and is different from one producer to the other. Glove selection must take into account any solvents and other hazards present.

Other

Wear appropriate chemical resistant clothing. Use of an impervious apron is recommended. Wash off after each use. Replace as necessary.

Respiratory protection

In case of insufficient ventilation, wear suitable respiratory equipment. A respiratory protection program that meets OSHA's 29 CFR 1910.34 and ANSI Z88.2 requirements must be followed whenever workplace conditions warrant a respirator's use.

Thermal hazards

Wear appropriate thermal protective clothing, when necessary.

General hygiene considerations

Always observe good personal hygiene measures, such as washing after handling the material and before eating, drinking, and/or smoking. Routinely wash work clothing and protective equipment to remove contaminants. Contaminated work clothing should not be allowed out of the workplace.

9. Physical and chemical properties**Appearance**

Liquid

Physical state

Liquid.

Form

Liquid.

Color

Amber to brown

Odor

Slightly sweet odor

Odor threshold

Not available.

pH (concentrated product)

2.6 Neat

Melting point/freezing point

27 °F (-3 °C)

Initial boiling point and boiling range

212 °F (100 °C)

Flash point

Not Applicable

Evaporation rate

Slower than Water

Flammability (solid, gas)

Not applicable.

Upper/lower flammability or explosive limits**Explosive limit - lower (%)**

Not available.

Explosive limit - upper (%)

Not available.

Vapor pressure

18 mmHg

Vapor pressure temp.

70 °F (21 °C)

Vapor density

< 1

Relative density

1.17

Relative density temperature

70 °F (21 °C)

Solubility(ies)**Solubility (water)**

100 %

Partition coefficient (n-octanol/water)

Not available.

Auto-ignition temperature

Not available.

Decomposition temperature

Not available.

Viscosity

17 mPa.s

Viscosity temperature

70 °F (21 °C)

Other information

Explosive properties	Not explosive.
Oxidizing properties	Not oxidizing.
pH in aqueous solution	3 (5% Solution)
Pour point	32 °F (0 °C)
VOC	0 % ESTIMATED

10. Stability and reactivity

Reactivity	The product is stable and non-reactive under normal conditions of use, storage and transport.
Chemical stability	Material is stable under normal conditions.
Possibility of hazardous reactions	Hazardous polymerization does not occur.
Conditions to avoid	Contact with incompatible materials. Keep away from heat, hot surfaces, sparks, open flames and other ignition sources.
Incompatible materials	Strong oxidizing agents.
Hazardous decomposition products	Oxides of carbon, nitrogen, and sulphur evolved in fire.

11. Toxicological information**Information on likely routes of exposure**

Inhalation	Prolonged inhalation may be harmful.
Skin contact	Causes skin irritation. May cause an allergic skin reaction.
Eye contact	Causes serious eye irritation.
Ingestion	Ingestion of large amounts may produce gastrointestinal disturbances including irritation, nausea, and diarrhea.

Symptoms related to the physical, chemical and toxicological characteristics	Immediate effects: Severe eye irritation. Skin irritation. May cause redness and pain. Delayed effects: May cause an allergic skin reaction. Dermatitis. Rash.
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Information on toxicological effects**Acute toxicity**

Product	Species	Test Results
GENGARD GN8020		
<u>Acute</u>		
Dermal		
LD50	Rabbit	> 5000 mg/kg (Calculated according to GHS additivity formula)
Oral		
LD50	Rat	> 5000 mg/kg (Calculated according to GHS additivity formula)

Components	Species	Test Results
CARBOXYLIC ACID POLYMER		
<u>Acute</u>		
Oral		
LD50	Rat	4563 mg/kg
Maleic acid (CAS 110-16-7)		
<u>Acute</u>		
Dermal		
LD50	Rabbit	1560 mg/kg
Inhalation		
LC50	Rat	> 2.88 mg/L, 4 Hour
Oral		
LD50	Rat	708 mg/kg

Skin corrosion/irritation	Causes skin irritation.
----------------------------------	-------------------------

Serious eye damage/eye irritation Causes eye irritation.

Respiratory or skin sensitization

Respiratory sensitization This product is not expected to cause respiratory sensitization.

Skin sensitization May cause an allergic skin reaction.

Germ cell mutagenicity Not classified.

Carcinogenicity Not classified.

IARC Monographs. Overall Evaluation of Carcinogenicity

Not listed.

OSHA Specifically Regulated Substances (29 CFR 1910.1001-1053)

Not listed.

US. National Toxicology Program (NTP) Report on Carcinogens

Not listed.

Reproductive toxicity Not classified.

Specific target organ toxicity - single exposure Not classified.

Specific target organ toxicity - repeated exposure Not classified.

Aspiration hazard Not classified.

12. Ecological information

Ecotoxicity

Product		Species	Test Results
Aquatic			
Algae	IC50	Selenastrum (algae)	3872 mg/l, 96 hour (pH adjusted)
	NOEL	Selenastrum (algae)	2000 mg/l, 96 hour (pH adjusted)
Crustacea	LC50	Daphnia magna	3628 mg/l, 48 hour (pH adjusted)
	NOEL	Daphnia magna	1250 mg/l, 48 hour (pH adjusted)
Fish	LC50	Fathead Minnow	5814 mg/l, 96 hour (pH adjusted)
		Rainbow Trout	7071 mg/l, 96 hour (pH adjusted)
	NOEL	Fathead Minnow	5000 mg/l, 96 hour (pH adjusted)
		Rainbow Trout	5000 mg/l, 96 hour (pH adjusted)

Persistence and degradability

- COD (mgO₂/g) 359
- BOD 5 (mgO₂/g) 21
- BOD 28 (mgO₂/g) 3
- Closed Bottle Test (% Degradation in 28 days) 1 OECD 301D
- TOC (mg C/g) 142 (calculated data)

Bioaccumulative potential

Partition coefficient n-octanol / water (log K_{ow})
Maleic acid -0.48

Mobility in soil No data available.

Other adverse effects Not available.

13. Disposal considerations

Disposal instructions Dispose of contents/container in accordance with local/regional/national/international regulations. Collect and reclaim or dispose in sealed containers at licensed waste disposal site.

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

Dispose of in accordance with local regulations. Empty containers or liners may retain some product residues. This material and its container must be disposed of in a safe manner. 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

Via an authorized waste disposal contractor to an approved waste disposal site, observing all local and national regulations. Since emptied containers may retain product residue, follow label warnings even after container is emptied. Empty containers should be taken to an approved waste handling site for recycling or disposal.

14. Transport information**DOT**

Not regulated as dangerous goods.

IATA

Not regulated as dangerous goods.

IMDG

Not regulated as dangerous goods.

15. Regulatory information**US federal regulations**

This product is a "Hazardous Chemical" as defined by the OSHA Hazard Communication Standard, 29 CFR 1910.1200.

Toxic Substances Control Act (TSCA)**TSCA Section 12(b) Export Notification (40 CFR 707, Subpt. D)**

Not regulated.

CERCLA Hazardous Substance List (40 CFR 302.4)

Maleic acid (CAS 110-16-7)

Listed.

SARA 304 Emergency release notification

Not regulated.

OSHA Specifically Regulated Substances (29 CFR 1910.1001-1053)

Not listed.

Superfund Amendments and Reauthorization Act of 1986 (SARA)**SARA 302 Extremely hazardous substance**

Not listed.

SARA 311/312 Hazardous chemical

Yes

Classified hazard categories

Skin corrosion or irritation
Serious eye damage or eye irritation
Respiratory or skin sensitization

SARA 313 (TRI reporting)

Not regulated.

Other federal regulations**Clean Air Act (CAA) Section 112 Hazardous Air Pollutants (HAPs) List**

Acrylic acid (CAS 79-10-7)

Clean Air Act (CAA) Section 112(r) Accidental Release Prevention (40 CFR 68.130)

Not regulated.

Safe Drinking Water Act (SDWA)

Contains component(s) regulated under the Safe Drinking Water Act.

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)

A "No" indicates that one or more components of the product are not listed or exempt from listing on the inventory administered by the governing country(s).

NSF Registered and/or meets USDA (according to 1998 guidelines):

Registration No. – 144523
Category Code(s):
G5 Cooling and retort water treatment products
G7 Boiler, steam line treatment products – nonfood contact

US state regulations

California Proposition 65

California Safe Drinking Water and Toxic Enforcement Act of 2016 (Proposition 65): This material is not known to contain any chemicals currently listed as carcinogens or reproductive toxins. For more information go to www.P65Warnings.ca.gov.

US - California Proposition 65 - CRT: Listed date/Carcinogenic substance

No ingredient listed.

US - California Proposition 65 - CRT: Listed date/Developmental toxin

No ingredient listed.

US - California Proposition 65 - CRT: Listed date/Female reproductive toxin

No ingredient listed.

US - California Proposition 65 - CRT: Listed date/Male reproductive toxin

No ingredient listed.

16. Other information, including date of preparation or last revision

Issue date Sep-26-2014

Revision date Feb-19-2023

Version # 6.1

NFPA ratings Health: 2
Flammability: 0
Instability: 0

NFPA ratings



List of abbreviations

CAS: Chemical Abstract Service Registration Number
NFPA: National Fire Protection Association
ACGIH: American Conference of Governmental Industrial Hygienists
TWA: Time Weighted Average
STEL: Short Term Exposure Limit
LD50: Lethal Dose, 50%
LC50: Lethal Concentration, 50%
EC50: Effect Concentration, 50%
NOEL: No Observed Effect Level
COD: Chemical Oxygen Demand
BOD: Biochemical Oxygen Demand
TOC: Total Organic Carbon
CEN: European Committee for Standardisation
IATA: International Air Transport Association
IMDG: International Maritime Dangerous Goods Code
TSRN indicates a Trade Secret Registry Number is used in place of the CAS number.

References: No data available

Disclaimer The information provided in this Safety Data Sheet is correct to the best of our knowledge, information and belief at the date of its publication. The information given is designed only as a guidance for safe handling, use, processing, storage, transportation, disposal and release and is not to be considered a warranty or quality specification. The information relates only to the specific material designated and may not be valid for such material used in combination with any other materials or in any process, unless specified in the text.

Revision information Product and Company Identification: Product Registration Numbers
Composition / Information on Ingredients: Disclosure Overrides
Other information, including date of preparation or last revision: Prepared by
GHS: Classification

Prepared by This SDS has been prepared by Veolia Water Technologies & Solutions' Regulatory Department (1-215-355-3300).

* Trademark of Veolia. May be registered in one or more countries.



SAFETY DATA SHEET

INHIBITOR ECP8130

1. Identification

Product identifier	INHIBITOR ECP8130
Other means of identification	None.
Recommended use	Corrosion inhibitor
Recommended restrictions	Industrial use only.

Company/undertaking identification

SUEZ WTS USA, Inc.
4636 Somerton Road
Trevose, PA 19053
T 215 355 3300, F 215 953 5524

Emergency telephone

(800) 877 1940

2. Hazard(s) identification

Physical hazards	Corrosive to metals	Category 1
Health hazards	Skin corrosion/irritation	Category 1B
	Serious eye damage/eye irritation	Category 1
OSHA defined hazards	Not classified.	

Label elements



Signal word Danger

Hazard statement May be corrosive to metals. Causes severe skin burns and eye damage. Causes serious eye damage.

Precautionary statement

Prevention Keep only in original container. Do not breathe mist or vapor. Wash thoroughly after handling. Wear protective gloves/protective clothing/eye protection/face protection.

Response If swallowed: Rinse mouth. Do NOT induce vomiting. If on skin (or hair): Take off immediately all contaminated clothing. Rinse skin with water/shower. If inhaled: Remove person to fresh air and keep comfortable for breathing. If in eyes: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing. Immediately call a poison center/doctor. Wash contaminated clothing before reuse. Absorb spillage to prevent material damage.

Storage Store locked up. Store in corrosive resistant container with a resistant inner liner.

Disposal Dispose of contents/container in accordance with local/regional/national/international regulations.

Hazard(s) not otherwise classified (HNOC) None known.

Supplemental information None.

3. Composition/information on ingredients

Mixtures

Components	CAS #	Percent
Sodium hydroxide	1310-73-2	2.5 - 10
Acid Derivative	TSRN 125438 - 9999	

Composition comments Information for specific product ingredients as required by the U.S. OSHA HAZARD COMMUNICATION STANDARD is listed. Refer to additional sections of this SDS for our assessment of the potential hazards of this formulation.

4. First-aid measures

Inhalation

Move to fresh air. Call a physician if symptoms develop or persist.

Skin contact

Take off immediately all contaminated clothing. Rinse skin with water/shower. Call a physician or poison control center immediately. Chemical burns must be treated by a physician. Wash contaminated clothing before reuse.

Eye contact

Immediately flush eyes with plenty of water for at least 15 minutes. Remove contact lenses, if present and easy to do. Continue rinsing. Call a physician or poison control center immediately.

Ingestion

Call a physician or poison control center immediately. Rinse mouth. Do not induce vomiting. If vomiting occurs, keep head low so that stomach content doesn't get into the lungs.

Most important symptoms/effects, acute and delayed

Burning pain and severe corrosive skin damage. Causes serious eye damage. Symptoms may include stinging, tearing, redness, swelling, and blurred vision. Permanent eye damage including blindness could result.

Indication of immediate medical attention and special treatment needed

Provide general supportive measures and treat symptomatically. Chemical burns: Flush with water immediately. While flushing, remove clothes which do not adhere to affected area. Call an ambulance. Continue flushing during transport to hospital. Keep victim under observation. Symptoms may be delayed.

General information

Ensure that medical personnel are aware of the material(s) involved, and take precautions to protect themselves.

5. Fire-fighting measures

Suitable extinguishing media

Water fog. Foam. Dry chemical powder. Carbon dioxide (CO2).

Unsuitable extinguishing media

Do not use water jet as an extinguisher, as this will spread the fire.

Specific hazards arising from the chemical

During fire, gases hazardous to health may be formed.

Special protective equipment and precautions for firefighters

Wear full protective clothing, including helmet, self-contained positive pressure or pressure demand breathing apparatus, protective clothing and face mask.

Fire fighting equipment/instructions

In case of fire and/or explosion do not breathe fumes. Use standard firefighting procedures and consider the hazards of other involved materials. Move containers from fire area if you can do so without risk. Cool containers / tanks with water spray.

Specific methods

Use standard firefighting procedures and consider the hazards of other involved materials.

6. Accidental release measures

Personal precautions, protective equipment and emergency procedures

Keep unnecessary personnel away. Keep people away from and upwind of spill/leak. Wear appropriate protective equipment and clothing during clean-up. Do not breathe mist or vapor. Do not touch damaged containers or spilled material unless wearing appropriate protective clothing. Ensure adequate ventilation. Local authorities should be advised if significant spillages cannot be contained. For personal protection, see section 8 of the SDS.

Methods and materials for containment and cleaning up

Prevent entry into waterways, sewer, basements or confined areas.

Large Spills: Stop the flow of material, if this is without risk. Dike the spilled material, where this is possible. Absorb spillage to prevent material damage. Use a non-combustible material like vermiculite, sand or earth to soak up the product and place into a container for later disposal. Following product recovery, flush area with water.

Small Spills: Wipe up with absorbent material (e.g. cloth, fleece). Clean surface thoroughly to remove residual contamination.

Environmental precautions

Never return spills to original containers for re-use. For waste disposal, see section 13 of the SDS. Avoid discharge into drains, water courses or onto the ground.

7. Handling and storage

Precautions for safe handling

Do not get in eyes, on skin, or on clothing. Avoid prolonged exposure. Provide adequate ventilation. Wear appropriate personal protective equipment. Observe good industrial hygiene practices.

Conditions for safe storage, including any incompatibilities

Store locked up. Store in a cool, dry place out of direct sunlight. Store in corrosive resistant container with a resistant inner liner. Store in tightly closed container. Keep only in the original container. Store away from incompatible materials (see Section 10 of the SDS).

8. Exposure controls/personal protection

Occupational exposure limits

US. OSHA Table Z-1 Limits for Air Contaminants (29 CFR 1910.1000)

Components	Type	Value
Sodium hydroxide (CAS 1310-73-2)	PEL	2 mg/m3

US. ACGIH Threshold Limit Values

Components	Type	Value
Sodium hydroxide (CAS 1310-73-2)	Ceiling	2 mg/m3

US. NIOSH: Pocket Guide to Chemical Hazards

Components	Type	Value
Sodium hydroxide (CAS 1310-73-2)	Ceiling	2 mg/m3

Biological limit values

No biological exposure limits noted for the ingredient(s).

Appropriate engineering controls

Eye wash facilities and emergency shower must be available when handling this product. Good general ventilation should be used. Ventilation rates should be matched to conditions. If applicable, use process enclosures, local exhaust ventilation, or other engineering controls to maintain airborne levels below recommended exposure limits. If exposure limits have not been established, maintain airborne levels to an acceptable level.

Individual protection measures, such as personal protective equipment

Eye/face protection

Wear safety glasses with side shields (or goggles) and a face shield.

Skin protection

Hand protection

Wear appropriate chemical resistant gloves. The choice of an appropriate glove does not only depend on its material but also on other quality features and is different from one producer to the other. Glove selection must take into account any solvents and other hazards present.

Other

Wear appropriate chemical resistant clothing.

Respiratory protection

If engineering controls do not maintain airborne concentrations below recommended exposure limits (where applicable) or to an acceptable level (in countries where exposure limits have not been established), an approved respirator must be worn. A respiratory protection program that meets OSHA's 29 CFR 1910.34 and ANSI Z88.2 requirements must be followed whenever workplace conditions warrant a respirator's use.

Thermal hazards

Wear appropriate thermal protective clothing, when necessary.

General hygiene considerations

Always observe good personal hygiene measures, such as washing after handling the material and before eating, drinking, and/or smoking. Routinely wash work clothing and protective equipment to remove contaminants.

9. Physical and chemical properties

Appearance

Color

Light yellow

Physical state

Liquid

Odor

Not available.

Odor threshold

Not available.

Melting point/freezing point

18 °F (-8 °C)

Initial boiling point and boiling range

212 °F (100 °C)

Flash point

> 199 °F (> 93 °C) P-M(CC)

Evaporation rate

Slower than Ether

Flammability (solid, gas)

Not applicable.

Upper/lower flammability or explosive limits

Flammability limit - lower (%)	Not available.
Flammability limit - upper (%)	Not available.
Explosive limit - lower (%)	Not available.
Explosive limit - upper (%)	Not available.
Vapor pressure	18 mmHg
Vapor pressure temp.	70 °F (21 °C)
Vapor density	< 1
Relative density	1.21
Relative density temperature	70 °F (21 °C)
Solubility(ies)	
Solubility (water)	100 %
Partition coefficient (n-octanol/water)	Not available.
Auto-ignition temperature	Not available.
Decomposition temperature	Not available.
Viscosity	8 mPa.s
Viscosity temperature	73 °F (23 °C)
Other information	
Explosive properties	Not explosive.
Oxidizing properties	Not oxidizing.
Specific gravity	1.206
VOC	0 % ESTIMATED
pH (concentrated product)	13.5 Neat
pH in aqueous solution	12.5 (5% Solution)

10. Stability and reactivity

Reactivity	May be corrosive to metals.
Chemical stability	Material is stable under normal conditions.
Possibility of hazardous reactions	Hazardous polymerization does not occur.
Conditions to avoid	Keep away from heat, hot surfaces, sparks, open flames and other ignition sources. Avoid temperatures exceeding the flash point. Contact with incompatible materials.
Incompatible materials	Strong oxidizing agents. Metals.
Hazardous decomposition products	No hazardous decomposition products are known.

11. Toxicological information**Information on likely routes of exposure**

Inhalation	May cause irritation to the respiratory system. Prolonged inhalation may be harmful.
Skin contact	Causes severe skin burns.
Eye contact	Causes serious eye damage.
Ingestion	Causes digestive tract burns.
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	Not classified.

Components	Species	Test Results
Acid Derivative (CAS TSRN 125438 - 9999)		
Acute		
Oral		
LD50	Rat	1720 mg/kg
Sodium hydroxide (CAS 1310-73-2)		
Acute		
Dermal		
LD50	Rabbit	1350 mg/kg
Oral		
LD50	Rabbit	> 500 mg/kg
Skin corrosion/irritation	Causes severe skin burns and eye damage.	
Serious eye damage/eye irritation	Causes serious eye damage.	
Respiratory or skin sensitization		
Respiratory sensitization	This product is not expected to cause respiratory sensitization.	
Skin sensitization	This product is not expected to cause skin sensitization.	
Germ cell mutagenicity	No data available to indicate product or any components present at greater than 0.1% are mutagenic or genotoxic.	
Carcinogenicity	Not classified.	
IARC Monographs. Overall Evaluation of Carcinogenicity		
Not listed.		
OSHA Specifically Regulated Substances (29 CFR 1910.1001-1052)		
Not regulated.		
US. National Toxicology Program (NTP) Report on Carcinogens		
Not listed.		
Reproductive toxicity	This product is not expected to cause reproductive or developmental effects.	
Specific target organ toxicity - single exposure	Not classified.	
Specific target organ toxicity - repeated exposure	Not classified.	
Aspiration hazard	Based on available data, the classification criteria are not met.	
Chronic effects	Prolonged inhalation may be harmful.	

12. Ecological information

Ecotoxicity

Product	Species		Test Results	
INHIBITOR ECP8130 (CAS Mixture)				
Aquatic	Crustacea	LC50	Daphnia magna	365.9 mg/L, Static Renewal Bioassay, 48 H, (pH adjusted)
			Mysid Shrimp	182.1 mg/L, Static Renewal Bioassay, 96 H, (pH adjusted)
		NOEL	Daphnia magna	250 mg/L, Static Renewal Bioassay, 48 H, (pH adjusted)
			Mysid Shrimp	125 mg/L, Static Renewal Bioassay, 96 H, (pH adjusted)
	Fish	LC50	Fathead Minnow	163.4 mg/L, Static Renewal Bioassay, 96 H, (pH adjusted)
			Rainbow Trout	44.2 mg/L, Static Renewal Bioassay, 96 H, (pH adjusted)
		NOEL	Fathead Minnow	125 mg/L, Static Renewal Bioassay, 96 H, (pH adjusted)
			Rainbow Trout	31.3 mg/L, Static Renewal Bioassay, 96 H, (pH adjusted)

Bioaccumulative potential	No data available.
Mobility in soil	No data available.
Other adverse effects	Not available.
Persistence and degradability	

13. Disposal considerations

Disposal instructions	Collect and reclaim or dispose in sealed containers at licensed waste disposal site. Incinerate the material under controlled conditions in an approved incinerator. Dispose of contents/container in accordance with local/regional/national/international regulations.
Local disposal regulations	Dispose in accordance with all applicable regulations.
Hazardous waste code	D002: Waste Corrosive material [pH <=2 or >=12.5, or corrosive to steel] The waste code should be assigned in discussion between the user, the producer and the waste disposal company.
Waste from residues / unused products	Dispose of in accordance with local regulations. Empty containers or liners may retain some product residues. This material and its container must be disposed of in a safe manner (see: Disposal instructions).
Contaminated packaging	Since emptied containers may retain product residue, follow label warnings even after container is emptied. Empty containers should be taken to an approved waste handling site for recycling or disposal.

14. Transport information

DOT

UN number	UN1824
UN proper shipping name	Sodium hydroxide solution, RQ(Sodium hydroxide)
Transport hazard class(es)	
Class	8
Subsidiary risk	-
Packing group	II
Special precautions for user	Read safety instructions, SDS and emergency procedures before handling.
ERG number	154
Some containers may be exempt from Dangerous Goods/Hazmat Transport Regulations, please check BOL for exact container classification.	

IATA

UN number	UN1824
UN proper shipping name	Sodium hydroxide solution
Transport hazard class(es)	
Class	8
Subsidiary risk	-
Packing group	II
Environmental hazards	No.
ERG Code	154
Special precautions for user	Read safety instructions, SDS and emergency procedures before handling.

IMDG

UN number	UN1824
UN proper shipping name	SODIUM HYDROXIDE SOLUTION, RQ(Sodium hydroxide)
Transport hazard class(es)	
Class	8
Subsidiary risk	-
Packing group	II
Environmental hazards	
Marine pollutant	No.
EmS	F-A, S-B
Special precautions for user	Read safety instructions, SDS and emergency procedures before handling.

DOT



IATA; IMDG



15. Regulatory information

US federal regulations

This product is a "Hazardous Chemical" as defined by the OSHA Hazard Communication Standard, 29 CFR 1910.1200.

TSCA Section 12(b) Export Notification (40 CFR 707, Subpt. D)

Not regulated.

CERCLA Hazardous Substance List (40 CFR 302.4)

Sodium hydroxide (CAS 1310-73-2)

Listed.

SARA 304 Emergency release notification

Not regulated.

OSHA Specifically Regulated Substances (29 CFR 1910.1001-1052)

Not regulated.

Superfund Amendments and Reauthorization Act of 1986 (SARA)

SARA 302 Extremely hazardous substance

Not listed.

SARA 311/312 Hazardous chemical

Yes

Classified hazard categories

Corrosive to metal
Skin corrosion or irritation
Serious eye damage or eye irritation

SARA 313 (TRI reporting)

Not regulated.

Other federal regulations

Clean Air Act (CAA) Section 112 Hazardous Air Pollutants (HAPs) List

Formaldehyde (CAS 50-00-0)

Hydrochloric acid (CAS 7647-01-0)

Clean Air Act (CAA) Section 112(r) Accidental Release Prevention (40 CFR 68.130)

Formaldehyde (CAS 50-00-0)

Hydrochloric acid (CAS 7647-01-0)

Safe Drinking Water Act (SDWA)

Not regulated.

Inventory status

Country(s) or region

Canada

Canada

Inventory name

Domestic Substances List (DSL)

Non-Domestic Substances List (NDSL)

On inventory (yes/no)*

Yes

No

Country(s) or region	Inventory name	On inventory (yes/no)*
United States & Puerto Rico	Toxic Substances Control Act (TSCA) Inventory	Yes

*A "Yes" indicates that all components of this product comply with the inventory requirements administered by the governing country(s)
A "No" indicates that one or more components of the product are not listed or exempt from listing on the inventory administered by the governing country(s).

US state regulations

California Proposition 65



WARNING: WARNING: This product can expose you to Formaldehyde, which is known to the State of California to cause cancer. For more information go to www.P65Warnings.ca.gov.

US - California Proposition 65 - CRT: Listed date/Carcinogenic substance

Formaldehyde (CAS 50-00-0) Listed: January 1, 1988

US - California Proposition 65 - CRT: Listed date/Developmental toxin

No ingredient listed.

US - California Proposition 65 - CRT: Listed date/Female reproductive toxin

No ingredient listed.

US - California Proposition 65 - CRT: Listed date/Male reproductive toxin

No ingredient listed.

16. Other information, including date of preparation or last revision

Issue date	Dec-15-2020
Revision date	Apr-14-2021
Version #	1.2
NFPA ratings	Health: 3 Flammability: 0 Instability: 0

NFPA ratings



List of abbreviations

ACGIH: American Conference of Governmental Industrial Hygienists
BOD: Biochemical Oxygen Demand
CAS: Chemical Abstract Service Registration Number
COD: Chemical Oxygen Demand
DOT: Department of Transportation (49 CFR 172.101).
GHS: Globally Harmonized System of Classification and Labeling of Chemicals.
NFPA: National Fire Protection Association
IARC: International Agency for Research on Cancer.
IATA: International Air Transport Association
IMDG: International Maritime Dangerous Goods Code
LC50: Lethal Concentration, 50%
LD50: Lethal Dose, 50%
NOEL: No Observed Effect Level
OSHA: Occupational Safety & Health Administration.
STEL: Short Term Exposure Limit
TOC: Total Organic Carbon
TSRN indicates a Trade Secret Registry Number is used in place of the CAS number.
TWA: Time Weighted Average
WHMIS: Workplace Hazardous Materials Information System.

References: No data available

Disclaimer The information provided in this Safety Data Sheet is correct to the best of our knowledge, information and belief at the date of its publication. The information given is designed only as a guidance for safe handling, use, processing, storage, transportation, disposal and release and is not to be considered a warranty or quality specification. The information relates only to the specific material designated and may not be valid for such material used in combination with any other materials or in any process, unless specified in the text.

Prepared by This SDS has been prepared by SUEZ Regulatory Department (1-215-355-3300).



SAFETY DATA SHEET

INHIBITOR ECP8130

1. Identification

Product identifier INHIBITOR ECP8130
Other means of identification None.
Recommended use Corrosion inhibitor
Recommended restrictions Industrial use only.

Company/undertaking identification

SUEZ WTS USA, Inc.
4636 Somerton Road
Trevose, PA 19053
T 215 355 3300, F 215 953 5524

Emergency telephone

(800) 877 1940

2. Hazard(s) identification

Physical hazards	Corrosive to metals	Category 1
Health hazards	Skin corrosion/irritation	Category 1B
	Serious eye damage/eye irritation	Category 1
OSHA defined hazards	Not classified.	

Label elements



Signal word Danger

Hazard statement May be corrosive to metals. Causes severe skin burns and eye damage. Causes serious eye damage.

Precautionary statement

Prevention Keep only in original container. Do not breathe mist or vapor. Wash thoroughly after handling. Wear protective gloves/protective clothing/eye protection/face protection.

Response If swallowed: Rinse mouth. Do NOT induce vomiting. If on skin (or hair): Take off immediately all contaminated clothing. Rinse skin with water/shower. If inhaled: Remove person to fresh air and keep comfortable for breathing. If in eyes: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing. Immediately call a poison center/doctor. Wash contaminated clothing before reuse. Absorb spillage to prevent material damage.

Storage Store locked up. Store in corrosive resistant container with a resistant inner liner.

Disposal Dispose of contents/container in accordance with local/regional/national/international regulations.

Hazard(s) not otherwise classified (HNOC) None known.

Supplemental information None.

3. Composition/information on ingredients

Mixtures

Components	CAS #	Percent
Sodium hydroxide	1310-73-2	1 - 2.5
Halogenated Aromatic Heterocycle	TSRN 125438 - 7795	

Composition comments Information for specific product ingredients as required by the U.S. OSHA HAZARD COMMUNICATION STANDARD is listed. Refer to additional sections of this SDS for our assessment of the potential hazards of this formulation.

4. First-aid measures

Inhalation Move to fresh air. Call a physician if symptoms develop or persist.

Skin contact Take off immediately all contaminated clothing. Rinse skin with water/shower. Call a physician or poison control center immediately. Chemical burns must be treated by a physician. Wash contaminated clothing before reuse.

Eye contact Immediately flush eyes with plenty of water for at least 15 minutes. Remove contact lenses, if present and easy to do. Continue rinsing. Call a physician or poison control center immediately.

Ingestion Call a physician or poison control center immediately. Rinse mouth. Do not induce vomiting. If vomiting occurs, keep head low so that stomach content doesn't get into the lungs.

Most important symptoms/effects, acute and delayed Burning pain and severe corrosive skin damage. Causes serious eye damage. Symptoms may include stinging, tearing, redness, swelling, and blurred vision. Permanent eye damage including blindness could result.

Indication of immediate medical attention and special treatment needed Provide general supportive measures and treat symptomatically. Chemical burns: Flush with water immediately. While flushing, remove clothes which do not adhere to affected area. Call an ambulance. Continue flushing during transport to hospital. Keep victim under observation. Symptoms may be delayed.

General information Ensure that medical personnel are aware of the material(s) involved, and take precautions to protect themselves.

5. Fire-fighting measures

Suitable extinguishing media Water fog. Foam. Dry chemical powder. Carbon dioxide (CO2).

Unsuitable extinguishing media Do not use water jet as an extinguisher, as this will spread the fire.

Specific hazards arising from the chemical During fire, gases hazardous to health may be formed.

Special protective equipment and precautions for firefighters Wear full protective clothing, including helmet, self-contained positive pressure or pressure demand breathing apparatus, protective clothing and face mask.

Fire fighting equipment/instructions In case of fire and/or explosion do not breathe fumes. Use standard firefighting procedures and consider the hazards of other involved materials. Move containers from fire area if you can do so without risk. Cool containers / tanks with water spray.

Specific methods Use standard firefighting procedures and consider the hazards of other involved materials.

6. Accidental release measures

Personal precautions, protective equipment and emergency procedures Keep unnecessary personnel away. Keep people away from and upwind of spill/leak. Wear appropriate protective equipment and clothing during clean-up. Do not breathe mist or vapor. Do not touch damaged containers or spilled material unless wearing appropriate protective clothing. Ensure adequate ventilation. Local authorities should be advised if significant spillages cannot be contained. For personal protection, see section 8 of the SDS.

Methods and materials for containment and cleaning up Prevent entry into waterways, sewer, basements or confined areas.

Large Spills: Stop the flow of material, if this is without risk. Dike the spilled material, where this is possible. Absorb spillage to prevent material damage. Use a non-combustible material like vermiculite, sand or earth to soak up the product and place into a container for later disposal. Following product recovery, flush area with water.

Small Spills: Wipe up with absorbent material (e.g. cloth, fleece). Clean surface thoroughly to remove residual contamination.

Never return spills to original containers for re-use. For waste disposal, see section 13 of the SDS.

Environmental precautions Avoid discharge into drains, water courses or onto the ground.

7. Handling and storage

Precautions for safe handling

Do not get in eyes, on skin, or on clothing. Avoid prolonged exposure. Provide adequate ventilation. Wear appropriate personal protective equipment. See Section 8 of the SDS for Personal Protective Equipment. Observe good industrial hygiene practices.

Conditions for safe storage, including any incompatibilities

Store locked up. Store in a cool, dry place out of direct sunlight. Store in corrosive resistant container with a resistant inner liner. Store in tightly closed container. Keep only in the original container. Store away from incompatible materials (see Section 10 of the SDS).

8. Exposure controls/personal protection

Occupational exposure limits

US. OSHA Table Z-1 Limits for Air Contaminants (29 CFR 1910.1000)

Components	Type	Value
Sodium hydroxide (CAS 1310-73-2)	PEL	2 mg/m3

US. ACGIH Threshold Limit Values

Components	Type	Value
Sodium hydroxide (CAS 1310-73-2)	Ceiling	2 mg/m3

US. NIOSH: Pocket Guide to Chemical Hazards

Components	Type	Value
Sodium hydroxide (CAS 1310-73-2)	Ceiling	2 mg/m3

Biological limit values

No biological exposure limits noted for the ingredient(s).

Appropriate engineering controls

Provide adequate ventilation. Eye wash facilities and emergency shower must be available when handling this product.

Individual protection measures, such as personal protective equipment

Eye/face protection

Wear safety glasses with side shields (or goggles) and a face shield.

Skin protection

Hand protection

Wear appropriate chemical resistant gloves. The choice of an appropriate glove does not only depend on its material but also on other quality features and is different from one producer to the other. Glove selection must take into account any solvents and other hazards present.

Other

Wear appropriate chemical resistant clothing.

Respiratory protection

In case of insufficient ventilation, wear suitable respiratory equipment. A respiratory protection program that meets OSHA's 29 CFR 1910.34 and ANSI Z88.2 requirements must be followed whenever workplace conditions warrant a respirator's use.

Thermal hazards

Wear appropriate thermal protective clothing, when necessary.

General hygiene considerations

Always observe good personal hygiene measures, such as washing after handling the material and before eating, drinking, and/or smoking. Routinely wash work clothing and protective equipment to remove contaminants.

9. Physical and chemical properties

Appearance

Liquid

Physical state

Liquid.

Form

Not available.

Color

Light yellow

Odor

Characteristic

Odor threshold

Not available.

pH (concentrated product)

13.5 Neat

Melting point/freezing point

18 °F (-8 °C)

Initial boiling point and boiling range

212 °F (100 °C)

Flash point

> 199 °F (> 93 °C) P-M(CC)

Evaporation rate

Slower than Ether

Flammability (solid, gas)

Not applicable.

Upper/lower flammability or explosive limits

Explosive limit - lower (%) Not available.

Explosive limit - upper (%) Not available.

Vapor pressure 18 mmHg

Vapor pressure temp. 70 °F (21 °C)

Vapor density < 1

Relative density 1.21

Relative density temperature 70 °F (21 °C)

Solubility(ies)

Solubility (water) 100 %

Partition coefficient
(n-octanol/water) Not available.

Auto-ignition temperature Not available.

Decomposition temperature Not available.

Viscosity 8 mPa.s

Viscosity temperature 73 °F (23 °C)

Other information

Explosive properties Not explosive.

Oxidizing properties Not oxidizing.

pH in aqueous solution 12.5 (5% Solution)

VOC 0 % ESTIMATED

10. Stability and reactivity

Reactivity May be corrosive to metals.

Chemical stability Material is stable under normal conditions.

Possibility of hazardous reactions Hazardous polymerization does not occur.

Conditions to avoid Contact with incompatible materials.

Incompatible materials Strong oxidizing agents. Aluminum.

Hazardous decomposition products No hazardous decomposition products are known.

11. Toxicological information**Information on likely routes of exposure**

Inhalation May cause irritation to the respiratory system. Prolonged inhalation may be harmful.

Skin contact Causes severe skin burns.

Eye contact Causes serious eye damage.

Ingestion Causes digestive tract burns.

Symptoms related to the physical, chemical and toxicological characteristics Immediate effects: Burning pain and severe corrosive skin damage. Causes serious eye damage. Symptoms may include stinging, tearing, redness, swelling, and blurred vision. Delayed effects: Permanent eye damage including blindness could result.

Information on toxicological effects

Acute toxicity Not classified.

Product	Species	Test Results
INHIBITOR ECP8130		
Acute		
Dermal		
LD50	Rabbit	> 5000 mg/kg
Oral		
LD50	Rat	> 5000 mg/kg

Components	Species	Test Results
Halogenated Aromatic Heterocycle		
<u>Acute</u>		
Dermal		
LD50	Rat	> 5000 mg/kg
Oral		
LD50	Rat	3100 mg/kg
Sodium hydroxide (CAS 1310-73-2)		
<u>Acute</u>		
Dermal		
LD50	Rabbit	1350 mg/kg
Oral		
LD50	Rabbit	> 500 mg/kg
Skin corrosion/irritation	Causes severe skin burns and eye damage.	
Serious eye damage/eye irritation	Causes serious eye damage.	
Respiratory or skin sensitization		
Respiratory sensitization	This product is not expected to cause respiratory sensitization.	
Skin sensitization	This product is not expected to cause skin sensitization.	
Germ cell mutagenicity	Not classified.	
Carcinogenicity	Not classified.	
IARC Monographs. Overall Evaluation of Carcinogenicity		
Not listed.		
OSHA Specifically Regulated Substances (29 CFR 1910.1001-1053)		
Not listed.		
US. National Toxicology Program (NTP) Report on Carcinogens		
Not listed.		
Reproductive toxicity	Not classified.	
Specific target organ toxicity - single exposure	Not classified.	
Specific target organ toxicity - repeated exposure	Not classified.	
Aspiration hazard	Not classified.	
Chronic effects	Prolonged inhalation may be harmful.	

12. Ecological information

Ecotoxicity

Product	Species	Test Results
Aquatic		
Crustacea	ChV	Ceriodaphnia
		141.4 mg/L, 7 D (pH adjusted)
	IC25	Ceriodaphnia
		127.7 mg/L, 7 D (pH adjusted)
	LC50	Ceriodaphnia
		405 mg/L, 48 H (pH adjusted)
		Daphnia magna
		365.9 mg/L, 48 H (pH adjusted)
		Mysid Shrimp
		182.1 mg/L, 96 H (pH adjusted)
Fish	LOEL	Ceriodaphnia
		200 mg/L, 7 D (pH adjusted)
	NOEL	Ceriodaphnia
		250 mg/L, 48 H (pH adjusted)
		100 mg/L, 7 D (pH adjusted)
		Daphnia magna
		250 mg/L, 48 H (pH adjusted)
		Mysid Shrimp
		125 mg/L, 96 H (pH adjusted)
	LC50	Fathead Minnow
		163.4 mg/L, 96 H (pH adjusted)
		Rainbow Trout
		44.2 mg/L, 96 H (pH adjusted)

Product	Species	Test Results
	NOEL	
	Fathead Minnow	125 mg/L, 96 H (pH adjusted)
	Rainbow Trout	31.3 mg/L, 96 H (pH adjusted)
Persistence and degradability		
- COD (mgO2/g)	120 (calculated data)	
- BOD 5 (mgO2/g)	4 (calculated data)	
- BOD 28 (mgO2/g)	4 (calculated data)	
- Closed Bottle Test (% Degradation in 28 days)	3 (calculated data)	
- TOC (mg C/g)	44 (calculated data)	
Bioaccumulative potential	No data available.	
Mobility in soil	No data available.	
Other adverse effects	Not available.	
13. Disposal considerations		
Disposal instructions	Collect and reclaim or dispose in sealed containers at licensed waste disposal site. Incinerate the material under controlled conditions in an approved incinerator. Dispose of contents/container in accordance with local/regional/national/international regulations.	
Local disposal regulations	Dispose in accordance with all applicable regulations.	
Hazardous waste code	D002: Waste Corrosive material [pH <=2 or >=12.5, or corrosive to steel] The waste code should be assigned in discussion between the user, the producer and the waste disposal company.	
Waste from residues / unused products	Dispose of in accordance with local regulations. Empty containers or liners may retain some product residues. This material and its container must be disposed of in a safe manner (see: Disposal instructions).	
Contaminated packaging	Since emptied containers may retain product residue, follow label warnings even after container is emptied. Empty containers should be taken to an approved waste handling site for recycling or disposal.	
14. Transport information		
DOT		
UN number	UN1760	
UN proper shipping name	Corrosive liquids, n.o.s. (Sodium hydroxide, HALOGENATED AROMATIC HETEROCYCLE), RQ(Sodium hydroxide)	
Transport hazard class(es)		
Class	8	
Subsidiary risk	-	
Packing group	II	
Special precautions for user	Read safety instructions, SDS and emergency procedures before handling.	
ERG number	154	
Some containers may be exempt from Dangerous Goods/Hazmat Transport Regulations, please check BOL for exact container classification.		
IATA		
UN number	UN1760	
UN proper shipping name	Corrosive liquid, n.o.s. (Sodium hydroxide, HALOGENATED AROMATIC HETEROCYCLE)	
Transport hazard class(es)		
Class	8	
Subsidiary risk	-	
Packing group	II	
Environmental hazards	No.	
ERG Code	154	
Special precautions for user	Read safety instructions, SDS and emergency procedures before handling.	
IMDG		
UN number	UN1760	
UN proper shipping name	CORROSIVE LIQUID, N.O.S. (SODIUM HYDROXIDE, HALOGENATED AROMATIC HETEROCYCLE), RQ(Sodium hydroxide)	

Transport hazard class(es)**Class** 8**Subsidiary risk** -**Packing group** II**Environmental hazards****Marine pollutant** No.**EmS** F-A, S-B**Special precautions for user** Read safety instructions, SDS and emergency procedures before handling.**DOT****IATA; IMDG****15. Regulatory information****US federal regulations**

This product is a "Hazardous Chemical" as defined by the OSHA Hazard Communication Standard, 29 CFR 1910.1200.

Toxic Substances Control Act (TSCA)**TSCA Section 12(b) Export Notification (40 CFR 707, Subpt. D)**

Not regulated.

CERCLA Hazardous Substance List (40 CFR 302.4)

Sodium hydroxide (CAS 1310-73-2)

Listed.

SARA 304 Emergency release notification

Not regulated.

OSHA Specifically Regulated Substances (29 CFR 1910.1001-1053)

Not listed.

Superfund Amendments and Reauthorization Act of 1986 (SARA)**SARA 302 Extremely hazardous substance**

Not listed.

SARA 311/312 Hazardous chemical Yes**Classified hazard categories** Corrosive to metal
Skin corrosion or irritation
Serious eye damage or eye irritation**SARA 313 (TRI reporting)**

Not regulated.

Other federal regulations**Clean Air Act (CAA) Section 112 Hazardous Air Pollutants (HAPs) List**

Formaldehyde (CAS 50-00-0)

Clean Air Act (CAA) Section 112(r) Accidental Release Prevention (40 CFR 68.130)

Formaldehyde (CAS 50-00-0)

Safe Drinking Water Act (SDWA) Contains component(s) regulated under the Safe Drinking Water Act.**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)

A "No" indicates that one or more components of the product are not listed or exempt from listing on the inventory administered by the governing country(s).

US state regulations**US. California. Candidate Chemicals List. Safer Consumer Products Regulations (Cal. Code Regs, tit. 22, 69502.3, subd. (a))**

Sodium hydroxide (CAS 1310-73-2)

California Proposition 65**WARNING:** WARNING: This product can expose you to Formaldehyde, which is known to the State of California to cause cancer. For more information go to www.P65Warnings.ca.gov.**US - California Proposition 65 - CRT: Listed date/Carcinogenic substance**

Formaldehyde (CAS 50-00-0)

Listed: January 1, 1988

US - California Proposition 65 - CRT: Listed date/Developmental toxin

No ingredient listed.

US - California Proposition 65 - CRT: Listed date/Female reproductive toxin

No ingredient listed.

US - California Proposition 65 - CRT: Listed date/Male reproductive toxin

No ingredient listed.

16. Other information, including date of preparation or last revision**Issue date** Dec-15-2020**Revision date** Jul-13-2022**Version #** 3.0**NFPA ratings** Health: 3
Flammability: 0
Instability: 0**NFPA ratings****List of abbreviations**

DOT: Department of Transportation (49 CFR 172.101).
GHS: Globally Harmonized System of Classification and Labeling of Chemicals.
IARC: International Agency for Research on Cancer.
OSHA: Occupational Safety & Health Administration.
WHMIS: Workplace Hazardous Materials Information System.
ACGIH: American Conference of Governmental Industrial Hygienists
BOD: Biochemical Oxygen Demand
CAS: Chemical Abstract Service Registration Number
COD: Chemical Oxygen Demand
NFPA: National Fire Protection Association
IATA: International Air Transport Association
IMDG: International Maritime Dangerous Goods Code
LC50: Lethal Concentration, 50%
LD50: Lethal Dose, 50%
NOEL: No Observed Effect Level
STEL: Short Term Exposure Limit
TOC: Total Organic Carbon
TSRN indicates a Trade Secret Registry Number is used in place of the CAS number.
TWA: Time Weighted Average

References:

No data available

Material name: INHIBITOR ECP8130

Version number: 3.0

Disclaimer

The information provided in this Safety Data Sheet is correct to the best of our knowledge, information and belief at the date of its publication. The information given is designed only as a guidance for safe handling, use, processing, storage, transportation, disposal and release and is not to be considered a warranty or quality specification. The information relates only to the specific material designated and may not be valid for such material used in combination with any other materials or in any process, unless specified in the text.

Revision information

Composition / Information on Ingredients: Ingredients
Transport Information: Material Transportation Information
GHS: Classification

Prepared by

This SDS has been prepared by SUEZ Regulatory Department (1-215-355-3300).



SAFETY DATA SHEET

OPTIGUARD MCA4288

1. Identification

Product identifier	OPTIGUARD MCA4288
Other means of identification	None.
Recommended use	Internal boiler treatment
Recommended restrictions	None known.

Company/undertaking identification

Veolia WTS USA, Inc.
3600 Horizon Blvd.
Trevose, PA 19053
T 215 355 3300, F 215 953 5524

Emergency telephone

(800) 877 1940

2. Hazard(s) identification

Physical hazards	Corrosive to metals	Category 1
Health hazards	Skin corrosion/irritation	Category 1B
	Serious eye damage/eye irritation	Category 1
	Specific target organ toxicity, single exposure	Category 3 respiratory tract irritation
OSHA defined hazards	Not classified.	

Label elements



Signal word Danger

Hazard statement May be corrosive to metals. Causes severe skin burns and eye damage. Causes serious 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. Wash thoroughly after handling.
Response	If swallowed: Rinse mouth. Do NOT induce vomiting. If on skin (or hair): Take off immediately all contaminated clothing. Rinse skin with water/shower. If inhaled: Remove person to fresh air and keep comfortable for breathing. If in eyes: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing. Immediately call a poison center/doctor/. Specific treatment (see on this label). Wash contaminated clothing before reuse. Absorb spillage to prevent material damage. Immediately call a poison center/doctor.
Storage	Store in a well-ventilated place. Keep container tightly closed. Store locked up. Store in corrosive resistant/ container with a resistant inner liner.
Disposal	Dispose of contents/container in accordance with local/regional/national/international regulations. Dispose of contents/container to approved local facility.

Hazard(s) not otherwise classified (HNOC) None known.

Supplemental information None.

3. Composition/information on ingredients

Mixtures

Components	CAS #	Percent
Sodium hydroxide	1310-73-2	2.5 - 10
2-Diethylaminoethanol	100-37-8	1 - 2.5
Sodium carbonate	497-19-8	1 - 2.5

*Designates that a specific chemical identity and/or percentage of composition has been withheld as a trade secret.

Composition comments Information for specific product ingredients as required by the U.S. OSHA HAZARD COMMUNICATION STANDARD is listed. Refer to additional sections of this SDS for our assessment of the potential hazards of this formulation.

4. First-aid measures

Inhalation Remove victim to fresh air and keep at rest in a position comfortable for breathing. Call a POISON CENTER or doctor/physician if you feel unwell.

Skin contact Take off immediately all contaminated clothing. Rinse skin with water/shower. Call a physician or poison control center immediately. Chemical burns must be treated by a physician. Wash contaminated clothing before reuse.

Eye contact Remove contact lenses, if present and easy to do. Continue rinsing. Call a physician or poison control center immediately. Rinse immediately with plenty of water for at least 20 minutes

Ingestion Call a physician or poison control center immediately. Rinse mouth. Do not induce vomiting. If vomiting occurs, keep head low so that stomach content doesn't get into the lungs.

Most important symptoms/effects, acute and delayed Burning pain and severe corrosive skin damage. Causes serious eye damage. Symptoms may include stinging, tearing, redness, swelling, and blurred vision. Permanent eye damage including blindness could result. May cause respiratory irritation.

Indication of immediate medical attention and special treatment needed Provide general supportive measures and treat symptomatically. Chemical burns: Flush with water immediately. While flushing, remove clothes which do not adhere to affected area. Call an ambulance. Continue flushing during transport to hospital. Keep victim under observation. Symptoms may be delayed.

General information Ensure that medical personnel are aware of the material(s) involved, and take precautions to protect themselves.

5. Fire-fighting measures

Suitable extinguishing media Water fog. Foam. Dry chemical powder. Carbon dioxide (CO₂).

Unsuitable extinguishing media Do not use water jet as an extinguisher, as this will spread the fire.

Specific hazards arising from the chemical During fire, gases hazardous to health may be formed.

Special protective equipment and precautions for firefighters Wear full protective clothing, including helmet, self-contained positive pressure or pressure demand breathing apparatus, protective clothing and face mask.

Fire fighting equipment/instructions In case of fire and/or explosion do not breathe fumes. Use standard firefighting procedures and consider the hazards of other involved materials. Move containers from fire area if you can do so without risk. Cool containers / tanks with water spray.

Specific methods Use standard firefighting procedures and consider the hazards of other involved materials.

6. Accidental release measures

Personal precautions, protective equipment and emergency procedures Keep unnecessary personnel away. Keep people away from and upwind of spill/leak. Keep out of low areas. Wear appropriate protective equipment and clothing during clean-up. Do not breathe mist or vapor. Do not touch damaged containers or spilled material unless wearing appropriate protective clothing. Ensure adequate ventilation. Local authorities should be advised if significant spillages cannot be contained.

Methods and materials for containment and cleaning up

Prevent entry into waterways, sewer, basements or confined areas.

Large Spills: Stop the flow of material, if this is without risk. Dike the spilled material, where this is possible. Cover with plastic sheet to prevent spreading. Absorb spillage to prevent material damage. Absorb in vermiculite, dry sand or earth and place into containers. Following product recovery, flush area with water.

Small Spills: Wipe up with absorbent material (e.g. cloth, fleece). Clean surface thoroughly to remove residual contamination.

Never return spills to original containers for re-use.

Environmental precautions

Avoid discharge into drains, water courses or onto the ground. Water contaminated with this product may be sent to a sanitary sewer treatment facility, or a permitted waste treatment facility, in accordance with any local agreements.

7. Handling and storage

Precautions for safe handling

Do not breathe mist or vapor. Do not get this material in contact with eyes. Do not get this material in contact with skin. Do not get this material on clothing. Avoid prolonged exposure. Provide adequate ventilation. Wear appropriate personal protective equipment. Observe good industrial hygiene practices. Use care in handling/storage.

Conditions for safe storage, including any incompatibilities

Store locked up. Store in a cool, dry place out of direct sunlight. Store in corrosive resistant container with a resistant inner liner. Store in original tightly closed container. Keep only in the original container. Store in accordance with local/regional/national/international regulation. Protect from freezing. Do not store at elevated temperatures. If frozen, thaw completely and mix thoroughly prior to use.

8. Exposure controls/personal protection

Occupational exposure limits

US. OSHA Table Z-1 Limits for Air Contaminants (29 CFR 1910.1000)

Components	Type	Value
2-Diethylaminoethanol (CAS 100-37-8)	PEL	50 mg/m3
		10 ppm
Sodium hydroxide (CAS 1310-73-2)	PEL	2 mg/m3

US. ACGIH Threshold Limit Values

Components	Type	Value
2-Diethylaminoethanol (CAS 100-37-8)	TWA	2 ppm
Sodium hydroxide (CAS 1310-73-2)	Ceiling	2 mg/m3

US. NIOSH: Pocket Guide to Chemical Hazards

Components	Type	Value
2-Diethylaminoethanol (CAS 100-37-8)	TWA	50 mg/m3
		10 ppm
Sodium hydroxide (CAS 1310-73-2)	Ceiling	2 mg/m3

Biological limit values

No biological exposure limits noted for the ingredient(s).

Exposure guidelines

US ACGIH Threshold Limit Values: Skin designation

2-Diethylaminoethanol (CAS 100-37-8)

Danger of cutaneous absorption

US. OSHA Table Z-1 Limits for Air Contaminants (29 CFR 1910.1000)

2-Diethylaminoethanol (CAS 100-37-8)

Can be absorbed through the skin.

Appropriate engineering controls

Good general ventilation (typically 10 air changes per hour) should be used. Ventilation rates should be matched to conditions. If applicable, use process enclosures, local exhaust ventilation, or other engineering controls to maintain airborne levels below recommended exposure limits. If exposure limits have not been established, maintain airborne levels to an acceptable level. Eye wash facilities and emergency shower must be available when handling this product.

Individual protection measures, such as personal protective equipment

Eye/face protection

Splash proof chemical goggles. Face shield.

Skin protection	
Hand protection	Chemical resistant gloves. The choice of an appropriate glove does not only depend on its material but also on other quality features and is different from one producer to the other. Glove selection must take into account any solvents and other hazards present.
Other	Wear appropriate chemical resistant clothing. Use of an impervious apron is recommended.
Respiratory protection	Chemical respirator with organic vapor cartridge and full facepiece. A respiratory protection program that meets OSHA's 29 CFR 1910.34 and ANSI Z88.2 requirements must be followed whenever workplace conditions warrant a respirator's use.
Thermal hazards	Wear appropriate thermal protective clothing, when necessary.
General hygiene considerations	Always observe good personal hygiene measures, such as washing after handling the material and before eating, drinking, and/or smoking. Routinely wash work clothing and protective equipment to remove contaminants.

9. Physical and chemical properties

Appearance	Liquid
Physical state	Liquid.
Form	Liquid.
Color	Colorless to light yellow
Odor	Slight
Odor threshold	Not available.
pH (concentrated product)	13.5
Melting point/freezing point	32 °F (0 °C)
Initial boiling point and boiling range	212 °F (100 °C)
Flash point	> 200 °F (> 93 °C) P-M(CC)
Evaporation rate	< 1 (Ether = 1)
Flammability (solid, gas)	Not available.
Upper/lower flammability or explosive limits	
Explosive limit - lower (%)	Not available.
Explosive limit - upper (%)	Not available.
Vapor pressure	18 mm Hg
Vapor pressure temp.	70 °F (21 °C)
Vapor density	< 1 (Air = 1)
Relative density	1.15
Relative density temperature	70 °F (21 °C)
Solubility(ies)	
Solubility (water)	100 %
Partition coefficient (n-octanol/water)	Not available.
Auto-ignition temperature	Not available.
Decomposition temperature	Not available.
Viscosity	10 cps
Viscosity temperature	70 °F (21 °C)
Other information	
Pour point	37 °F (3 °C)
VOC	1.4 % (Calculated)

10. Stability and reactivity

Reactivity	The product is stable and non-reactive under normal conditions of use, storage and transport.
Chemical stability	Material is stable under normal conditions.
Possibility of hazardous reactions	Contact with strong acids may cause a violent reaction releasing heat.
Conditions to avoid	Protect from freezing.

Incompatible materials May react with acids or strong oxidisers. Do not contaminate.

Hazardous decomposition products Oxides of carbon, nitrogen, and sulphur evolved in fire.

11. Toxicological information

Information on likely routes of exposure

Inhalation May cause irritation to the respiratory system. Prolonged inhalation may be harmful.

Skin contact Causes severe skin burns.

Eye contact Causes serious eye damage.

Ingestion Causes digestive tract burns.

Symptoms related to the physical, chemical and toxicological characteristics Burning pain and severe corrosive skin damage. Causes serious eye damage. Symptoms may include stinging, tearing, redness, swelling, and blurred vision. Permanent eye damage including blindness could result. May cause respiratory irritation.

Information on toxicological effects

Acute toxicity May cause respiratory irritation.

Product	Species	Test Results
OPTIGUARD MCA4288		
<u>Acute</u>		
Dermal		
LD50	Rabbit	> 5000 mg/kg (Calculated according to GHS additivity formula)
Inhalation		
<i>Mist</i>		
LC50	Rat	> 5 mg/l, 4 Hours (Calculated according to GHS additivity formula)
Oral		
LD50	Rat	> 5000 mg/kg (Calculated according to GHS additivity formula)

Components	Species	Test Results
2-Diethylaminoethanol (CAS 100-37-8)		
<u>Acute</u>		
Dermal		
LD50	Guinea pig	885 mg/kg
Inhalation		
<i>Vapor</i>		
LC50	Rat	4.6 mg/l, 4 Hour
Oral		
LD50	Rat	1320 mg/kg

Sodium carbonate (CAS 497-19-8)

<u>Acute</u>		
Dermal		
LD50	Rabbit	> 2000 mg/kg
Oral		
LD50	Rat	2800 mg/kg

Sodium hydroxide (CAS 1310-73-2)

<u>Acute</u>		
Dermal		
LD50	Rabbit	1350 mg/kg
Oral		
LD50	Rabbit	> 500 mg/kg

Skin corrosion/irritation Causes severe skin burns and eye damage.

Serious eye damage/eye irritation Causes serious eye damage.

Respiratory or skin sensitization

Respiratory sensitization Not available.

Skin sensitization This product is not expected to cause skin sensitization.

Germ cell mutagenicity No data available to indicate product or any components present at greater than 0.1% are mutagenic or genotoxic.

Carcinogenicity This product is not considered to be a carcinogen by IARC, ACGIH, NTP, or OSHA.

IARC Monographs. Overall Evaluation of Carcinogenicity

Not listed.

OSHA Specifically Regulated Substances (29 CFR 1910.1001-1053)

Not listed.

US. National Toxicology Program (NTP) Report on Carcinogens

Not listed.

Reproductive toxicity This product is not expected to cause reproductive or developmental effects.

Specific target organ toxicity - single exposure May cause respiratory irritation.

Specific target organ toxicity - repeated exposure Not classified.

Aspiration hazard Based on available data, the classification criteria are not met. Aspiration of this product may cause the same corrosiveness/irritation impacts as if it were ingested.

Chronic effects Prolonged inhalation may be harmful.

12. Ecological information

Ecotoxicity The product is not classified as environmentally hazardous. However, this does not exclude the possibility that large or frequent spills can have a harmful or damaging effect on the environment.

Product	Species		Test Results
Aquatic			
Crustacea	0% Mortality	Daphnia magna	2000 mg/L, 48 hour (pH adjusted)
Fish	0% Mortality	Fathead Minnow	2000 mg/L, 96 hour (pH adjusted)

Persistence and degradability No data is available on the degradability of this product.
No data is available on the degradability of this product.

Bioaccumulative potential No data available.

Partition coefficient n-octanol / water (log Kow)

2-Diethylaminoethanol 0.21

Bioconcentration factor (BCF)

2-Diethylaminoethanol < 6.1

Mobility in soil No data available.

Other adverse effects No other adverse environmental effects (e.g. ozone depletion, photochemical ozone creation potential, endocrine disruption, global warming potential) are expected from this component.

13. Disposal considerations

Disposal instructions Collect and reclaim or dispose in sealed containers at licensed waste disposal site. Incinerate the material under controlled conditions in an approved incinerator. Dispose of contents/container in accordance with local/regional/national/international regulations.

Local disposal regulations Dispose in accordance with all applicable regulations.

Hazardous waste code D002: Waste Corrosive material [pH ≤2 or ≥12.5, or corrosive to steel]
The waste code should be assigned in discussion between the user, the producer and the waste disposal company.

Waste from residues / unused products Dispose of in accordance with local regulations. Empty containers or liners may retain some product residues. This material and its container must be disposed of in a safe manner (see: Disposal instructions).

Contaminated packaging Since emptied containers may retain product residue, follow label warnings even after container is emptied. Empty containers should be taken to an approved waste handling site for recycling or disposal.

14. Transport information

DOT

UN number UN3266

UN proper shipping name Corrosive liquid, basic, inorganic, n.o.s. (Sodium hydroxide, SODIUM SULFITE), RQ(Sodium hydroxide)

Transport hazard class(es)

Class 8

Subsidiary risk -

Packing group III

Special precautions for user Not available.

ERG number 154

Some containers may be exempt from Dangerous Goods/Hazmat Transport Regulations, please check BOL for exact container classification.

IATA

UN number UN3266

UN proper shipping name Corrosive liquid, basic, inorganic, n.o.s. (SODIUM HYDROXIDE, SODIUM SULFITE)

Transport hazard class(es)

Class 8

Subsidiary risk -

Packing group III

Environmental hazards No.

ERG Code 154

Special precautions for user Not available.

IMDG

UN number UN3266

UN proper shipping name CORROSIVE LIQUID, BASIC, INORGANIC, N.O.S. (SODIUM HYDROXIDE, SODIUM SULFITE), RQ(Sodium hydroxide)

Transport hazard class(es)

Class 8

Subsidiary risk -

Packing group III

Environmental hazards

Marine pollutant No.

EmS F-A, S-B

Special precautions for user Not available.

DOT



IATA; IMDG



15. Regulatory information

US federal regulations This product is a "Hazardous Chemical" as defined by the OSHA Hazard Communication Standard, 29 CFR 1910.1200.
All components are on the U.S. EPA TSCA Inventory List.

Toxic Substances Control Act (TSCA)

TSCA Section 12(b) Export Notification (40 CFR 707, Subpt. D)

Not regulated.

CERCLA Hazardous Substance List (40 CFR 302.4)

Sodium hydroxide (CAS 1310-73-2) Listed.

SARA 304 Emergency release notification

Not regulated.

OSHA Specifically Regulated Substances (29 CFR 1910.1001-1053)

Not listed.

Superfund Amendments and Reauthorization Act of 1986 (SARA)**SARA 302 Extremely hazardous substance**

Not listed.

SARA 311/312 Hazardous chemical No**SARA 313 (TRI reporting)**

Not regulated.

Other federal regulations**Clean Air Act (CAA) Section 112 Hazardous Air Pollutants (HAPs) List**

ACETALDEHYDE (CAS 75-07-0)

Clean Air Act (CAA) Section 112(r) Accidental Release Prevention (40 CFR 68.130)

ACETALDEHYDE (CAS 75-07-0)

Safe Drinking Water Act (SDWA) Not regulated.**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)

A "No" indicates that one or more components of the product are not listed or exempt from listing on the inventory administered by the governing country(s).

Food and drug administration ALL ingredients in this product are authorized in 21CFR173.310 for use as boiler water additives where the steam may contact food.**US state regulations** WARNING: This product contains a chemical known to the State of California to cause cancer.**US. California. Candidate Chemicals List. Safer Consumer Products Regulations (Cal. Code Regs, tit. 22, 69502.3, subd. (a))**

Sodium hydroxide (CAS 1310-73-2)

California Proposition 65**WARNING:** WARNING: This product contains a chemical known to the State of California to cause cancer.**US - California Proposition 65 - CRT: Listed date/Carcinogenic substance**

ACETALDEHYDE (CAS 75-07-0) Listed: April 1, 1988

US - California Proposition 65 - CRT: Listed date/Developmental toxin

No ingredient listed.

US - California Proposition 65 - CRT: Listed date/Female reproductive toxin

No ingredient listed.

US - California Proposition 65 - CRT: Listed date/Male reproductive toxin

No ingredient listed.

16. Other information, including date of preparation or last revision**Issue date** Dec-15-2014**Revision date** Feb-18-2023**Version #** 1.2**NFPA ratings** Health: 3
Flammability: 0
Instability: 0

NFPA ratings**List of abbreviations**

CAS: Chemical Abstract Service Registration Number
TSRN indicates a Trade Secret Registry Number is used in place of the CAS number.
ACGIH: American Conference of Governmental Industrial Hygienists
NOEL: No Observed Effect Level
STEL: Short Term Exposure Limit
LC50: Lethal Concentration, 50%
LD50: Lethal Dose, 50%
TWA: Time Weighted Average
BOD: Biochemical Oxygen Demand
COD: Chemical Oxygen Demand
TOC: Total Organic Carbon
IATA: International Air Transport Association
IMDG: International Maritime Dangerous Goods Code

References:

No data available

Disclaimer

The information provided in this Safety Data Sheet is correct to the best of our knowledge, information and belief at the date of its publication. The information given is designed only as a guidance for safe handling, use, processing, storage, transportation, disposal and release and is not to be considered a warranty or quality specification. The information relates only to the specific material designated and may not be valid for such material used in combination with any other materials or in any process, unless specified in the text. The information in the sheet was written based on the best knowledge and experience currently available.

Revision information

Exposure controls/personal protection: Appropriate engineering controls
Exposure controls/personal protection: Respiratory protection
Transport Information: Material Transportation Information
Other information, including date of preparation or last revision: Prepared by

Prepared by



This SDS has been prepared by Veolia Water Technologies & Solutions' Regulatory Department (1-215-355-3300).

Sulfuric Acid 93-98 Percent

SECTION 1: IDENTIFICATION OF THE SUBSTANCE/MIXTURE AND OF THE COMPANY

Product Name:	Sulfuric Acid 93-98 Percent
Product Code:	SA93/98
Formula:	H ₂ SO ₄
Synonyms:	Oil of Vitriol
Intended Use of the Product:	Inorganic Acid. For industrial use only.
Supplier:	<div> <div> Skyhawk Chemicals, Inc 701 N Post Oak Rd Ste 500 Houston, TX 77024 </div> <div> Phone: 713-957-2200 / 800-535-2847 Fax: 713-957-0345 order@skyhawkchemicals.com </div> </div>
Emergency number:	CHEMTREC 800-424-9300 ACCT#: CCN721839

SECTION 2: HAZARDS IDENTIFICATION

Classification (GHS-US):	Skin Corr. 1A H314 Eye Dam. 1 H318 Carc. 1A H350
Label Elements: GHS-US Labeling Hazard Pictograms (GHS-US)	  GHS05 GHS08
Signal Word (GHS-US)	Danger.
Hazard Statements (GHS-US)	H314 - Causes severe skin burns and eye damage. H318 - Causes serious eye damage. H350 - May cause cancer (Inhalation).
Precautionary Statements (GHS-US)	P201 - Obtain special instructions before use. P202 - Do not handle until all safety precautions have been read and understood. P260 - Do not breathe fume, mist, vapors, spray. P264 - Wash hands and forearms thoroughly after handling. P280 - Wear eye protection, face protection, protective gloves, protective clothing. P301+P330+P331 - IF SWALLOWED: Rinse mouth. Do NOT induce vomiting. P303+P361+P353 - IF ON SKIN (or hair): Remove/Take off immediately all contaminated clothing. Rinse skin with water/shower. P304+P340 - IF INHALED: Remove person to fresh air and keep comfortable for breathing. P305+P351+P338 - If in eyes: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing. P308+P313 - If exposed or concerned: Get medical advice/attention. P310 - Immediately call a POISON CENTER or doctor. P321 - Specific treatment (see Section 4). P363 - Wash contaminated clothing before reuse.

Sulfuric Acid 93-98 Percent

SECTION 2: HAZARDS IDENTIFICATION (CONTINUED)

Precautionary Statements
(GHS-US)

P405 - Store locked up.
P501 - Dispose of contents/container according to local, regional, national, territorial, provincial, and international regulations.

Other Hazards:

Not available

Unknown Acute
Toxicity (GHS-US):

Not available

SECTION 3: COMPOSITION/INFORMATION ON INGREDIENTS

Mixture

Name	Product identifier	% (w/w)	Classification (GHS-US)
Sulfuric acid	(CAS No) 7664-93-9	93-98	Skin Corr. 1A, H314 Eye Dam. 1, H318 Carc. 1A, H350
Water	(CAS No) 7732-18-5	7-2	Not classified

Full text of H-phrases: see section 16

SECTION 4: FIRST AID MEASURES

General: Never give anything by mouth to an unconscious person. If you feel unwell, seek medical advice (show the label if possible).

Inhalation:	Using proper respiratory protection, immediately move the exposed person to fresh air. Keep at rest and in a position comfortable for breathing. Give oxygen or artificial respiration if necessary. Seek immediate medical advice.
Skin Contact:	Remove contaminated clothing. Drench affected area with water for at least 15 minutes. Immediately call a POISON CENTER or doctor/physician. Wash contaminated clothing before reuse.
Eye Contact:	Immediately rinse with water for a prolonged period (at least 15 minutes) while holding the eyelids wide open. Remove contact lenses, if present and easy to do. Continue rinsing. Immediately call a POISON CENTER or doctor/physician.
Ingestion:	If swallowed, do not induce vomiting: seek medical advice immediately and show this container or label. Rinse mouth.

Most Important Symptoms and Effects Both Acute and Delayed

General: Corrosive. Causes burns.

Inhalation:	Causes severe respiratory irritation if inhaled. Symptoms may include: burning of nose and throat, constriction of airway, difficulty breathing, shortness of breath, bronchial spasms, chest pain, and pink frothy sputum. May cause pulmonary edema. Symptoms may be delayed.
Skin Contact:	Contact may cause immediate severe irritation progressing quickly to chemical burns. Highly corrosive to skin.
Eye Contact:	Contact may cause immediate severe irritation progressing quickly to chemical burns. Can cause blindness.
Ingestion:	May cause burns or irritation of the linings of the mouth, throat, and gastrointestinal tract. Swallowing a small quantity of this material will result in serious health hazard.
Chronic Symptoms:	Prolonged and frequent exposure through inhalation may cause cancer.

Sulfuric Acid 93-98 Percent**SECTION 4: FIRST AID MEASURES (CONTINUED)****Indication of Any Immediate Medical Attention and Special Treatment Needed**

If medical advice is needed, have product container or label at hand.

SECTION 5: FIREFIGHTING MEASURES**Extinguishing Media**

Suitable Extinguishing Media: Use extinguishing media appropriate for surrounding fire.

Unsuitable Extinguishing Media: Do not get water inside containers. Do not apply water stream directly at source of leak. A direct water stream will cause violent splattering and generation of heat.

Special Hazards Arising From the Substance or Mixture

Fire Hazard: Not flammable but reacts exothermically with incompatibles, releasing heat and increasing risk of fire or explosion.

Explosion Hazard: Risk of fire and explosion on contact with combustible substances or reducing agents.

Reactivity: Reacts exothermically with (some) bases. Violent exothermic reaction with water: release of corrosive gases/vapors.

Advice for Firefighters

Precautionary Measures Fire: Exercise caution when fighting any chemical fire.

Firefighting Instructions: Do not get water inside containers. Do not apply water stream directly at source of leak.

Protection During Firefighting: Do not enter fire area without proper protective equipment, including respiratory protection.

Hazardous Combustion Products: Sulphur oxides.

Other information: Do not allow run-off from fire fighting to enter drains or water courses.

Reference to Other Sections:

Refer to section 9 for flammability properties.

SECTION 6: ACCIDENTAL RELEASE MEASURES**Personal Precautions, Protective Equipment and Emergency Procedures**

General Measures: Do not get in eyes, on skin, or on clothing. Do not breathe vapor or mist.

For Non-Emergency Personnel

Protective Equipment: Use recommended respiratory protection. Wear suitable protective clothing, gloves and eye/face protection.

Emergency Procedures: Stop leak if safe to do so. Eliminate ignition sources. Evacuate unnecessary personnel.

For Emergency Personnel

Protective Equipment: Use recommended respiratory protection. Wear suitable protective clothing, gloves and eye/face protection.

Emergency Procedures: Stop leak if safe to do so. Eliminate ignition sources. Ventilate area.

Environmental Precautions

Do not allow to enter drains or water courses. Avoid release to the environment.

Methods and Material for Containment and Cleaning Up

For Containment: Liquid spill: neutralize with powdered limestone or sodium bicarbonate.

Contain any spills with dikes or absorbents to prevent migration and entry into sewers or streams.

Do not absorb with combustible material such as: saw dust or cellulosic material.

Sulfuric Acid 93-98 Percent

SECTION 6: ACCIDENTAL RELEASE MEASURES (CONTINUED)

Methods for Cleaning Up: Ventilate area. Collect absorbed material and place into a sealed, labelled container for proper disposal.

Reference to Other Sections

See section 8, Exposure Controls and Personal Protection

SECTION 7: HANDLING AND STORAGE

Precautions for Safe Handling

Hygiene Measures: Handle in accordance with good industrial hygiene and safety procedures.

Wash hands and other exposed areas with mild soap and water before eating, drinking, or smoking and again when leaving work.

Conditions for Safe Storage, Including Any Incompatibilities

Technical Measures: Ensure all national/local regulations are observed.

Storage Conditions: Store in original container or corrosive resistant and/or lined container. May be stored in stainless steel containers. Store in an area having corrosion resistant concrete floor. Store in a dry, cool and well-ventilated place. Store away from other materials. **Incompatible**

Materials: Reducing agents, organic materials, alkalis, moisture.

Specific End Use(s)

Inorganic Acid. For industrial use only.

SECTION 8: EXPOSURE CONTROLS/PERSONAL PROTECTION

Control Parameters

Sulfuric acid (7664-93-9)

Mexico	OEL TWA (mg/m ³)	1 mg/m ³
USA ACGIH	ACGIH TWA (mg/m ³)	0.2 mg/m ³
USA OSHA	OSHA PEL (TWA) (mg/m ³)	1 mg/m ³
USA NIOSH	NIOSH REL (TWA) (mg/m ³)	1 mg/m ³
USA IDLH	US IDLH (mg/m ³)	15 mg/m ³
Alberta	OEL STEL (mg/m ³)	3 mg/m ³
Alberta	OEL TWA (mg/m ³)	1 mg/m ³
British Columbia	OEL TWA (mg/m ³)	0.2 mg/m ³ (Thoracic, contained in strong inorganic acid mists)
Manitoba	OEL TWA (mg/m ³)	0.2 mg/m ³
New Brunswick	OEL STEL (mg/m ³)	3 mg/m ³
New Brunswick	OEL TWA (mg/m ³)	1 mg/m ³
Newfoundland & Labrador	OEL TWA (mg/m ³)	0.2 mg/m ³
Nova Scotia	OEL TWA (mg/m ³)	0.2 mg/m ³
Nunavut	OEL STEL (mg/m ³)	3 mg/m ³
Nunavut	OEL TWA (mg/m ³)	1 mg/m ³
Northwest Territories	OEL STEL (mg/m ³)	3 mg/m ³

Sulfuric Acid 93-98 Percent

SECTION 8: EXPOSURE CONTROLS/PERSONAL PROTECTION (CONTINUED)

Sulfuric acid (7664-93-9)

Northwest Territories	OEL TWA (mg/m ³)	1 mg/m ³
Ontario	OEL TWA (mg/m ³)	0.2 mg/m ³
Prince Edward Island	OEL TWA (mg/m ³)	0.2 mg/m ³
Québec	VECD (mg/m ³)	3 mg/m ³
Québec	VEMP (mg/m ³)	1 mg/m ³
Saskatchewan	OEL STEL (mg/m ³)	0.6 mg/m ³
Saskatchewan	OEL TWA (mg/m ³)	0.2 mg/m ³
Yukon	OEL STEL (mg/m ³)	1 mg/m ³
Yukon	OEL TWA (mg/m ³)	1 mg/m ³

Exposure Controls

Appropriate Engineering Controls: Ensure adequate ventilation, especially in confined areas. Emergency eye wash fountains and safety showers should be available in the immediate vicinity of any potential exposure. Ensure all national/local regulations are observed.

Personal Protective Equipment:



Materials for Protective Clothing: Acid-resistant clothing.

Hand Protection: Wear chemically resistant protective gloves.

Eye Protection: A full face shield is recommended. Chemical goggles or safety glasses. **Skin and Body Protection:** Chemical resistant suit. Rubber apron, boots.

Respiratory Protection: Use a NIOSH-approved respirator or self-contained breathing apparatus whenever exposure may exceed established Occupational Exposure Limits.

Thermal Hazard Protection: If material is hot, wear thermally resistant protective gloves.

SECTION 9: PHYSICAL & CHEMICAL PROPERTIES

Information on Basic Physical & Chemical Properties

Physical State:	Liquid
Appearance:	Clear
Odor:	Pungent, irritating
Odor Threshold:	Not available
pH:	< 1
Relative Evaporation Rate (butylacetate=1):	Not available

Sulfuric Acid 93-98 Percent

SECTION 9: PHYSICAL & CHEMICAL PROPERTIES (CONTINUED)

Melting Point:	1 °C (30 °F)
Freezing Point:	- 1 °C (30 °F)
Boiling Point:	327 °C (621 °F)
Flash Point:	Not available
Auto-ignition Temperature:	Not available
Decomposition Temperature:	Not available
Flammability (solid, gas):	Not available
Lower Flammable Limit:	Not available
Upper Flammable Limit:	Not available
Vapor Pressure:	0.002 mm Hg at 40 °C (104 °F)
Relative Vapor Density at 20 °C:	3.4 (air = 1)
Relative Density:	1.84 at 15.55 °C (60 °F) (water = 1)
Density:	15.35 lb/gal at 15.55 °C (60 °F)
Solubility:	Miscible
Log Pow:	Not available
Log Kow:	Not available
Viscosity, Kinematic:	Not available
Viscosity, Dynamic:	26.7 cP at 20 °C (68 °F)
Explosion Data – Sensitivity to Mechanical Impact:	Not available
Explosion Data – Sensitivity to Static Discharge:	Not available

SECTION 10: STABILITY AND REACTIVITY

Reactivity:	Reacts exothermically with (some) bases. Violent exothermic reaction with water (moisture); release of corrosive gases/vapours.
Chemical Stability:	Stable at standard temperature and pressure.
Possibility of Hazardous Reactions:	Hazardous polymerization will not occur.
Conditions to Avoid:	Protect from moisture. Water. Keep away from (strong) bases. Contact with metallic substances.

Sulfuric Acid 93-98 Percent

SECTION 10: STABILITY AND REACTIVITY (CONTINUED)

Incompatible Materials:	Reducing agents, water, combustible materials, bases, organic materials, metals.
Hazardous Decomposition Products:	Under conditions of fire this material may produce sulphur oxides.

SECTION 11: TOXICOLOGICAL INFORMATION

Information on Toxicological Effects - Product

Acute Toxicity:	Not classified
LD50 and LC50 Data:	See below and Section 12
Skin Corrosion/Irritation:	Causes severe skin burns and eye damage (pH: < 1)
Serious Eye Damage/Irritation:	Causes serious eye damage (pH: < 1)
Respiratory or Skin Sensitization:	Not classified
Germ Cell Mutagenicity:	Not classified
Teratogenicity:	Not available
Carcinogenicity:	May cause cancer (Inhalation)
Specific Target Organ Toxicity (Repeated Exposure):	Not classified
Reproductive Toxicity:	Not classified
Specific Target Organ Toxicity (Single Exposure):	Not classified
Aspiration Hazard:	Not classified
Symptoms/Injuries After Inhalation:	Causes severe respiratory irritation if inhaled. Symptoms may include: Burning of nose and throat, constriction of airway, difficulty breathing, shortness of breath, bronchial spasms, chest pain, and pink frothy sputum. May cause pulmonary edema. Symptoms may be delayed.
Symptoms/Injuries After Skin Contact:	Contact may cause immediate severe irritation progressing quickly to chemical burns. Highly corrosive to skin.
Symptoms/Injuries After Eye Contact:	Contact may cause immediate severe irritation progressing quickly to chemical burns. Can cause blindness.
Symptoms/Injuries After Ingestion:	May cause burns or irritation of the linings of the mouth, throat, and gastrointestinal tract. Swallowing a small quantity of this material will result in serious health hazard.
Chronic Symptoms:	Prolonged and frequent exposure through inhalation may cause cancer.



SAFETY DATA SHEET

according to 29 CFR 1910.1200(g)

Sulfuric Acid 93-98 Percent

Information on Toxicological Effects - Ingredient(s) - LD50 and LC50 Data

Sulfuric acid (7664-93-9)

LD50 Oral Rat	2140 mg/kg
LC50 Inhalation Rat (mg/l)	510 mg/m ³ (Exposure time: 2 h)
ATE (oral)	2140 mg/kg body weight
ATE (dust, mist)	510 mg/l/4h

Sulfuric acid (7664-93-9)

IARC Group	1 (inorganic acid mist)
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SECTION 12: ECOLOGICAL INFORMATION

Toxicity

Sulfuric acid (7664-93-9)

LC50 Fish 1	500 mg/l (Exposure time: 96 h - Species: Brachydanio rerio [static])
EC50 Daphnia 1	29 mg/l (Exposure time: 24 h - Species: Daphnia magna)

Persistence and Degradability

Sulfuric Acid 98 Percent

Persistence and Degradability	Product is biodegradable.
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Bioaccumulative Potential

Sulfuric Acid 98 Percent

Bioaccumulative Potential	Not expected to bioaccumulate.
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Sulfuric acid (7664-93-9)

BCF fish 1	(no bioaccumulation)
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Mobility in Soil:

Not available

Other Adverse Effects

Not available

SECTION 13: DISPOSAL CONSIDERATIONS

Waste Disposal Recommendations: Dispose of waste material in accordance with all local, regional, national, provincial, territorial and international regulations.

SECTION 14: TRANSPORT INFORMATION

In Accordance With ICAO/IATA/DOT/TDG

DOT UN No.:	UN 1830
DOT Proper Shipping Name:	Sulfuric acid
Department of Transportation (DOT) Hazard Classes:	Class 8 - Corrosive
DOT Symbols:	None
Packing group (DOT)	II



SAFETY DATA SHEET

according to 29 CFR 1910.1200(g)

Sulfuric Acid 93-98 Percent

SECTION 14: TRANSPORT INFORMATION (CONTINUED)

In Accordance With ICAO/IATA/DOT/TDG

DOT Special Provisions	See 49 C.F.R. 172.102
DOT Reportable Quantity (RQ)	1,000 lb
USCG CHRIS Code	SFA

SECTION 15: REGULATORY INFORMATION

US Federal Regulations

Sulfuric Acid 93 Percent

SARA Section 311/312 Hazard Classes

Immediate (acute) health hazard Delayed (chronic) health hazard

Sulfuric acid (7664-93-9)

United States TSCA (Toxic Substances Control Act) inventory	Yes.
EPCRA (SARA) § 313 Toxic Release Inventory (TRI)	Yes – Aerosol forms only.
EPCRA (SARA) § 302 Extremely Hazardous Substance (EHS)	Yes
EPCRA (SARA) § 302 Threshold Planning Quantity (TPQ)	1,000 lb.
EPCRA (SARA) § 302 EHS Reportable Quantity (RQ)	1,000 lb.
CERCLA Reportable Quantity (RQ)	1,000 lb.
CERCLA Hazardous Substance	Yes.

Water (7732-18-5)

Listed on the United States TSCA (Toxic Substances Control Act) inventory

Sulfuric acid (7664-93-9)

U.S. - California - SCAQMD - Toxic Air Contaminants - Non-Cancer Acute
U.S. - California - SCAQMD - Toxic Air Contaminants - Non-Cancer Chronic
U.S. - California - Toxic Air Contaminant List (AB 1807, AB 2728)
U.S. - Connecticut - Hazardous Air Pollutants - HLVs (30 min)
U.S. - Connecticut - Hazardous Air Pollutants - HLVs (8 hr)
U.S. - Delaware - Pollutant Discharge Requirements - Reportable Quantities
U.S. - Idaho - Non-Carcinogenic Toxic Air Pollutants - Acceptable Ambient Concentrations
U.S. - Idaho - Non-Carcinogenic Toxic Air Pollutants - Emission Levels (ELs)
U.S. - Idaho - Occupational Exposure Limits - TWAs
U.S. - Illinois - Toxic Air Contaminant Carcinogens
U.S. - Illinois - Toxic Air Contaminants
U.S. - Louisiana - Reportable Quantity List for Pollutants

Sulfuric Acid 93-98 Percent**SECTION 15: REGULATORY INFORMATION (CONTINUED)****US State Regulations****Sulfuric acid (7664-93-9)**

U.S. - Maine - Air Pollutants - Hazardous Air Pollutants
U.S. - Massachusetts - Allowable Ambient Limits (AALs)
U.S. - Massachusetts - Allowable Threshold Concentrations (ATCs)
U.S. - Massachusetts - Oil & Hazardous Material List - Groundwater Reportable Concentration - Reporting Category 1
U.S. - Massachusetts - Oil & Hazardous Material List - Groundwater Reportable Concentration - Reporting Category 2
U.S. - Massachusetts - Oil & Hazardous Material List - Reportable Quantity
U.S. - Massachusetts - Oil & Hazardous Material List - Soil Reportable Concentration - Reporting Category 1
U.S. - Massachusetts - Oil & Hazardous Material List - Soil Reportable Concentration - Reporting Category 2
U.S. - Massachusetts - Right To Know List
U.S. - Massachusetts - Threshold Effects Exposure Limits (TEELs)
U.S. - Massachusetts - Toxics Use Reduction Act
U.S. - Michigan - Occupational Exposure Limits - TWAs
U.S. - Michigan - Polluting Materials List
U.S. - Minnesota - Chemicals of High Concern
U.S. - Minnesota - Hazardous Substance List
U.S. - Minnesota - Permissible Exposure Limits - TWAs
U.S. - New Hampshire - Regulated Toxic Air Pollutants - Ambient Air Levels (AALs) - 24-Hour
U.S. - New Hampshire - Regulated Toxic Air Pollutants - Ambient Air Levels (AALs) - Annual
U.S. - New Jersey - Discharge Prevention - List of Hazardous Substances
U.S. - New Jersey - Environmental Hazardous Substances
List U.S. - New Jersey - Right to Know Hazardous Substance
List U.S. - New Jersey - Special Health Hazards Substances
List U.S. - New York - Occupational Exposure Limits - TWAs
U.S. - New York - Reporting of Releases Part 597 - List of Hazardous Substances
U.S. - North Carolina - Control of Toxic Air Pollutants
U.S. - North Dakota - Air Pollutants - Guideline Concentrations - 8-Hour
U.S. - Ohio - Extremely Hazardous Substances - Threshold Quantities
U.S. - Oregon - Permissible Exposure Limits - TWAs
U.S. - Pennsylvania - RTK (Right to Know) - Environmental Hazard List
U.S. - Pennsylvania - RTK (Right to Know) List
U.S. - Rhode Island - Air Toxics - Acceptable Ambient Levels - 1-Hour
U.S. - Rhode Island - Air Toxics - Acceptable Ambient Levels - Annual
U.S. - South Carolina - Toxic Air Pollutants - Maximum Allowable Concentrations

Sulfuric Acid 93-98 Percent

SECTION 15: REGULATORY INFORMATION (CONTINUED)

US State Regulations

Sulfuric acid (7664-93-9)

U.S. - South Carolina - Toxic Air Pollutants - Pollutant Categories
 U.S. - Tennessee - Occupational Exposure Limits - TWAs
 U.S. - Texas - Effects Screening Levels - Long Term
 U.S. - Texas - Effects Screening Levels - Short Term
 U.S. - Vermont - Permissible Exposure Limits - TWAs
 U.S. - Washington - Permissible Exposure Limits - STELs
 U.S. - Washington - Permissible Exposure Limits - TWAs
 U.S. - Wisconsin - Hazardous Air Contaminants - All Sources - Emissions From Stack Heights 25 Feet to Less Than 40 Feet
 U.S. - Wisconsin - Hazardous Air Contaminants - All Sources - Emissions From Stack Heights 40 Feet to Less Than 75 Feet
 U.S. - Wisconsin - Hazardous Air Contaminants - All Sources - Emissions From Stack Heights 75 Feet or Greater
 U.S. - Wisconsin - Hazardous Air Contaminants - All Sources - Emissions From Stack Heights Less Than 25 Feet

Canadian Regulations

Sulfuric acid 93-98 Percent (7664-93-9)

WHMIS Classification

Class D Division 2 Subdivision A - Very toxic material causing other toxic effects
 Class E - Corrosive Material



Sulfuric acid (7664-93-9)

Listed on the Canadian DSL (Domestic Substances List) inventory. Listed on the Canadian Ingredient Disclosure List

WHMIS Classification Class D Division 1 Subdivision A - Very toxic material causing immediate and serious toxic effects
 Class E - Corrosive Material

Water (7732-18-5)

Listed on the Canadian DSL (Domestic Substances List) inventory.

WHMIS Classification

Uncontrolled product according to WHMIS classification criteria

This product has been classified in accordance with the hazard criteria of the Controlled Products Regulations (CPR) and the MSDS contains all of the information required by CPR.



SAFETY DATA SHEET

according to 29 CFR 1910.1200(g)

Sulfuric Acid 93-98 Percent

SECTION 16: OTHER INFORMATION

Indication of Changes: 11/20/2013

Other Information: This document has been prepared in accordance with the SDS requirements of the OSHA Hazard Communication Standard 29 CFR 1910.1200

GHS Full Text Phrases:

Carc. 1A	Carcinogenicity Category 1A
Eye Dam. 1	Serious eye damage/eye irritation Category 1
Skin Corr. 1A	Skin corrosion/irritation Category 1A
H314	Causes severe skin burns and eye damage
H318	Causes serious eye damage
H350	May cause cancer

The information contained in this Material Safety Data Sheet (MSDS) relates only to the specific product(s) designated herein. The information and recommendations are based upon data believed to be current as of the date of this MSDS and was obtained from sources believed to be accurate. However, this information is furnished without warranty, representations, or license of any kind, express or implied, with respect to accuracy, correctness, or completeness and neither Skyhawk Chemicals, Inc. nor its marketing affiliates assume any legal responsibility for use or reliance upon same.

North America GHS US 2012 & WHMIS



Material Safety Data Sheet

Issue Date: 07-NOV-2012
Supersedes: 12-NOV-2008

STEAMATE PAS4010

1 Identification

Identification of substance or preparation
STEAMATE PAS4010

Product Application Area
Water based internal boiler treatment chemical.

Company/Undertaking Identification
GE Betz, Inc.
4636 Somerton Road
Trevose, PA 19053
T 215 355-3300, F 215 953 5524

Emergency Telephone
(800) 877-1940

Prepared by Product Stewardship Group: T 215-355-3300 Prepared on: 07-NOV-2012

2 Hazard(s) identification

EMERGENCY OVERVIEW

DANGER

Corrosive. Absorbed by skin. Skin sensitizer. Corrosive to the eyes. Vapors, gases, mists and/or aerosols cause irritation to the upper respiratory tract. Prolonged exposure may cause dizziness and headache.

DOT hazard: Corrosive to skin, Combustible
Odor: Strong; Appearance: Colorless To Yellow, Liquid

Fire fighters should wear positive pressure self-contained breathing apparatus(full face-piece type). Proper fire-extinguishing media: dry chemical, carbon dioxide, foam or water

POTENTIAL HEALTH EFFECTS

ACUTE SKIN EFFECTS:

Primary route of exposure; Corrosive. Absorbed by skin. Skin sensitizer.

ACUTE EYE EFFECTS:

Corrosive to the eyes.

ACUTE RESPIRATORY EFFECTS:

Primary route of exposure; Vapors, gases, mists and/or aerosols cause irritation to the upper respiratory tract. Prolonged exposure may cause dizziness and headache.

INGESTION EFFECTS:

May cause severe irritation or burning of mouth, throat, and gastrointestinal tract with severe chest and abdominal pain, nausea, vomiting, diarrhea, lethargy and collapse. Possible death when ingested in very large doses.

TARGET ORGANS:

Prolonged or repeated exposures may cause tissue necrosis, CNS depression, and/or skin sensitization.

MEDICAL CONDITIONS AGGRAVATED:

Not known.

SYMPTOMS OF EXPOSURE:

Causes severe irritation or burns, and skin sensitization.

3 Composition / information on ingredients

Information for specific product ingredients as required by the U.S. OSHA HAZARD COMMUNICATION STANDARD is listed. Refer to additional sections of this MSDS for our assessment of the potential hazards of this formulation. This product is subject to the Pennsylvania and New Jersey Worker and Community Right to Know Law.

HAZARDOUS INGREDIENTS:

Cas#	Chemical Name	Range (w/w%)
5332-73-0	METHOXYPROPYLAMINE, 3- Flammable liquid; Skin corrosive 1; eye damage 1; skin sensitizer 1; respiratory irritant	10-20
109-55-7	DIMETHYLAMINOPROPYLAMINE (DMAPA) Flammable; Skin corrosive-1B; skin sensitizer-1	10-20
108-91-8	CYCLOHEXYLAMINE Flammable; corrosive; Category 2 suspected reproductive toxicant	7-13
3710-84-7	DIETHYLHYDROXYLAMINE Combustible; Mild skin irritant	1-5

NON-HAZARDOUS INGREDIENTS:

CAS#	CHEMICAL NAME
7732-18-5	WATER

4 First-aid measures

SKIN CONTACT:

URGENT! Wash thoroughly with soap and water. Remove contaminated clothing. Get immediate medical attention. Thoroughly wash clothing before reuse.

EYE CONTACT:

URGENT! Immediately flush eyes with plenty of low-pressure water for at least 20 minutes while removing contact lenses. Hold eyelids apart. Get immediate medical attention.

INHALATION:

Remove to fresh air. If breathing is difficult, give oxygen. If breathing has stopped, give artificial respiration. Get immediate medical attention.

INGESTION:

Do not feed anything by mouth to an unconscious or convulsive victim. Do not induce vomiting. Immediately contact physician. Dilute contents of stomach using 3-4 glasses milk or water.

NOTES TO PHYSICIANS:

Material is corrosive. It may not be advisable to induce vomiting. Possible mucosal damage may contraindicate the use of gastric lavage.

5 Fire-fighting measures

FIRE FIGHTING INSTRUCTIONS:

Fire fighters should wear positive pressure self-contained breathing apparatus (full face-piece type).

EXTINGUISHING MEDIA:

dry chemical, carbon dioxide, foam or water

HAZARDOUS DECOMPOSITION PRODUCTS:

elemental oxides

FLASH POINT:

142F 61C P-M(CC)

MISCELLANEOUS:

Corrosive to skin, Combustible
UN 2735;Emergency Response Guide #153

6 Accidental release measures

PROTECTION AND SPILL CONTAINMENT:

Ventilate area. Use specified protective equipment. Contain and absorb on absorbent material. Place in waste disposal container. Remove ignition sources. Flush area with water. Spread sand/grit.

DISPOSAL INSTRUCTIONS:

Water contaminated with this product may be sent to a sanitary sewer treatment facility, in accordance with any local agreement, a permitted waste treatment facility or discharged under a permit. Product as is - Incinerate or land dispose in an approved landfill.

7 Handling and storage

HANDLING:

Combustible. Corrosive to skin and/or eyes.

STORAGE:

Keep containers closed when not in use. Keep away from flames or sparks. Bond containers during filling or discharge when performed at temperatures at or above the product flash point. Shelf life 270 days.

8 Exposure controls / personal protection

EXPOSURE LIMITS

CHEMICAL NAME

METHOXYPROPYLAMINE, 3-

PEL (OSHA): LIMITS HAVE NOT BEEN ESTABLISHED BY US OSHA.

TLV (ACGIH): LIMITS HAVE NOT BEEN ESTABLISHED BY ACGIH.

DIMETHYLAMINOPROPYLAMINE (DMAPA)

PEL (OSHA): LIMITS HAVE NOT BEEN ESTABLISHED BY US OSHA.

TLV (ACGIH): LIMITS HAVE NOT BEEN ESTABLISHED BY ACGIH.

CYCLOHEXYLAMINE

PEL (OSHA): LIMITS HAVE NOT BEEN ESTABLISHED BY US OSHA.

TLV (ACGIH): TWA = 10 PPM; A4

DIETHYLHYDROXYLAMINE

PEL (OSHA): LIMITS HAVE NOT BEEN ESTABLISHED BY US OSHA.

TLV (ACGIH): LIMITS HAVE NOT BEEN ESTABLISHED BY ACGIH.

ENGINEERING CONTROLS:

Adequate ventilation to maintain air contaminants below exposure limits.

PERSONAL PROTECTIVE EQUIPMENT:

Use protective equipment in accordance with 29CFR 1910 Subpart I

RESPIRATORY PROTECTION:

A RESPIRATORY PROTECTION PROGRAM THAT MEETS OSHA'S 29 CFR 1910.134 AND ANSI Z88.2 REQUIREMENTS MUST BE FOLLOWED WHENEVER WORKPLACE CONDITIONS WARRANT A RESPIRATOR'S USE.

USE AIR PURIFYING RESPIRATORS WITHIN USE LIMITATIONS ASSOCIATED WITH THE EQUIPMENT OR ELSE USE SUPPLIED AIR-RESPIRATORS.

If air-purifying respirator use is appropriate, use a respirator with organic vapor cartridges and dust/mist prefilters.

SKIN PROTECTION:

gauntlet-type neoprene gloves, chemical resistant apron--
Wash off after each use. Replace as necessary.

EYE PROTECTION:

splash proof chemical goggles, face shield

9 Physical and chemical properties

Spec. Grav. (70F, 21C)	0.971	Vapor Pressure (mmHG)	~ 18.0
Freeze Point (F)	-6	Vapor Density (air=1)	> 1.00
Freeze Point (C)	-21		
Viscosity (cps 70F, 21C)	16	% Solubility (water)	100.0
Odor	Strong		
Appearance	Colorless To Yellow		
Physical State	Liquid		
Flash Point	P-M(CC) 142F	61C	
pH As Is (approx.)	13.0		
Evaporation Rate (Ether=1)	< 1.00		
Percent VOC:	40.0		

NA = not applicable ND = not determined

10 Stability and reactivity

CHEMICAL STABILITY:

Stable under normal storage conditions.

POSSIBILITY OF HAZARDOUS REACTIONS:**INCOMPATIBILITIES:**

May react with acids.

DECOMPOSITION PRODUCTS:

elemental oxides

11 Toxicological information

Oral LD50 RAT:	1,200 mg/kg
NOTE - Estimated value	
Dermal LD50 RABBIT:	1,575 mg/kg
NOTE - Estimated value	
Skin Irritation Score RABBIT:	CORROSIVE
NOTE - Estimated value	
Eye Irritation Score RABBIT:	CORROSIVE
NOTE - Estimated value	

12 Ecological information

AQUATIC TOXICOLOGY

Daphnia magna 48 Hour Static Renewal Bioassay (pH adjusted)

LC50= 100; No Effect Level= 62.5 mg/L

Fathead Minnow 96 Hour Static Renewal Bioassay (pH adjusted)

LC50= 695; No Effect Level= 549 mg/L

BIODEGRADATION

BOD-28 (mg/g): 39

BOD-5 (mg/g): 1

COD (mg/g): 753

TOC (mg/g): 226

13 Disposal considerations

If this undiluted product is discarded as a waste, the US RCRA hazardous waste identification number is :
D002=Corrosive(pH).

Please be advised; however, that state and local requirements for waste disposal may be more restrictive or otherwise different from federal regulations. Consult state and local regulations regarding the proper disposal of this material.

14 Transport information

Transportation Hazard: Corrosive to skin, Combustible

DOT: AMINES, LIQUID, CORROSIVE, N.O.S. (CYCLOHEXYLAMINE,
DIMETHYLAMINOPROPYLAMINE)
8, UN2735, PG II

DOT EMERGENCY RESPONSE GUIDE #: 153

Note: Some containers may be DOT exempt, please check BOL for

exact container classification
IATA: AMINES, LIQUID, CORROSIVE, N.O.S.(CYCLOHEXYLAMINE,
DIMETHYLAMINOPROPYLAMINE)
8, UN2735, PG II
IMDG: AMINES, LIQUID, CORROSIVE, N.O.S.(CYCLOHEXYLAMINE,
DIMETHYLAMINOPROPYLAMINE)
8, UN2735, PG II

15 Regulatory information

TSCA:

All components of this product are included on or are in compliance with the U.S. TSCA regulations.

CERCLA AND/OR SARA REPORTABLE QUANTITY (RQ):

No regulated constituent present at OSHA thresholds

FOOD AND DRUG ADMINISTRATION:

All ingredients in this product are authorized in 21 CFR176.170 for use in boilers where the steam will be used for manufacturing paper or paperboard.

NSF Registered and/or meets USDA (according to 1998 Guidelines):

Registration number: Not Registered
G7

SARA SECTION 312 HAZARD CLASS:

Immediate(acute);Delayed(Chronic);Fire

SARA SECTION 302 CHEMICALS:

CAS#	CHEMICAL NAME
108-91-8	CYCLOHEXYLAMINE

SARA SECTION 313 CHEMICALS:

No regulated constituent present at OSHA thresholds

CALIFORNIA REGULATORY INFORMATION

CALIFORNIA SAFE DRINKING WATER AND TOXIC

ENFORCEMENT ACT (PROPOSITION 65):

This product contains one or more ingredients known to the state of California to cause cancer.

MICHIGAN REGULATORY INFORMATION

No regulated constituent present at OSHA thresholds

16 Other information

HMIS vII

CODE TRANSLATION

Health	3	Serious Hazard
Fire	2	Moderate Hazard
Reactivity	0	Minimal Hazard
Special	CORR	DOT corrosive
(1) Protective Equipment	D	Goggles,Face Shield,Gloves,Apron

(1) refer to section 8 of MSDS for additional protective equipment recommendations.

CHANGE LOG

EFFECTIVE	REVISIONS TO SECTION:	SUPERCEDES
DATE		
-----	-----	-----
MSDS status: 11-FEB-1998		** NEW **

12-MAY-1998	12	11-FEB-1998
20-MAY-1998	15	12-MAY-1998
11-JUN-1998	12	20-MAY-1998
03-JUL-2006	4, 7, 15	11-JUN-1998
12-NOV-2008	3, 8	03-JUL-2006
07-NOV-2012	14, 16	12-NOV-2008

Safety Data Sheet

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SECTION 1. PRODUCT AND COMPANY IDENTIFICATION

Product name : SULFURIC ACID 66 BE°

Recommended use of the chemical and restrictions on use

Recommended use : Industrial Chemical

Manufacturer or supplier's details

Company : Univar Solutions USA
Address : 3075 Highland Pkwy Suite 200
 Downers Grove, IL 60515
 United States of America (USA)

Emergency telephone number:

Transport North America: CHEMTREC (1-800-424-9300)

CHEMTREC INTERNATIONAL Tel # 703-527-3887

Additional Information: : Responsible Party: Product Compliance Department
 E-mail: SDSNA@univarsolutions.com
 SDS Requests: 1-855-429-2661
 Website: www.univarsolutions.com

SECTION 2. HAZARDS IDENTIFICATION

GHS Classification

Corrosive to metals : Category 1

Skin corrosion : Category 1A

Serious eye damage : Category 1

Carcinogenicity : Category 1A

Specific target organ toxicity
 - single exposure : Category 3 (Respiratory system)

GHS label elements

Hazard pictograms :



Signal word : Danger

Hazard statements : H290 May be corrosive to metals.
 H314 Causes severe skin burns and eye damage.
 H335 May cause respiratory irritation.
 H350 May cause cancer.

Precautionary statements : **Prevention:**
 P201 Obtain special instructions before use.
 P202 Do not handle until all safety precautions have been read and understood.
 P234 Keep only in original container.
 P261 Avoid breathing dust/ fume/ gas/ mist/ vapours/ spray.

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P264 Wash skin thoroughly after handling.
P271 Use only outdoors or in a well-ventilated area.
P280 Wear protective gloves/ protective clothing/ eye protection/ face protection.

Response:

P301 + P330 + P331 IF SWALLOWED: Rinse mouth. Do NOT induce vomiting.

P303 + P361 + P353 IF ON SKIN (or hair): Take off immediately all contaminated clothing. Rinse skin with water/ shower.

P304 + P340 + P310 IF INHALED: Remove person to fresh air and keep comfortable for breathing. Immediately call a POISON CENTER/ doctor.

P305 + P351 + P338 + P310 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.

P308 + P313 IF exposed or concerned: Get medical advice/ attention.

P363 Wash contaminated clothing before reuse.

P390 Absorb spillage to prevent material damage.

Storage:

P403 + P233 Store in a well-ventilated place. Keep container tightly closed.

P405 Store locked up.

P406 Store in corrosive resistant container with a resistant inner liner.

Disposal:

P501 Dispose of contents/ container to an approved waste disposal plant.

Other hazards

None known.

SECTION 3. COMPOSITION/INFORMATION ON INGREDIENTS

Substance / Mixture : Mixture

Hazardous components

CAS-No.	Chemical name	Weight percent
7664-93-9	Sulfuric acid	90 - 100

Any Concentration shown as a range is due to batch variation.

Molecular formula : H₂-O₄-S

SECTION 4. FIRST AID MEASURES

General advice : Move out of dangerous area.
Consult a physician.
Show this safety data sheet to the doctor in attendance.
Do not leave the victim unattended.

If inhaled : If unconscious, place in recovery position and seek medical advice.
If symptoms persist, call a physician.

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- | | |
|-------------------------|--|
| In case of skin contact | : Immediate medical treatment is necessary as untreated wounds from corrosion of the skin heal slowly and with difficulty.
If on skin, rinse well with water.
If on clothes, remove clothes. |
| In case of eye contact | : Small amounts splashed into eyes can cause irreversible tissue damage and blindness.
In the case of contact with eyes, rinse immediately with plenty of water and seek medical advice.
Continue rinsing eyes during transport to hospital.
Remove contact lenses.
Keep eye wide open while rinsing.
If eye irritation persists, consult a specialist.
Take victim immediately to hospital. |
| If swallowed | : Clean mouth with water and drink afterwards plenty of water.
Keep respiratory tract clear.
Do NOT induce vomiting.
Do not give milk or alcoholic beverages.
Never give anything by mouth to an unconscious person.
If symptoms persist, call a physician.
Take victim immediately to hospital. |

SECTION 5. FIREFIGHTING MEASURES

- | | |
|---|---|
| Suitable extinguishing media | : Dry chemical
Carbon dioxide (CO2) |
| Unsuitable extinguishing media | : High volume water jet
Water |
| Hazardous combustion products | : sulfur oxides
Gases hazardous to health may be formed.
Sulphuric acid |
| Specific extinguishing methods | : Use a water spray to cool fully closed containers. |
| Further information | : Collect contaminated fire extinguishing water separately. This must not be discharged into drains.
Fire residues and contaminated fire extinguishing water must be disposed of in accordance with local regulations. |
| Special protective equipment for firefighters | : Wear self-contained breathing apparatus for firefighting if necessary. |

SECTION 6. ACCIDENTAL RELEASE MEASURES

- | | |
|---|---|
| Personal precautions, protective equipment and emergency procedures | : Use personal protective equipment. |
| Environmental precautions | : Prevent product from entering drains.
Prevent further leakage or spillage if safe to do so.
If the product contaminates rivers and lakes or drains inform respective authorities. |
| Methods and materials for | : Soak up with inert absorbent material (e.g. sand, silica gel, |

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containment and cleaning up : acid binder, universal binder, sawdust).
Keep in suitable, closed containers for disposal.

SECTION 7. HANDLING AND STORAGE

Advice on protection against fire and explosion : Normal measures for preventive fire protection.

Advice on safe handling : Do not breathe vapours/dust.
Avoid contact with skin and eyes.
For personal protection see section 8.
Smoking, eating and drinking should be prohibited in the application area.
To avoid spills during handling keep bottle on a metal tray.
Dispose of rinse water in accordance with local and national regulations.

Conditions for safe storage : Keep container tightly closed in a dry and well-ventilated place.
Containers which are opened must be carefully resealed and kept upright to prevent leakage.
Observe label precautions.
Electrical installations / working materials must comply with the technological safety standards.

Materials to avoid : Do not store near acids.

SECTION 8. EXPOSURE CONTROLS/PERSONAL PROTECTION

Components with workplace control parameters

CAS-No.	Components	Value type (Form of exposure)	Control parameters / Permissible concentration	Basis
7664-93-9	Sulfuric acid	TWA (Thoracic particulate matter)	0.2 mg/m3	ACGIH
		TWA	1 mg/m3	NIOSH REL
		TWA	1 mg/m3	OSHA Z-1
		TWA	1 mg/m3	OSHA P0
		PEL	0.1 mg/m3	CAL PEL
		STEL	3 mg/m3	CAL PEL

Personal protective equipment

Respiratory protection : General and local exhaust ventilation is recommended to maintain vapor exposures below recommended limits. Where concentrations are above recommended limits or are unknown, appropriate respiratory protection should be worn. Follow OSHA respirator regulations (29 CFR 1910.134) and use NIOSH/MSHA approved respirators. Protection provided by air purifying respirators against exposure to any hazardous chemical is limited. Use a positive pressure air supplied respirator if there is any potential for uncontrolled release, exposure levels are unknown, or any other circumstance where air

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Hand protection	purifying respirators may not provide adequate protection.
Remarks	: The suitability for a specific workplace should be discussed with the producers of the protective gloves.
Eye protection	: Eye wash bottle with pure water Tightly fitting safety goggles Wear face-shield and protective suit for abnormal processing problems.
Skin and body protection	: Impervious clothing Choose body protection according to the amount and concentration of the dangerous substance at the work place.
Hygiene measures	: When using do not eat or drink. When using do not smoke. Wash hands before breaks and at the end of workday.

SECTION 9. PHYSICAL AND CHEMICAL PROPERTIES

Appearance	: liquid
Colour	: Clear, colorless, amber
Odour	: pungent
Odour Threshold	: No data available
pH	: 0.3 @ 25 °C (77 °F)
Freezing Point (Melting point/range)	: -31 - 10.56 °C (-24 - 51.01 °F)
Boiling Point (Boiling point/boiling range)	: 217 - 330 °C (423 - 626 °F)
Flash point	: does not flash
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	: < 0.3 mmHg @ 25 °C (77 °F)
Relative vapour density	: 3.4 @ 20 °C (68 °F) (Air = 1.0)
Relative density	: 1.8347 - 1.8437 @ 25 °C (77 °F) Reference substance: (water = 1)
Density	: Estimated 1.837 g/cm ³ @ 20 °C (68 °F) 15.3 - 15.4 lb/gal @ 25 °C (77 °F)
Solubility(ies)	
Water solubility	: completely miscible
Solubility in other solvents	: No data available
Partition coefficient: n-octanol/water	: No data available
Auto-ignition temperature	: No data available

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Thermal decomposition : 340 °C

SECTION 10. STABILITY AND REACTIVITY

Reactivity	: No dangerous reaction known under conditions of normal use.
Chemical stability	: Stable under normal conditions.
Possibility of hazardous reactions	: Acid reacts with most metals to release hydrogen gas which can form explosive mixtures with air. Reacts with organic materials and may cause ignition of finely divided materials on contact.
Conditions to avoid	: Avoid contact with combustible material (paper, wool, oil).
Incompatible materials	: Alkalis Metals carbide chlorates fuminates nitrates Organic materials Strong oxidizing agents strong reducing agents water Sulphur compounds acetylenes Acids Ammonia Combustible material Flammable materials Metals nitrates Nitriles nitrites Organic materials Oxidizing agents phosphorus Powdered metals Reducing agents water Peroxides
Hazardous decomposition products	: corrosive vapors Sulphur oxides toxic fumes

SECTION 11. TOXICOLOGICAL INFORMATION**Acute toxicity****Components:**

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7664-93-9:

Acute oral toxicity : LC50 (Rat, male and female): 2,140 mg/kg

Acute inhalation toxicity : LC50 (Rat, male and female): mg/m3 375
Exposure time: 4 h
Test atmosphere: dust/mist

Acute dermal toxicity : Remarks: No data available

Skin corrosion/irritation

Product:

Remarks: Extremely corrosive and destructive to tissue.

Components:

7664-93-9:

Species: Rabbit
Result: Causes severe burns.

Serious eye damage/eye irritation

Product:

Remarks: May cause irreversible eye damage.

Components:

7664-93-9:

Remarks: No data available

Respiratory or skin sensitisation

Components:

7664-93-9:

Remarks: No data available

Germ cell mutagenicity

Components:

7664-93-9:

Genotoxicity in vitro : Test Type: Ames test
Species: Salmonella typhimurium
Metabolic activation: with and without metabolic activation
Result: negative

Germ cell mutagenicity - Assessment : Not mutagenic in Ames Test

Carcinogenicity

Product:

Carcinogenicity - Assessment : Human carcinogen.

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Components:**7664-93-9:**

Species: Mouse, (male and female)

Application Route: Oral

Exposure time: lifetime

Dose: 0.2 mL of 0.2% aq solution

Frequency of Treatment: 1 days/week

Symptoms: Local irritation, Tumors

Carcinogenicity - Assessment : Weight of evidence does not support classification as a carcinogen

IARC

Group 1: Carcinogenic to humans

7664-93-9

Sulfuric acid

OSHA

No component of this product present at levels greater than or equal to 0.1% is on OSHA's list of regulated carcinogens.

NTP

Known to be human carcinogen

7664-93-9

Sulfuric acid

Reproductive toxicity**Components:****7664-93-9:**

Reproductive toxicity - Assessment

Fertility classification not possible from current data.

Teratogenicity - Assessment : Did not show teratogenic effects in animal experiments.

STOT - single exposure**Product:**

Assessment: The substance or mixture is classified as specific target organ toxicant, single exposure, category 3 with respiratory tract irritation.

Further information**Product:**

Remarks: No data available

SECTION 12. ECOLOGICAL INFORMATION**Ecotoxicity**

No data available

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Persistence and degradability

No data available

Bioaccumulative potential

No data available

Mobility in soil

No data available

Other adverse effects**Product:**

Ozone-Depletion Potential : Regulation: 40 CFR Protection of Environment; Part 82 Protection of Stratospheric Ozone - CAA Section 602 Class I Substances
Remarks: This product neither contains, nor was manufactured with a Class I or Class II ODS as defined by the U.S. Clean Air Act Section 602 (40 CFR 82, Subpt. A, App.A + B).

Additional ecological information : An environmental hazard cannot be excluded in the event of unprofessional handling or disposal.

SECTION 13. DISPOSAL CONSIDERATIONS**Disposal methods**

Waste from residues : Dispose of in accordance with all applicable local, state and federal regulations.
For assistance with your waste management needs - including disposal, recycling and waste stream reduction, contact Univar Solutions ChemCare: 1-800-637-7922

Contaminated packaging : Empty remaining contents.
Dispose of as unused product.
Do not re-use empty containers.

SECTION 14. TRANSPORT INFORMATION**DOT (Department of Transportation):**

UN1830, SULFURIC ACID, 8, II

IATA (International Air Transport Association):

UN1830, SULPHURIC ACID, 8, II

IMDG (International Maritime Dangerous Goods):

UN1830, SULPHURIC ACID, 8, II

SECTION 15. REGULATORY INFORMATION

WHMIS Classification : D2A: Very Toxic Material Causing Other Toxic Effects
D2B: Toxic Material Causing Other Toxic Effects

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E: Corrosive Material

EPCRA - Emergency Planning and Community Right-to-Know Act

CERCLA Reportable Quantity

Components	CAS-No.	Component RQ (lbs)	Calculated product RQ (lbs)
Sulfuric acid	7664-93-9	1000	1000

SARA 304 Extremely Hazardous Substances Reportable Quantity

Components	CAS-No.	Component RQ (lbs)	Calculated product RQ (lbs)
Sulfuric acid	7664-93-9	1000	1000

SARA 311/312 Hazards : Corrosive to metals
Skin corrosion or irritation
Serious eye damage or eye irritation
Carcinogenicity
Specific target organ toxicity (single or repeated exposure)

SARA 302 :

7664-93-9 Sulfuric acid

SARA 313 : The following components are subject to reporting levels established by SARA Title III, Section 313:

7664-93-9 Sulfuric acid

Clean Air Act

This product does not contain any hazardous air pollutants (HAP), as defined by the U.S. Clean Air Act Section 112 (40 CFR 61).

This product does not contain any chemicals listed under the U.S. Clean Air Act Section 112(r) for Accidental Release Prevention (40 CFR 68.130, Subpart F).

This product does not contain any chemicals listed under the U.S. Clean Air Act Section 111 SOCM I Intermediate or Final VOC's (40 CFR 60.489).

Clean Water Act

The following Hazardous Substances are listed under the U.S. CleanWater Act, Section 311, Table 116.4A:

7664-93-9 Sulfuric acid

The following Hazardous Chemicals are listed under the U.S. CleanWater Act, Section 311, Table 117.3:

7664-93-9 Sulfuric acid

This product does not contain any toxic pollutants listed under the U.S. Clean Water Act Section 307

Massachusetts Right To Know


7664-93-9 Sulfuric acid

Pennsylvania Right To Know

7664-93-9 Sulfuric acid

7732-18-5 Water

California Prop 65

 **WARNING:** This product can expose you to chemicals including Sulfuric acid, which is/are known to the State of California to cause cancer. For more information go to

Safety Data Sheet

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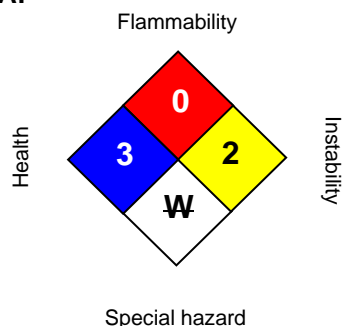
www.P65Warnings.ca.gov.

The components of this product are reported in the following inventories:

TSCA	: On TSCA Inventory
DSL	: All components of this product are on the Canadian DSL
AICS	: On the inventory, or in compliance with the inventory
NZIoC	: Not in compliance with the inventory
ENCS	: On the inventory, or in compliance with the inventory
KECI	: On the inventory, or in compliance with the inventory
PICCS	: On the inventory, or in compliance with the inventory
IECSC	: On the inventory, or in compliance with the inventory

SECTION 16. OTHER INFORMATION

NFPA:



HMIS III:

HEALTH	3/
FLAMMABILITY	0
PHYSICAL HAZARD	2

0 = not significant, 1 = Slight,
2 = Moderate, 3 = High
4 = Extreme, * = Chronic

The information accumulated is based on the data of which we are aware and is believed to be correct as of the date hereof. Since this information may be applied under conditions beyond our control and with which we may be unfamiliar and since data made become available subsequently to the date hereof, we do not assume any responsibility for the results of its use. Recipients are advised to confirm in advance of need that the information is current, applicable, and suitable to their circumstances. This SDS has been prepared by Univar Solutions Product Compliance Department (1-855-429-2661) SDSNA@univarsolutions.com.

Revision Date : 01/24/2024

Material number:

16212914, 16212048, 16211576, 16208309, 16207590, 16206988, 16202647, 16140266, 16187970, 16186715, 16177232, 16178973, 16178227, 16176163, 16176386, 16176196,

Safety Data Sheet


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16177166, 16162887, 16169706, 16173568, 16173209, 16152466, 16172838, 16145761, 16145532, 16145325, 16145036, 16144466, 16158800, 16152844, 16146037, 16147599, 16147477, 16158884, 16158841, 16145294, 16144737, 16143905, 16148041, 16144253, 16148755, 16163605, 16163600, 16148558, 16166436, 16166263, 16149587, 16138737, 16144430, 16159796, 16144634, 16144492, 16148416, 16152198, 16151380, 16151346, 16148456, 16148188, 16144447, 16144280, 16144100, 16144089, 16159794, 16143770, 16143771, 16160331, 16136043, 16149274, 16158943, 16149737, 16149062, 16148018, 16147993, 16145633, 16145526, 16144840, 16144220, 16143768, 16147033, 16147042, 16144370, 16144451, 16142210, 16140162, 16141097, 16140348, 16141851, 16141877, 16140763, 16143767, 16143769, 16142063, 16142367, 16142360, 16140603, 16142270

Key or legend to abbreviations and acronyms used in the safety data sheet			
ACGIH	American Conference of Government Industrial Hygienists	LD50	Lethal Dose 50%
AICS	Australia, Inventory of Chemical Substances	LOAEL	Lowest Observed Adverse Effect Level
DSL	Canada, Domestic Substances List	NFPA	National Fire Protection Agency
NDSL	Canada, Non-Domestic Substances List	NIOSH	National Institute for Occupational Safety & Health
CNS	Central Nervous System	NTP	National Toxicology Program
CAS	Chemical Abstract Service	NZIoC	New Zealand Inventory of Chemicals
EC50	Effective Concentration	NOAEL	No Observable Adverse Effect Level
EC50	Effective Concentration 50%	NOEC	No Observed Effect Concentration
EGEST	EOSCA Generic Exposure Scenario Tool	OSHA	Occupational Safety & Health Administration
EOSCA	European Oilfield Specialty Chemicals Association	PEL	Permissible Exposure Limit
EINECS	European Inventory of Existing Chemical Substances	PICCS	Philippines Inventory of Commercial Chemical Substances
MAK	Germany Maximum Concentration Values	PRNT	Presumed Not Toxic
GHS	Globally Harmonized System	RCRA	Resource Conservation Recovery Act
>=	Greater Than or Equal To	STEL	Short-term Exposure Limit
IC50	Inhibition Concentration 50%	SARA	Superfund Amendments and Reauthorization Act.
IARC	International Agency for Research on Cancer	TLV	Threshold Limit Value
IECSC	Inventory of Existing Chemical Substances in China	TWA	Time Weighted Average
ENCS	Japan, Inventory of Existing and New Chemical Substances	TSCA	Toxic Substance Control Act
KECI	Korea, Existing Chemical Inventory	UVCB	Unknown or Variable Composition, Complex Reaction Products, and Biological Materials
<=	Less Than or Equal To	WHMIS	Workplace Hazardous Materials Information System
LC50	Lethal Concentration 50%		

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SECTION 1: Identification of the substance/mixture and of the company/undertaking

1.1 Product identifier

Trade name : SULFURIC ACID 93% TECHNICAL

1.2 Relevant identified uses of the substance or mixture and uses advised against

no data available

1.3 Details of the supplier of the safety data sheet

Company : Eco Services Operations Corp.
2002 Timberloch Place
Suite 300
The Woodlands, TX 77380
Phone number : (844) 812-1812

1.4 Emergency telephone

FOR EMERGENCIES INVOLVING A SPILL, LEAK, FIRE, EXPOSURE OR ACCIDENT CONTACT: CHEMTREC 800-424-9300 within the United States and Canada, or 703-527-3887 for international collect calls.

SECTION 2: Hazards identification

Although OSHA has not adopted the environmental portion of the GHS regulations, this document may include information on environmental effects.

2.1 Classification of the substance or mixture

HCS 2012 (29 CFR 1910.1200)

Skin corrosion, Category 1A
Serious eye damage, Category 1
Specific target organ systemic toxicity - single exposure, Category 3, Respiratory system

H314: Causes severe skin burns and eye damage.
H318: Causes serious eye damage.
H335: May cause respiratory irritation.

2.2 Label elements

HCS 2012 (29 CFR 1910.1200)

Pictogram




Signal Word

: Danger

Hazard Statements:

H314
H335

Causes severe skin burns and eye damage.
May cause respiratory irritation.

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Precautionary Statements:

Prevention

P261 Avoid breathing dust/ fume/ gas/ mist/ vapors/ spray.
P264 Wash skin thoroughly after handling.
P271 Use only outdoors or in a well-ventilated area.
P280 Wear protective gloves/ protective clothing/ eye protection/ face protection.

Response

P301 + P330 + P331 IF SWALLOWED: Rinse mouth. Do NOT induce vomiting.
P303 + P361 + P353 IF ON SKIN (or hair): Remove/ Take off immediately all contaminated clothing. Rinse skin with water/ shower.
P304 + P340 IF INHALED: Remove victim to fresh air and keep at rest in a position comfortable for breathing.
P305 + P351 + P338 IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.
P310 Immediately call a POISON CENTER or doctor/ physician.
P363 Wash contaminated clothing before reuse.

Storage

P403 + P233 Store in a well-ventilated place. Keep container tightly closed.
P405 Store locked up.

Disposal

P501 Dispose of contents/ container to an approved waste disposal plant.

2.3 Other hazards which do not result in classification

Water Reactive

H402: Harmful to aquatic life.

H411: Toxic to aquatic life with long lasting effects.

SECTION 3: Composition/information on ingredients

3.1 Substance

Not applicable, this product is a mixture.


3.2 Mixture

Hazardous Ingredients and Impurities

Chemical Name	Identification number CAS-No.	Concentration [%]
Sulfuric acid	7664-93-9	93

Non Hazardous Ingredients and Impurities

Chemical Name	Identification number CAS-No.	Concentration [%]
Water	7732-18-5	7

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SECTION 4: First aid measures

4.1 Description of first-aid measures

- | | | |
|--------------|---|--|
| If inhaled | : | Remove victim from exposure and then have him lie down in the recovery position.
In case of shortness of breath, give oxygen.
If victim has stopped breathing:
administer CPR (cardio-pulmonary resuscitation)
Immediate medical attention is required. |
| Skin contact | : | In case of contact, immediately flush skin with plenty of water for at least 30 minutes.
Remove all contaminated apparel under the shower.
Wash off with plenty of water.
Do not attempt to neutralize with chemical agents
Immediate medical attention is required. |
| Eye contact | : | In case of contact, immediately flush eyes with plenty of water for at least 30 minutes.
Immediate medical attention is required. |
| Ingestion | : | Do NOT induce vomiting.
If victim is conscious:
Rinse mouth with water.
Do not leave the victim unattended.
Risk of product entering the lungs on vomiting after ingestion.
Lay victim on side.
Never give anything by mouth to an unconscious person.
Immediate medical attention is required. |

4.2 Most important symptoms and effects, both acute and delayed

- | | | |
|-------|---|---|
| Risks | : | Inhalation of product may aggravate existing chronic respiratory problems such as asthma, emphysema or bronchitis
Skin contact may aggravate existing skin disease |
|-------|---|---|


4.3 Indication of any immediate medical attention and special treatment needed

- | | | |
|--------------------|---|--|
| Notes to physician | : | All treatments should be based on observed signs and symptoms of distress in the patient. Consideration should be given to the possibility that overexposure to materials other than this product may have occurred. |
|--------------------|---|--|

SECTION 5: Firefighting measures

- | | | |
|--------------------------------|---|-------------------|
| Flash point | : | Not applicable |
| Autoignition temperature | : | no data available |
| Flammability / Explosive limit | : | no data available |

5.1 Extinguishing media

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Suitable extinguishing media : Dry chemical

5.2 Special hazards arising from the substance or mixture

Specific hazards during fire fighting : Not combustible.
 Strong oxidizer. Contact with other material may cause fire.
 Reacts violently with water.
 Corrosive or suffocating vapors are released.
 On combustion or on thermal decomposition (pyrolysis), releases:
 Sulfur oxides
 Sulfuric acid reacts with metals, especially when diluted with water. This reaction produces highly flammable hydrogen gas, which may explode when ignited, especially in confined spaces.

5.3 Advice for firefighters

Special protective equipment for fire-fighters : Firefighters should wear NIOSH/MSHA approved self-contained breathing apparatus and full protective clothing.
 Acid-resistant protective clothing

Specific fire fighting methods : Fight fire with normal precautions from a reasonable distance.

SECTION 6: Accidental release measures

6.1 Personal precautions, protective equipment and emergency procedures

Personal precautions, protective equipment and emergency procedures : The product must only be handled by specifically trained employees.


6.2 Environmental precautions

Environmental precautions : Do not flush into surface water or sanitary sewer system.
 Collect contaminated fire extinguishing water separately. This must not be discharged into drains.
 Spills may be reportable to the National Response Center (800-424-8802) and to state and/or local agencies
 Site should have a spill plan to ensure that adequate safeguards are in place to minimize the impact of episodic releases.

6.3 Methods and materials for containment and cleaning up

Recovery : Stop leak if safe to do so.
 Dam up with sand or inert earth (do not use combustible materials).

Decontamination / cleaning : Pump or collect any free spillage into an appropriate closed container. (see Section 7: Handling and Storage)
 Exercise caution during neutralization as considerable heat may be generated
 Carefully neutralize the remainder using:
 soda ash
 Soak up with inert absorbent material.
 Scrape up.
 Keep in suitable, closed containers for disposal.

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6.4 Reference to other sections

Reference to other sections : 7. HANDLING AND STORAGE

SECTION 7: Handling and storage

7.1 Precautions for safe handling

- | | | |
|--------------------|---|---|
| Technical measures | : | <p>Do not breathe mist or vapors.
 Avoid contact with the skin and the eyes.
 When diluting, always add the product to water. Never add water to the product.
 Reacts violently with:
 bases.</p> |
| Hygiene measures | : | <p>Personal hygiene is an important work practice exposure control measure and the following general measures should be taken when working with or handling this materials:</p> <ol style="list-style-type: none"> 1) Do not store, use, and/or consume foods, beverages, tobacco products, or cosmetics in areas where this material is stored. 2) Wash hands and face carefully before eating, drinking, using tobacco, applying cosmetics, or using the toilet. 3) Wash exposed skin promptly to remove accidental splashes or contact with material. |

7.2 Conditions for safe storage, including any incompatibilities

Storage conditions


- | | | |
|-------------|---|---|
| Recommended | : | <p>Keep tightly closed.
 Store in an area:
 dry
 well-ventilated
 diked</p> |
|-------------|---|---|

Storage stability

- | | | |
|---------------------|---|--|
| Storage temperature | : | < 104 °F (< 40 °C) |
| Other data | : | Corrosion rates increase at elevated temperatures. |

7.3 Specific end use(s)

no data available

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SECTION 8: Exposure controls/personal protection

Introductory Remarks: These recommendations provide general guidance for handling this product. Because specific work environments and material handling practices vary, safety procedures should be developed for each intended application. Assistance with selection, use and maintenance of worker protection equipment is generally available from equipment manufacturers.

8.1 Control parameters

Ingredients with workplace control parameters

Ingredients	Value type	Value	Basis
Sulfuric acid	TWA	1 mg/m3	NIOSH
Sulfuric acid	TWA	0.2 mg/m3	ACGIH
	Form of exposure : Thoracic fraction Pulmonary function, Classification refers to sulfuric acid contained in strong inorganic acid mists, Suspected human carcinogen		
Sulfuric acid	TWA	1 mg/m3	OSHA Z-1
Sulfuric acid	TWA	1 mg/m3	OSHA Z-1-A
Sulfuric acid	TWA	0.2 mg/m3	SOLVAY

NIOSH IDLH (Immediately Dangerous to Life or Health Concentrations)

Ingredients	CAS-No.	Concentration
Sulfuric acid	7664-93-9	15 milligram per cubic meter

8.2 Exposure controls

Control measures

Engineering measures : Where engineering controls are indicated by use conditions or a potential for excessive exposure exists, the following traditional exposure control techniques may be used to effectively minimize employee exposures :

Effective exhaust ventilation system


Personal protective equipment

Respiratory protection : When respirators are required, select NIOSH/MSHA approved equipment based on actual or potential airborne concentrations and in accordance with the appropriate regulatory standards and/or industrial recommendations.

Recommended Filter type: Acidic gas/vapor type

Eye protection : Eye and face protection requirements will vary dependent upon work environment conditions and material handling practices. Appropriate ANSI Z87 approved equipment should be selected for the particular use intended for this material.

Eye contact should be prevented through the use of:

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Wear protective eye glasses for protection against liquid splashes (goggles)

Skin and body protection

- : Wear as appropriate:
- Face-shield
- Acid-resistant protective clothing
- Acid resistant boots.

Hygiene measures

- : Personal hygiene is an important work practice exposure control measure and the following general measures should be taken when working with or handling this materials:
- 1) Do not store, use, and/or consume foods, beverages, tobacco products, or cosmetics in areas where this material is stored.
- 2) Wash hands and face carefully before eating, drinking, using tobacco, applying cosmetics, or using the toilet.
- 3) Wash exposed skin promptly to remove accidental splashes or contact with material.

Protective measures


- : Ensure that eyewash stations and safety showers are close to the workstation location.

SECTION 9: Physical and chemical properties

Physical and Chemical properties here represent typical properties of this product. Contact the business area using the Product information phone number in Section 1 for its exact specifications.

9.1 Information on basic physical and chemical properties

Appearance	: Form : oily Physical state: liquid Color: colorless
Odor	: odorless
Odor Threshold	: no data available
pH	: 1.0 (1 % (m/v))
Melting point/range	: -26 °F (-32 °C)
Boiling point/boiling range	: 529 °F (276 °C) (760 mmHg (1,013.25 hPa))
Flash point	: Not applicable
Evaporation rate (Butylacetate = 1)	: no data available
Flammability (solid, gas)	: no data available
Flammability (liquids)	: no data available
Flammability / Explosive limit	: no data available
Autoignition temperature	: no data available

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Vapor pressure	:	< 1 mmHg (1.33 hPa) (104 °F (40 °C))
Vapor density	:	no data available
Density	:	Relative density : 1.836 (61 °F (16 °C))
Solubility	:	<u>Water solubility</u> : miscible
Partition coefficient: n-octanol/water	:	no data available
Thermal decomposition	:	no data available
Viscosity	:	no data available
Explosive properties	:	no data available
Oxidizing properties	:	no data available

9.2 Other information

Molecular weight	:	98.08 g/mol
Reactions with water / air	:	Reacts violently with water.

SECTION 10: Stability and reactivity

10.1 Reactivity

no data available

10.2 Chemical stability


Chemical stability	:	Stable under recommended storage conditions.
--------------------	---	--

10.3 Possibility of hazardous reactions

Contact with metals may evolve flammable hydrogen gas, especially in confined spaces.
Hazardous polymerization does not occur.

10.4 Conditions to avoid

no data available

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10.5 Incompatible materials

Materials to avoid : Water
 Strong reducing agents
 Halogenated compounds
 Bases
 metals
 Nitrogen oxides (NOx)

10.6 Hazardous decomposition products

Decomposition products : On combustion or on thermal decomposition (pyrolysis), releases:
 Sulfur oxides

SECTION 11: Toxicological information

11.1 Information on toxicological effects

Acute toxicity

Acute oral toxicity
 Sulfuric acid

LD50 Oral : 2,140 mg/kg - Rat
 Gavage
 Published data

Acute inhalation toxicity
 Sulfuric acid

: LC50 - 4 h (aerosol) : 0.375 mg/l - Rat , male and female
 Toxicity secondary to corrosive effects at site of contact.
 Published data

LC50 - 4 h (aerosol) : 0.85 mg/l - Mouse , male and female
 Toxicity secondary to corrosive effects at site of contact.
 Published data

(Mist) Humans

Symptoms: Potential health effects, Respiratory disorders, Symptoms may be delayed., Cough, Risk of delayed pulmonary edema.


Effects of breathing high concentration of respirable particles may include:
 May cause irritation of respiratory tract.

Lung irritation
 Published data

Acute dermal toxicity
 Sulfuric acid

: Not classified as hazardous for acute toxicity according to GHS
 Not applicable
 Corrosive
 internal evaluation

Acute toxicity (other routes of administration) : no data available

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Skin corrosion/irritation

Skin irritation

Sulfuric acid : Causes severe burns.
Published data

Serious eye damage/eye irritation

Eye irritation

Sulfuric acid : Risk of serious damage to eyes.
Published data

Respiratory or skin sensitization

Sensitization

Sulfuric acid : Local lymph node assay
Not applicable
Corrosive
The product is not considered to be sensitizing by skin contact.
internal evaluation

Mutagenicity

Genotoxicity in vitro


Sulfuric acid : Mutagenicity (Salmonella typhimurium - reverse mutation assay)
with and without metabolic activation
negative
Method: OECD Test Guideline 471
Published data

Chromosome aberration test in vitro
Strain: Chinese hamster ovary cells
with and without metabolic activation
positive
Effects observed are due to the reduced pH in the test medium.
Published data

Product is not considered to be genotoxic

Genotoxicity in vivo

: no data available

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Carcinogenicity

Carcinogenicity

Sulfuric acid

: inhalation (mist)

Animal studies

Unpublished reports

Published data

No carcinogenic effects have been observed

Note: IARC Classification: Group 1
mists from strong inorganic acids

IARC and NTP classified "occupational exposure to strong inorganic acid mists containing sulfuric acid" as a known human carcinogen. ACGIH has also classified "sulfuric acid as contained in strong inorganic acid mists" as a suspected human carcinogen. There is still a debate on the studies reviewed by these agencies. We disagree with IARC's conclusion, in that more recent studies have failed to find association between "occupational exposure to strong inorganic acid mist containing sulfuric acid." and laryngeal or lung cancer. In fact, in 2012 IARC revised their classification dropping the "containing sulfuric acid" wording. Lifetime animal studies in hamsters, rats, and guinea pigs were conducted by the EPA and NIEHS and were all negative. However, they were not formally published by the agencies and not considered by IARC or NTP.


Ingredients	CAS-No.	Rating	Basis
Strong inorganic acid mists containing sulfuric acid		Group 1: Carcinogenic to humans	IARC
Strong inorganic acid mists containing sulfuric acid		Suspected human carcinogen	ACGIH
Strong inorganic acid mists containing sulfuric acid		Known to be human carcinogen	NTP
Sulfuric acid	7664-93-9	Suspected human carcinogen	ACGIH

This product does not contain any ingredient designated as probable or suspected human carcinogens by:

OSHA

NTP

IARC

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Toxicity for reproduction and development

Toxicity to reproduction / fertility

Sulfuric acid : Effects on fertility
fetotoxic effect
no observed effect

Developmental Toxicity/Teratogenicity

Sulfuric acid : Rabbit
Application Route: inhalation (mist)
NOAEC teratogenicity: 19.3 mg/m3

Method: OECD Test Guideline 414
no teratogenic effects have been observed

Mouse
Application Route: inhalation (mist)
NOAEC teratogenicity: 19.3 mg/m3

Method: OECD Test Guideline 414
no teratogenic effects have been observed
Published data

STOT

STOT-single exposure

Sulfuric acid Routes of exposure: inhalation (mist)
Target Organs: Respiratory Tract
Toxicology Assessment:
May cause respiratory irritation.


STOT-repeated exposure

Sulfuric acid : Toxicology Assessment:
The substance or mixture is not classified as specific target organ toxicant, repeated exposure., internal evaluation

Sulfuric acid : inhalation (mist) 28 d - Rat
LOAEC: 0.3 mg/m3
Target Organs: Larynx
Method: OECD Test Guideline 412
Symptoms: Local irritation
Unpublished reports

inhalation (mist) 78 Weeks - Monkey
LOAEC: 0.38 mg/m3
Target Organs: Respiratory Tract
Symptoms: Local irritation, Respiratory disorders
Published data

Repeated inhalation of aerosols may cause adverse effects on health

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Experience with human exposure

Experience with human exposure : Inhalation

Sulfuric acid : Target Organs: Respiratory Tract

Target Organs: Nose

Symptoms: Burning sensations in the nose and throat.

Breathing difficulties

Dental erosion

Mist

At high concentrations:

Irritating to the respiratory system and mucous membranes.

Published data

Carcinogenicity

Sulfuric acid

: Carcinogenicity classification not possible from current data.

Teratogenicity

Sulfuric acid

: Did not show teratogenic effects in animal experiments.

Aspiration toxicity

Aspiration toxicity

Sulfuric acid

: Not applicable

SECTION 12: Ecological information

12.1 Toxicity

Aquatic Compartment

Acute toxicity to fish

Sulfuric acid

: LC50 - 96 h : 16 - 28 mg/l - Lepomis macrochirus (Bluegill sunfish)
static test

Non neutralized product

pH 3.5 - 3.25

Harmful to fish.

Published data

Acute toxicity to daphnia and other aquatic invertebrates.

Sulfuric acid

: EC50 - 48 h : > 100 mg/l - Daphnia magna (Water flea)
static test Method: OECD Test Guideline 202

Fresh water

Neutralized product

Not harmful to aquatic invertebrates. (EC50 > 100 mg/L)

Unpublished reports


EC50 - 24 h : 29 mg/l - Daphnia magna (Water flea)

Method: ISO 6341

Non neutralized product

Harmful to aquatic invertebrates.

Published data

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Toxicity to aquatic plants

Sulfuric acid

- : NOEC : 0.13 mg/l - Algae
field study
pH 5.6
Non neutralized product
Published data
- ErC50 - 72 h : > 100 mg/l - Desmodesmus subspicatus (green algae)
Growth inhibition
Method: OECD Test Guideline 201
Neutralized product
Unpublished reports

Chronic toxicity to fish

Sulfuric acid

- : NOEC: 0.13 mg/l - 10 Months - Salvelinus fontinalis (brown trout)
flow-through test
pH 5.6
Fresh water
Non neutralized product
Published data

Ecotoxicity assessment

Acute aquatic toxicity

Sulfuric acid

- : If the product is not neutralized, it may cause adverse effects to aquatic organisms due to its acidity.
Neutralization will reduce ecotoxic effects.

Chronic aquatic toxicity

Sulfuric acid

- : If the product is not neutralized, it may cause adverse effects to aquatic organisms due to its acidity.

12.2 Persistence and degradability

Biodegradability

Biodegradability

Sulfuric acid

- : Not applicable, inorganic substance

Stability

Stability in water

Sulfuric acid

- : Product dissociates rapidly to corresponding ions on contact with water.

12.3 Bioaccumulative potential

Partition coefficient: n-octanol/water

Sulfuric acid

- : Not applicable, inorganic substance


Bioconcentration factor (BCF)

Sulfuric acid

- : Not relevant
internal evaluation

12.4 Mobility in soil

no data available

SAFETY DATA SHEET		
SULFURIC ACID 93% TECHNICAL		
Revision: 2. US (EN)	Issuing date: 05/09/2016	

12.5 Results of PBT and vPvB assessment

Results of PBT and vPvB assessment

Sulfuric acid : This substance is not considered to be persistent, bioaccumulating, and toxic (PBT)., This substance is not considered to be very persistent and very bioaccumulating (vPvB).

12.6 Other adverse effects

Environment assessment

Sulfuric acid : Not classified as Dangerous for the Environment

SECTION 13: Disposal considerations

13.1 Waste treatment methods

Product Disposal

Advice on Disposal : Chemical additions, processing or otherwise altering this material may make the waste management information presented in this MSDS incomplete, inaccurate or otherwise inappropriate. Please be advised that state and local requirements for waste disposal may be more restrictive or otherwise different from federal laws and regulations. Consult state and local regulations regarding the proper disposal of this material.

Waste Code : EPA:
Hazardous Waste – YES

RCRA:
D002 - Corrosive waste – (C)
D003 - Reactive waste – (R)


SECTION 14: Transport information

Transportation status: IMPORTANT! Statements below provide additional data on listed transport classification.

The listed Transportation Classification does not address regulatory variations due to changes in package size, mode of shipment or other regulatory descriptors.

DOT

<u>14.1 UN number</u>	UN 1830
<u>14.2 Dangerous Good Description</u>	UN 1830 SULFURIC ACID, 8, II
<u>14.3 Transport hazard class</u>	8
<u>14.4 Packing group</u>	II
Packing group	II
Label(s)	8
ERG No	137
<u>14.5 Environmental hazards</u>	NO
Marine pollutant	

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14.6 Special precautions for user

This product contains one or more ingredients identified as a hazardous substance in Appendix A of 49 CFR 172.101. The product quantity, in one package, which triggers the RQ requirements under 49 CFR for each hazardous substance is shown.

Reportable quantities : RQ substance: Sulfuric acid
RQ limit for substance: 1,000 lb

TDG

14.1 UN number UN 1830

14.2 Dangerous Good Description UN 1830 SULFURIC ACID, 8, II

14.3 Transport hazard class 8

14.4 Packing group
Packing group II
Label(s) 8
ERG No 137

14.5 Environmental hazards NO
Marine pollutant

IMDG

14.1 UN number UN 1830

14.2 Dangerous Good Description UN 1830 SULPHURIC ACID, 8, II

14.3 Transport hazard class 8

14.4 Packing group
Packing group II
Label(s) 8
EmS F-A , S-B


14.5 Environmental hazards NO
Marine pollutant

14.6 Special precautions for user
For personal protection see section 8.

IATA

14.1 UN number UN 1830

14.2 Dangerous Good Description UN 1830 SULPHURIC ACID, 8, II

SAFETY DATA SHEET		
SULFURIC ACID 93% TECHNICAL		
Revision: 2. US (EN)		Issuing date: 05/09/2016

<u>14.3 Transport hazard class</u>	8
<u>14.4 Packing group</u>	
Packing group	II
Label(s):	8
Packing instruction (cargo aircraft)	855
Max net qty / pkg	30.00 L
Packing instruction (passenger aircraft)	851
Max net qty / pkg	1.00 L

<u>14.5 Environmental hazards</u>	NO
Marine pollutant	

14.6 Special precautions for user
For personal protection see section 8.


Note: The above regulatory prescriptions are those valid on the date of publication of this sheet. Given the possible evolution of transportation regulations for hazardous materials, it would be advisable to check their validity with your sales office.

SECTION 15: Regulatory information

15.1 Notification status

United States TSCA Inventory	: YES (positive listing) On TSCA Inventory
Canadian Domestic Substances List (DSL)	: YES (positive listing) All components of this product are on the Canadian DSL.
Australia Inventory of Chemical Substances (AICS)	: YES (positive listing) On the inventory, or in compliance with the inventory
Japan. CSCL - Inventory of Existing and New Chemical Substances	: YES (positive listing) On the inventory, or in compliance with the inventory
Korea. Korean Existing Chemicals Inventory (KECI)	: YES (positive listing) On the inventory, or in compliance with the inventory
China. Inventory of Existing Chemical Substances in China (IECSC)	: YES (positive listing) On the inventory, or in compliance with the inventory

15.2 Federal Regulations

SAFETY DATA SHEET		
SULFURIC ACID 93% TECHNICAL		
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SARA 311/312 Hazards

Fire Hazard	no
Reactivity Hazard	yes
Sudden Release of Pressure Hazard	no
Acute Health Hazard	yes
Chronic Health Hazard	no

SARA 313 : The following components are subject to reporting levels established by SARA Title III, Section 313:
Sulfuric acid 7664-93-9 93 %

SARA 302 : The following components are subject to reporting levels established by SARA Title III, Section 302:

Ingredients	CAS-No.	Threshold planning quantity	Remarks
Sulfuric acid	7664-93-9	1000 lb	

EPCRA - Emergency Planning and Community Right-to-Know

CERCLA Reportable Quantity

Ingredients	CAS-No.	Reportable quantity
Unlisted hazardous wastes - Characteristic of Corrosivity		100 lb
Unlisted hazardous wastes - Characteristic of Reactivity		100 lb
Sulfuric acid	7664-93-9	1000 lb

SARA 304 Reportable Quantity

Ingredients	CAS-No.	Reportable quantity
Sulfuric acid	7664-93-9	1000 lb

SARA 302 Reportable Quantity


Ingredients	CAS-No.	Reportable quantity
Sulfuric acid	7664-93-9	1000 lb

15.3 State Regulations

California Prop 65 : WARNING! This product contains a chemical known in the State of California to cause cancer.
Strong inorganic acid mists containing sulfuric acid

This product does not contain any chemicals known to the State of California to cause cancer, birth, or any other reproductive defects.

SECTION 16: Other information

SAFETY DATA SHEET		
SULFURIC ACID 93% TECHNICAL		
Revision: 2. US (EN)		Issuing date: 05/09/2016

NFPA (National Fire Protection Association) - Classification

Health : 3 serious
 Flammability : 0 minimal
 Instability or Reactivity : 2 moderate

HMIS (Hazardous Materials Identification System (Paint & Coating)) - Classification

Health : 3 serious
 Flammability : 0 minimal
 Reactivity : 2 moderate

Further information

Date Prepared : 01/15/2015
 Further information : Product classified under the US GHS format.

Key or legend to abbreviations and acronyms used in the safety data sheet

TWA : 8-hour, time-weighted average
 ACGIH : American Conference of Governmental Industrial Hygienists
 OSHA : Occupational Safety and Health Administration
 WHMIS : Workplace Hazardous Materials Information System
 NTP : National Toxicology Program
 IARC : International Agency for Research on Cancer
 : Solvay Acceptable Exposure Limit
 NIOSH : National Institute for Occupational Safety and Health
 NFPA : National Fire Protection Association
 HMIS : Hazardous Materials Identification System (Paint & Coating)

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. Such information is only given as a guidance to help the user handle, use, process, store, transport, dispose, and release the product in satisfactory safety conditions and is not to be considered as a warranty or quality specification. It should be used in conjunction with technical sheets but do not replace them. Thus, the information only relates to the designated specific product and may not be applicable if such product is used in combination with other materials or in another manufacturing process, unless otherwise specifically indicated. It does not release the user from ensuring he is in conformity with all regulations linked to its activity.



SAFETY DATA SHEET

CORTROL* OS5607

1. Identification

Product identifier CORTROL OS5607
Other means of identification None.
Recommended use Water based dissolved oxygen scavenger/ metal passivator.
Recommended restrictions None known.

Company/undertaking identification

Veolia WTS USA, Inc.
3600 Horizon Blvd.
Trevose, PA 19053
T 215 355 3300, F 215 953 5524

Emergency telephone

(800) 877 1940

2. Hazard(s) identification

Physical hazards Not classified.
Health hazards Sensitization, skin Category 1B
OSHA defined hazards Not classified.

Label elements



Signal word Warning
Hazard statement May cause an allergic skin reaction.

Precautionary statement

Prevention Avoid breathing mist or vapor. Contaminated work clothing must not be allowed out of the workplace. Wear protective gloves.
Response If on skin: Wash with plenty of water/. Specific treatment (see on this label). If skin irritation or rash occurs: Get medical advice/attention. Wash contaminated clothing before reuse.
Storage Store away from incompatible materials.
Disposal Dispose of contents/container in accordance with local/regional/national/international regulations.

Hazard(s) not otherwise classified (HNO C) None known.

Supplemental information None.

3. Composition/information on ingredients

Mixtures

Components	CAS #	Percent
Carbohydrazide	497-18-7	2.5 - 10

Composition comments

Information for specific product ingredients as required by the U.S. OSHA HAZARD COMMUNICATION STANDARD is listed. Refer to additional sections of this SDS for our assessment of the potential hazards of this formulation.

4. First-aid measures

Inhalation

Move to fresh air. Call a physician if symptoms develop or persist.

Skin contact

Remove contaminated clothing immediately and wash skin with soap and water. In case of eczema or other skin disorders: Seek medical attention and take along these instructions.

Eye contact

Rinse with water. Remove contact lenses, if present and easy to do. Get medical attention if irritation persists after flushing.

Ingestion

Rinse mouth. Get medical attention if symptoms occur.

Most important symptoms/effects, acute and delayed

Dermatitis. Rash. May cause an allergic skin reaction.

Indication of immediate medical attention and special treatment needed

Provide general supportive measures and treat symptomatically. Keep victim under observation. Symptoms may be delayed.

General information

Ensure that medical personnel are aware of the material(s) involved, and take precautions to protect themselves. Wash contaminated clothing before reuse.

5. Fire-fighting measures

Suitable extinguishing media

Water fog. Foam. Dry chemical powder. Carbon dioxide (CO₂).

Unsuitable extinguishing media

Do not use water jet as an extinguisher, as this will spread the fire.

Specific hazards arising from the chemical

During fire, gases hazardous to health may be formed.

Special protective equipment and precautions for firefighters

Self-contained breathing apparatus and full protective clothing must be worn in case of fire.

Fire fighting equipment/instructions

In case of fire and/or explosion do not breathe fumes. Use standard firefighting procedures and consider the hazards of other involved materials. Move containers from fire area if you can do so without risk. Cool containers / tanks with water spray.

Specific methods

Use standard firefighting procedures and consider the hazards of other involved materials.

General fire hazards

No unusual fire or explosion hazards noted.

6. Accidental release measures

Personal precautions, protective equipment and emergency procedures

Keep unnecessary personnel away. Keep people away from and upwind of spill/leak. Keep out of low areas. Wear appropriate protective equipment and clothing during clean-up. Avoid inhalation of vapors or mists. Do not touch damaged containers or spilled material unless wearing appropriate protective clothing. Ensure adequate ventilation. Local authorities should be advised if significant spillages cannot be contained. See Section 8 of the SDS for Personal Protective Equipment.

Methods and materials for containment and cleaning up

Prevent entry into waterways, sewer, basements or confined areas.

Large Spills: Stop the flow of material, if this is without risk. Dike the spilled material, where this is possible. Cover with plastic sheet to prevent spreading. Absorb in vermiculite, dry sand or earth and place into containers. Following product recovery, flush area with water.

Small Spills: Wipe up with absorbent material (e.g. cloth, fleece). Clean surface thoroughly to remove residual contamination.

Never return spills to original containers for re-use.

Environmental precautions

Avoid discharge into drains, water courses or onto the ground.

7. Handling and storage

Precautions for safe handling

Contact with oxidisers, peroxide and metal oxide may result in a violent reaction. Contamination with low pH products and low grade metal accelerate decomposition to hydrazine. Avoid contact with skin. Avoid contact with eyes. Avoid prolonged exposure. Avoid contact with clothing. Provide adequate ventilation. Wear appropriate personal protective equipment. Observe good industrial hygiene practices.

Conditions for safe storage, including any incompatibilities

Store containers closed when not in use. Do not freeze. If frozen, thaw completely and mix thoroughly prior to use.

8. Exposure controls/personal protection

Biological limit values	No biological exposure limits noted for the ingredient(s).
Appropriate engineering controls	Good general ventilation (typically 10 air changes per hour) should be used. Ventilation rates should be matched to conditions. If applicable, use process enclosures, local exhaust ventilation, or other engineering controls to maintain airborne levels below recommended exposure limits. If exposure limits have not been established, maintain airborne levels to an acceptable level.
Individual protection measures, such as personal protective equipment	
Eye/face protection	Splash proof chemical goggles.
Skin protection	
Hand protection	Chemical resistant gloves. The choice of an appropriate glove does not only depend on its material but also on other quality features and is different from one producer to the other. Glove selection must take into account any solvents and other hazards present.
Other	Wear appropriate chemical resistant clothing. Use of an impervious apron is recommended. Chemical resistant gloves. Wash off after each use. Rubber gloves Replace as necessary. Viton or neoprene gloves.
Respiratory protection	If engineering controls do not maintain airborne concentrations below recommended exposure limits (where applicable) or to an acceptable level (in countries where exposure limits have not been established), an approved respirator must be worn. A respiratory protection program that meets OSHA's 29 CFR 1910.34 and ANSI Z88.2 requirements must be followed whenever workplace conditions warrant a respirator's use.
Thermal hazards	Wear appropriate thermal protective clothing, when necessary.
General hygiene considerations	Always observe good personal hygiene measures, such as washing after handling the material and before eating, drinking, and/or smoking. Routinely wash work clothing and protective equipment to remove contaminants. Contaminated work clothing should not be allowed out of the workplace.

9. Physical and chemical properties

Appearance	Liquid
Physical state	Liquid.
Form	Not available.
Color	Colorless to light yellow
Odor	Slight
Odor threshold	Not available.
pH (concentrated product)	8
Melting point/freezing point	32 °F (0 °C)
Initial boiling point and boiling range	212 °F (100 °C)
Flash point	> 200 °F (> 93 °C) P-M(CC)
Evaporation rate	< 1 (Ether = 1)
Flammability (solid, gas)	Not available.
Upper/lower flammability or explosive limits	
Explosive limit - lower (%)	Not available.
Explosive limit - upper (%)	Not available.
Vapor pressure	18 mm Hg
Vapor pressure temp.	70 °F (21 °C)
Vapor density	< 1 (Air = 1)
Relative density	1.02
Relative density temperature	70 °F (21 °C)
Solubility(ies)	
Solubility (water)	100 %
Partition coefficient (n-octanol/water)	Not available.
Auto-ignition temperature	Not available.
Decomposition temperature	Not available.
Viscosity	9 cps

Viscosity temperature	70 °F (21 °C)
Other information	
pH in aqueous solution	7.4 (5% SOL.)
Pour point	37 °F (3 °C)
VOC	0 % (Calculated)

10. Stability and reactivity

Reactivity	The product is stable and non-reactive under normal conditions of use, storage and transport.
Chemical stability	Material is stable under normal conditions.
Possibility of hazardous reactions	Hazardous polymerization does not occur.
Conditions to avoid	Protect from freezing. Contact with water reactive compounds may cause fire or explosion. Avoid contact with incompatible materials.
Incompatible materials	Strong oxidizing agents. Contact with water reactive compounds may cause fire or explosion.
Hazardous decomposition products	Oxides of carbon and nitrogen evolved in fire.

11. Toxicological information

Information on likely routes of exposure

Inhalation	May cause irritation to respiratory organs.
Skin contact	May cause an allergic skin reaction.
Eye contact	Direct contact with eyes may cause temporary irritation.
Ingestion	May cause gastrointestinal irritation.

Symptoms related to the physical, chemical and toxicological characteristics	Dermatitis. Rash. Prolonged and repetitive exposure, depending on the route(s), may develop transient irritation on skin, eyes, ingestion tract, and/or respiratory tract.
---	--

Information on toxicological effects

Acute toxicity

Product	Species	Test Results
CORTROL OS5607		
<u>Acute</u>		
Dermal		
LD50	Rabbit	> 5000 mg/kg (Estimated value)
Oral		
LD50	Rat	> 5000 mg/kg (Estimated value)

Components	Species	Test Results
Carbohydrazide (CAS 497-18-7)		
<u>Acute</u>		
Dermal		
LD50	Rabbit	> 2000 mg/kg
Oral		
LD50	Rat	> 5000 mg/kg

Skin corrosion/irritation	Prolonged skin contact may cause temporary irritation.
----------------------------------	--

Serious eye damage/eye irritation	Direct contact with eyes may cause temporary irritation.
--	--

Respiratory or skin sensitization

Respiratory sensitization	This product is not expected to cause respiratory sensitization.
Skin sensitization	May cause an allergic skin reaction.

Germ cell mutagenicity	No data available to indicate product or any components present at greater than 0.1% are mutagenic or genotoxic.
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Carcinogenicity	This product is not considered to be a carcinogen by IARC, ACGIH, NTP, or OSHA.
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IARC Monographs. Overall Evaluation of Carcinogenicity

Not listed.

OSHA Specifically Regulated Substances (29 CFR 1910.1001-1053)

Not listed.

US. National Toxicology Program (NTP) Report on Carcinogens

Not listed.

Reproductive toxicity	This product is not expected to cause reproductive or developmental effects.
Specific target organ toxicity - single exposure	Not classified.
Specific target organ toxicity - repeated exposure	Not classified.
Aspiration hazard	Based on available data, the classification criteria are not met. Not an aspiration hazard.
Chronic effects	Prolonged inhalation may be harmful.

12. Ecological information**Ecotoxicity**

Product		Species	Test Results
Aquatic			
Crustacea	10% Mortality	Ceriodaphnia	96 mg/L, 48 hour
	LC50	Ceriodaphnia	160 mg/L, 48 hour
		Daphnia magna	850 mg/L, 48 hour
	NOEL	Daphnia magna	190 mg/L, 48 hour
Fish	5% Mortality	Fathead Minnow	96 mg/L, 96 hour
	LC50	Fathead Minnow	260 mg/L, 96 hour

Persistence and degradability No data available

No data available

Bioaccumulative potential No data available.**Mobility in soil** No data available.**Other adverse effects** Not available.**13. Disposal considerations****Disposal instructions** Collect and reclaim or dispose in sealed containers at licensed waste disposal site. 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** Dispose of in accordance with local regulations. Empty containers or liners may retain some product residues. This material and its container must be disposed of in a safe manner (see: Disposal instructions). Empty containers or liners may retain some product residues. This material and its container must be disposed of in a safe manner.**Contaminated packaging** Since emptied containers may retain product residue, follow label warnings even after container is emptied. Empty containers should be taken to an approved waste handling site for recycling or disposal.**14. Transport information****DOT**

UN number	UN3082
UN proper shipping name	Environmentally hazardous substance, liquid, n.o.s. (Hydrazine), RQ(Hydrazine)
Transport hazard class(es)	
Class	9
Subsidiary risk	-
Packing group	III
Special precautions for user	Not available.
ERG number	171

IATA

Not regulated as dangerous goods.

IMDG

Not regulated as dangerous goods.



15. Regulatory information

US federal regulations

This product is a "Hazardous Chemical" as defined by the OSHA Hazard Communication Standard, 29 CFR 1910.1200.

Toxic Substances Control Act (TSCA)

TSCA Section 12(b) Export Notification (40 CFR 707, Subpt. D)

Not regulated.

CERCLA Hazardous Substance List (40 CFR 302.4)

Not listed.

SARA 304 Emergency release notification

Not regulated.

OSHA Specifically Regulated Substances (29 CFR 1910.1001-1053)

Not listed.

Superfund Amendments and Reauthorization Act of 1986 (SARA)

SARA 302 Extremely hazardous substance

Not listed.

SARA 311/312 Hazardous chemical

Yes

Classified hazard categories

Respiratory or skin sensitization

SARA 313 (TRI reporting)

Not regulated.

Other federal regulations

Clean Air Act (CAA) Section 112 Hazardous Air Pollutants (HAPs) List

Hydrazine (CAS 302-01-2)

Clean Air Act (CAA) Section 112(r) Accidental Release Prevention (40 CFR 68.130)

Hydrazine (CAS 302-01-2)

Safe Drinking Water Act (SDWA)

Contains component(s) regulated under the Safe Drinking Water Act.

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)

A "No" indicates that one or more components of the product are not listed or exempt from listing on the inventory administered by the governing country(s).

US state regulations

California Proposition 65



WARNING: WARNING: This product can expose you to chemicals including Hydrazine, which is known to the State of California to cause cancer. For more information go to www.P65Warnings.ca.gov.

US - California Proposition 65 - CRT: Listed date/Carcinogenic substance

Hydrazine (CAS 302-01-2)

Listed: January 1, 1988

US - California Proposition 65 - CRT: Listed date/Developmental toxin

No ingredient listed.

US - California Proposition 65 - CRT: Listed date/Female reproductive toxin

No ingredient listed.

US - California Proposition 65 - CRT: Listed date/Male reproductive toxin

No ingredient listed.

16. Other information, including date of preparation or last revision

Issue date Nov-16-2014

Revision date Feb-18-2023

Version # 4.1

NFPA ratings Health: 2
Flammability: 0
Instability: 0

NFPA ratings



List of abbreviations

CAS: Chemical Abstract Service Registration Number
ACGIH: American Conference of Governmental Industrial Hygienists
TWA: Time Weighted Average
STEL: Short Term Exposure Limit
LD50: Lethal Dose, 50%
LC50: Lethal Concentration, 50%
NOEL: No Observed Effect Level
COD: Chemical Oxygen Demand
BOD: Biochemical Oxygen Demand
TOC: Total Organic Carbon
IATA: International Air Transport Association
IMDG: International Maritime Dangerous Goods Code
TSRN indicates a Trade Secret Registry Number is used in place of the CAS number.

References: No data available

Disclaimer The information provided in this Safety Data Sheet is correct to the best of our knowledge, information and belief at the date of its publication. The information given is designed only as a guidance for safe handling, use, processing, storage, transportation, disposal and release and is not to be considered a warranty or quality specification. The information relates only to the specific material designated and may not be valid for such material used in combination with any other materials or in any process, unless specified in the text.

Revision information Composition/information on ingredients: Composition comments
Handling and storage: Precautions for safe handling
Handling and storage: Conditions for safe storage, including any incompatibilities
Exposure controls/personal protection: Appropriate engineering controls
Exposure controls/personal protection: Hand protection
Exposure controls/personal protection: Respiratory protection
Disposal considerations: Contaminated packaging
Disposal considerations: Disposal instructions
Other information, including date of preparation or last revision: Prepared by
GHS: Classification

Prepared by This SDS has been prepared by Veolia Water Technologies & Solutions' Regulatory Department (1-215-355-3300).

* Trademark of Veolia. May be registered in one or more countries.



SAFETY DATA SHEET

OPTISPERSE* PO5061

1. Identification

Product identifier	OPTISPERSE PO5061
Other means of identification	None.
Recommended use	Water based internal boiler treatment chemical.
Recommended restrictions	None known.

Company/undertaking identification

Veolia WTS USA, Inc.
3600 Horizon Blvd.
Trevose, PA 19053
T 215 355 3300, F 215 953 5524

Emergency telephone

(800) 877 1940

2. Hazard(s) identification

Physical hazards	Not classified.	
Health hazards	Skin corrosion/irritation	Category 2
	Serious eye damage/eye irritation	Category 2A
	Specific target organ toxicity, single exposure	Category 3 respiratory tract irritation
OSHA defined hazards	Not classified.	

Label elements



Signal word	Warning
Hazard statement	Causes skin irritation. Causes serious eye irritation. May cause respiratory irritation.
Precautionary statement	
Prevention	Avoid breathing mist or vapor. Wash thoroughly after handling. Use only outdoors or in a well-ventilated area. Wear protective gloves. Wear eye/face protection.
Response	If on skin: Wash with plenty of water/. If inhaled: Remove person to fresh air and keep comfortable for breathing. If in eyes: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing. Call a poison center/doctor// if you feel unwell. Specific treatment (see on this label). If skin irritation occurs: Get medical advice/attention. If eye irritation persists: Get medical advice/attention. Take off contaminated clothing and wash before reuse.
Storage	Store in a well-ventilated place. Keep container tightly closed. Store locked up.
Disposal	Dispose of waste and residues in accordance with local authority requirements.
Hazard(s) not otherwise classified (HNOC)	None known.
Supplemental information	None.

3. Composition/information on ingredients

Mixtures

Components	CAS #	Percent
Trisodium phosphate	7601-54-9	2.5 - 10

Composition comments Information for specific product ingredients as required by the U.S. OSHA HAZARD COMMUNICATION STANDARD is listed. Refer to additional sections of this SDS for our assessment of the potential hazards of this formulation.

4. First-aid measures

Inhalation Remove victim to fresh air and keep at rest in a position comfortable for breathing. Call a POISON CENTER or doctor/physician if you feel unwell.

Skin contact Rinse skin with water/shower. Take off contaminated clothing and wash before reuse. If skin irritation occurs: Get medical advice/attention.

Eye contact Immediately flush eyes with plenty of water for at least 15 minutes. Remove contact lenses, if present and easy to do. Continue rinsing. Get medical attention if irritation develops and persists.

Ingestion Rinse mouth. If ingestion of a large amount does occur, call a poison control center immediately.

Most important symptoms/effects, acute and delayed Symptoms may include stinging, tearing, redness, swelling, and blurred vision. May cause respiratory irritation. May cause redness and pain.

Indication of immediate medical attention and special treatment needed Provide general supportive measures and treat symptomatically. Keep victim under observation. Symptoms may be delayed.

General information Ensure that medical personnel are aware of the material(s) involved, and take precautions to protect themselves.

5. Fire-fighting measures

Suitable extinguishing media Water fog. Foam. Dry chemical powder. Carbon dioxide (CO₂).

Unsuitable extinguishing media Do not use water jet as an extinguisher, as this will spread the fire.

Specific hazards arising from the chemical During fire, gases hazardous to health may be formed.

Special protective equipment and precautions for firefighters Self-contained breathing apparatus and full protective clothing must be worn in case of fire.

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.

General fire hazards No unusual fire or explosion hazards noted.

6. Accidental release measures

Personal precautions, protective equipment and emergency procedures Keep unnecessary personnel away. Keep people away from and upwind of spill/leak. Keep out of low areas. Wear appropriate protective equipment and clothing during clean-up. Avoid inhalation of vapors or mists. Do not touch damaged containers or spilled material unless wearing appropriate protective clothing. Ensure adequate ventilation. Local authorities should be advised if significant spillages cannot be contained.

Methods and materials for containment and cleaning up Prevent entry into waterways, sewer, basements or confined areas.

Large Spills: Stop the flow of material, if this is without risk. Dike the spilled material, where this is possible. Cover with plastic sheet to prevent spreading. Absorb in vermiculite, dry sand or earth and place into containers. Following product recovery, flush area with water.

Small Spills: Wipe up with absorbent material (e.g. cloth, fleece). Clean surface thoroughly to remove residual contamination.

Never return spills to original containers for re-use.

Environmental precautions Avoid discharge into drains, water courses or onto the ground.

7. Handling and storage

Precautions for safe handling Avoid breathing mist or vapor. Avoid contact with eyes. Avoid contact with skin. Avoid contact with clothing. Avoid prolonged exposure. Provide adequate ventilation. Wear appropriate personal protective equipment. Observe good industrial hygiene practices. Use care in handling/storage.

**Conditions for safe storage,
including any incompatibilities**

Store locked up. Do not freeze. If frozen, thaw completely and mix thoroughly prior to use. Store in original tightly closed container. Store in accordance with local/regional/national/international regulation.

8. Exposure controls/personal protection

Occupational exposure limits

US. Workplace Environmental Exposure Level (WEEL) Guides Components	Type	Value
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Trisodium phosphate (CAS 7601-54-9)	STEL	5 mg/m3
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Biological limit values

No biological exposure limits noted for the ingredient(s).

Appropriate engineering controls

Good general ventilation (typically 10 air changes per hour) should be used. Ventilation rates should be matched to conditions. If applicable, use process enclosures, local exhaust ventilation, or other engineering controls to maintain airborne levels below recommended exposure limits. If exposure limits have not been established, maintain airborne levels to an acceptable level. Eye wash facilities and emergency shower must be available when handling this product.

Individual protection measures, such as personal protective equipment

Eye/face protection

Splash proof chemical goggles.

Skin protection

Hand protection

Chemical resistant gloves. The choice of an appropriate glove does not only depend on its material but also on other quality features and is different from one producer to the other. Glove selection must take into account any solvents and other hazards present.

Other

Wear appropriate chemical resistant clothing. Use of an impervious apron is recommended.

Respiratory protection

Chemical respirator with organic vapor cartridge and full facepiece. A respiratory protection program that meets OSHA's 29 CFR 1910.34 and ANSI Z88.2 requirements must be followed whenever workplace conditions warrant a respirator's use.

Thermal hazards

Wear appropriate thermal protective clothing, when necessary.

General hygiene considerations

Always observe good personal hygiene measures, such as washing after handling the material and before eating, drinking, and/or smoking. Routinely wash work clothing and protective equipment to remove contaminants.

9. Physical and chemical properties

Appearance

Liquid

Physical state

Liquid.

Form

Liquid.

Color

Colorless to light yellow

Odor

Mild

Odor threshold

Not available.

pH (concentrated product)

12.4

Melting point/freezing point

30 °F (-1 °C)

Initial boiling point and boiling range

212 °F (100 °C)

Flash point

> 200 °F (> 93 °C) P-M(CC)

Evaporation rate

< 1 (Ether = 1)

Flammability (solid, gas)

Not available.

Upper/lower flammability or explosive limits

Explosive limit - lower (%)

Not available.

Explosive limit - upper (%)

Not available.

Vapor pressure

18 mm Hg

Vapor pressure temp.

70 °F (21 °C)

Vapor density

< 1 (Air = 1)

Relative density

1.04

Relative density temperature

70 °F (21 °C)

Solubility(ies)

Solubility (water)

100 %

Partition coefficient (n-octanol/water)	Not available.
Auto-ignition temperature	Not available.
Decomposition temperature	Not available.
Viscosity	10 cps
Viscosity temperature	70 °F (21 °C)
Other information	
pH in aqueous solution	11.6 (5% SOL.)
Pour point	35 °F (2 °C)
VOC	0 % (Calculated)

10. Stability and reactivity

Reactivity	The product is stable and non-reactive under normal conditions of use, storage and transport.
Chemical stability	Material is stable under normal conditions.
Possibility of hazardous reactions	Hazardous polymerization does not occur.
Conditions to avoid	Protect from freezing.
Incompatible materials	Strong oxidizing agents.
Hazardous decomposition products	Elemental oxides

11. Toxicological information

Information on likely routes of exposure

Inhalation	May cause irritation to the respiratory system. Prolonged inhalation may be harmful.
Skin contact	Causes skin irritation.
Eye contact	Causes serious eye irritation.
Ingestion	May cause slight gastrointestinal irritation.

Symptoms related to the physical, chemical and toxicological characteristics	Symptoms may include stinging, tearing, redness, swelling, and blurred vision. May cause respiratory irritation. May cause redness and pain.
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Information on toxicological effects

Acute toxicity	May cause respiratory irritation.
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Product	Species	Test Results
OPTISPERSE PO5061		
<u>Acute</u>		
Dermal		
LD50	Rabbit	> 5000 mg/kg (Calculated according to GHS additivity formula)
Oral		
LD50	Rat	> 5000 mg/kg (Calculated according to GHS additivity formula)
Components	Species	Test Results

Trisodium phosphate (CAS 7601-54-9)

<u>Acute</u>		
Dermal		
LD50	Rabbit	> 7940 mg/kg
Oral		
LD50	Rat	4150 mg/kg

Skin corrosion/irritation	Causes skin irritation.
Serious eye damage/eye irritation	Causes serious eye irritation.
Respiratory or skin sensitization	
Respiratory sensitization	Not available.

Skin sensitization	This product is not expected to cause skin sensitization.
Germ cell mutagenicity	No data available to indicate product or any components present at greater than 0.1% are mutagenic or genotoxic.
Carcinogenicity	This product is not considered to be a carcinogen by IARC, ACGIH, NTP, or OSHA.
IARC Monographs. Overall Evaluation of Carcinogenicity	
Not listed.	
OSHA Specifically Regulated Substances (29 CFR 1910.1001-1053)	
Not listed.	
US. National Toxicology Program (NTP) Report on Carcinogens	
Not listed.	
Reproductive toxicity	This product is not expected to cause reproductive or developmental effects.
Specific target organ toxicity - single exposure	May cause respiratory irritation.
Specific target organ toxicity - repeated exposure	Not classified.
Aspiration hazard	May be harmful if swallowed and enters airways. Based on available data, the classification criteria are not met.
Chronic effects	Prolonged inhalation may be harmful.

12. Ecological information

Ecotoxicity	No data available
Persistence and degradability	No data available
	No data available
Bioaccumulative potential	No data available.
Mobility in soil	No data available.
Other adverse effects	Heavy metals: None. Nutrients: P = 9.4 mg/g

13. Disposal considerations

Disposal instructions	Collect and reclaim or dispose in sealed containers at licensed waste disposal site. Incinerate the material under controlled conditions in an approved incinerator. Dispose of contents/container in accordance with local/regional/national/international regulations.
Local disposal regulations	Dispose in accordance with all applicable regulations.
Hazardous waste code	D002: Waste Corrosive material [pH <=2 or >=12.5, or corrosive to steel] The waste code should be assigned in discussion between the user, the producer and the waste disposal company.
Waste from residues / unused products	Dispose of in accordance with local regulations. Empty containers or liners may retain some product residues. This material and its container must be disposed of in a safe manner (see: Disposal instructions).
Contaminated packaging	Since emptied containers may retain product residue, follow label warnings even after container is emptied. Empty containers should be taken to an approved waste handling site for recycling or disposal.

14. Transport information

DOT	Not regulated as dangerous goods. Some containers may be exempt from Dangerous Goods/Hazmat Transport Regulations, please check BOL for exact container classification.
IATA	Not regulated as dangerous goods.
IMDG	Not regulated as dangerous goods.

15. Regulatory information

US federal regulations	All components are on the U.S. EPA TSCA Inventory List. This product is a "Hazardous Chemical" as defined by the OSHA Hazard Communication Standard, 29 CFR 1910.1200.
Toxic Substances Control Act (TSCA)	

TSCA Section 12(b) Export Notification (40 CFR 707, Subpt. D)

Not regulated.

CERCLA Hazardous Substance List (40 CFR 302.4)

Trisodium phosphate (CAS 7601-54-9) Listed.

SARA 304 Emergency release notification

Not regulated.

OSHA Specifically Regulated Substances (29 CFR 1910.1001-1053)

Not listed.

Superfund Amendments and Reauthorization Act of 1986 (SARA)**SARA 302 Extremely hazardous substance**

Not listed.

SARA 311/312 Hazardous chemical

Classified hazard categories	Skin corrosion or irritation Serious eye damage or eye irritation Specific target organ toxicity (single or repeated exposure)
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SARA 313 (TRI reporting)

Not regulated.

Other federal regulations**Clean Air Act (CAA) Section 112 Hazardous Air Pollutants (HAPs) List**

Not regulated.

Clean Air Act (CAA) Section 112(r) Accidental Release Prevention (40 CFR 68.130)

Not regulated.

Safe Drinking Water Act (SDWA)	Contains component(s) regulated under the Safe Drinking Water Act.
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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)

A "No" indicates that one or more components of the product are not listed or exempt from listing on the inventory administered by the governing country(s).

Food and drug administration	ALL ingredients in this product are authorized in 21CFR173.310 for use as boiler water additives where the steam may contact food.
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US state regulations	California Safe Drinking Water and Toxic Enforcement Act of 1986 (Proposition 65): This material is not known to contain any chemicals currently listed as carcinogens or reproductive toxins.
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California Proposition 65California Safe Drinking Water and Toxic Enforcement Act of 2016 (Proposition 65): This material is not known to contain any chemicals currently listed as carcinogens or reproductive toxins. For more information go to www.P65Warnings.ca.gov.**US - California Proposition 65 - CRT: Listed date/Carcinogenic substance**

No ingredient listed.

US - California Proposition 65 - CRT: Listed date/Developmental toxin

No ingredient listed.

US - California Proposition 65 - CRT: Listed date/Female reproductive toxin

No ingredient listed.

US - California Proposition 65 - CRT: Listed date/Male reproductive toxin

No ingredient listed.

16. Other information, including date of preparation or last revision

Issue date	Dec-08-2014
Revision date	Feb-18-2023
Version #	2.1
NFPA ratings	Health: 2 Flammability: 0 Instability: 0

NFPA ratings



List of abbreviations

CAS: Chemical Abstract Service Registration Number
TWA: Time Weighted Average
STEL: Short Term Exposure Limit
LD50: Lethal Dose, 50%
LC50: Lethal Concentration, 50%
NOEL: No Observed Effect Level
COD: Chemical Oxygen Demand
BOD: Biochemical Oxygen Demand
TOC: Total Organic Carbon
IATA: International Air Transport Association
IMDG: International Maritime Dangerous Goods Code
TSRN indicates a Trade Secret Registry Number is used in place of the CAS number.
ACGIH: American Conference of Governmental Industrial Hygienists
NFPA: National Fire Protection Association

References:

No data available

Disclaimer

The information 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. The information in the sheet was written based on the best knowledge and experience currently available.

Revision information

This document has undergone significant changes and should be reviewed in its entirety.

Prepared by

This SDS has been prepared by Veolia Water Technologies & Solutions' Regulatory Department (1-215-355-3300).

* Trademark of Veolia. May be registered in one or more countries.



SAFETY DATA SHEET

SPECTRUS* BD1501E

1. Identification

Product identifier	SPECTRUS BD1501E
Other means of identification	None.
Recommended use	Biodispersant
Recommended restrictions	Industrial use only.

Company/undertaking identification

Veolia WTS USA, Inc.
3600 Horizon Blvd.
Trevose, PA 19053
T 215 355 3300, F 215 953 5524

Emergency telephone

(800) 877 1940

2. Hazard(s) identification

Physical hazards	Not classified.	
Health hazards	Skin corrosion/irritation	Category 2
	Serious eye damage/eye irritation	Category 1
	Specific target organ toxicity, single exposure	Category 3 respiratory tract irritation
OSHA defined hazards	Not classified.	

Label elements



Signal word	Danger
Hazard statement	Causes skin irritation. Causes serious eye damage. May cause respiratory irritation.
Precautionary statement	
Prevention	Avoid breathing mist or vapor. Wash thoroughly after handling. Use only outdoors or in a well-ventilated area. Wear protective gloves. Wear eye/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. IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing. Immediately call a POISON CENTER or doctor/physician. If skin irritation occurs: Get medical advice/attention. Take off contaminated clothing and wash it before reuse.
Storage	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	None.

3. Composition/information on ingredients

Mixtures

Components	CAS #	Percent
Alcohols, C10, alkoxyated	166736-08-9	10 - 20

Composition comments Information for specific product ingredients as required by the U.S. OSHA HAZARD COMMUNICATION STANDARD is listed. Refer to additional sections of this SDS for our assessment of the potential hazards of this formulation.

4. First-aid measures

Inhalation	Remove victim to fresh air and keep at rest in a position comfortable for breathing. If breathing stops, provide artificial respiration. For breathing difficulties, oxygen may be necessary. Call a POISON CENTER or doctor/physician if you feel unwell. If nasal, throat or lung irritation develops - remove to fresh air and get medical attention.
Skin contact	Wash with plenty of soap and water. Take off contaminated clothing and wash before reuse. If skin irritation occurs: Get medical advice/attention.
Eye contact	Immediately flush eyes with plenty of water for at least 15 minutes. Remove contact lenses, if present and easy to do. Continue rinsing. Get medical attention immediately.
Ingestion	Rinse mouth. Never give anything by mouth to a victim who is unconscious or is having convulsions. Do not induce vomiting. Get medical attention if symptoms occur.
Most important symptoms/effects, acute and delayed	Symptoms may include stinging, tearing, redness, swelling, and blurred vision. Permanent eye damage including blindness could result. May cause respiratory irritation. May cause redness and pain.
Indication of immediate medical attention and special treatment needed	Provide general supportive measures and treat symptomatically. Keep victim under observation. Symptoms may be delayed.
General information	Ensure that medical personnel are aware of the material(s) involved, and take precautions to protect themselves.

5. Fire-fighting measures

Suitable extinguishing media	Water fog. Foam. Dry chemical powder. Carbon dioxide (CO ₂).
Unsuitable extinguishing media	Do not use water jet as an extinguisher, as this will spread the fire.
Specific hazards arising from the chemical	During fire, gases hazardous to health may be formed.
Special protective equipment and precautions for firefighters	Self-contained breathing apparatus and full protective clothing must be worn in case of fire.
Fire fighting equipment/instructions	In case of fire and/or explosion do not breathe fumes. Use standard firefighting procedures and consider the hazards of other involved materials. Move containers from fire area if you can do so without risk. Cool containers / tanks with water spray.
Specific methods	Use standard firefighting procedures and consider the hazards of other involved materials.
General fire hazards	No unusual fire or explosion hazards noted.

6. Accidental release measures

Personal precautions, protective equipment and emergency procedures	Keep unnecessary personnel away. Keep people away from and upwind of spill/leak. Keep out of low areas. Wear appropriate protective equipment and clothing during clean-up. Avoid inhalation of vapors or mists. Do not touch damaged containers or spilled material unless wearing appropriate protective clothing. Ensure adequate ventilation. Local authorities should be advised if significant spillages cannot be contained. See Section 8 of the SDS for Personal Protective Equipment.
Methods and materials for containment and cleaning up	<p>Prevent entry into waterways, sewer, basements or confined areas.</p> <p>Large Spills: Stop the flow of material, if this is without risk. Dike the spilled material, where this is possible. Cover with plastic sheet to prevent spreading. Absorb in vermiculite, dry sand or earth and place into containers. Following product recovery, flush area with water.</p> <p>Small Spills: Wipe up with absorbent material (e.g. cloth, fleece). Clean surface thoroughly to remove residual contamination.</p> <p>Never return spills to original containers for re-use. Ventilate area, use specified protective equipment. Flush area with water. Wet area may be slippery.</p>
Environmental precautions	Avoid discharge into drains, water courses or onto the ground.

7. Handling and storage

Precautions for safe handling

Do not get this material in contact with eyes. Avoid contact with skin. Avoid contact with clothing. Avoid prolonged exposure. Provide adequate ventilation. Wear appropriate personal protective equipment. Observe good industrial hygiene practices.

Conditions for safe storage, including any incompatibilities

Store in original tightly closed container. Store in cool, well ventilated area. Store away from oxidizers.

8. Exposure controls/personal protection

Biological limit values

No biological exposure limits noted for the ingredient(s).

Appropriate engineering controls

Eye wash facilities and emergency shower must be available when handling this product. Good general ventilation (typically 10 air changes per hour) should be used. Ventilation rates should be matched to conditions. If applicable, use process enclosures, local exhaust ventilation, or other engineering controls to maintain airborne levels below recommended exposure limits. If exposure limits have not been established, maintain airborne levels to an acceptable level.

Individual protection measures, such as personal protective equipment

Eye/face protection

Wear safety glasses with side shields (or goggles) and a face shield.

Skin protection

Hand protection

Chemical resistant gloves. The choice of an appropriate glove does not only depend on its material but also on other quality features and is different from one producer to the other. Glove selection must take into account any solvents and other hazards present.

Other

Wear appropriate chemical resistant clothing. Use of an impervious apron is recommended. Impervious gloves. Wash off after each use. Replace as necessary.

Respiratory protection

If engineering controls do not maintain airborne concentrations below recommended exposure limits (where applicable) or to an acceptable level (in countries where exposure limits have not been established), an approved respirator must be worn. A respiratory protection program that meets OSHA's 29 CFR 1910.34 and ANSI Z88.2 requirements must be followed whenever workplace conditions warrant a respirator's use.

Thermal hazards

Wear appropriate thermal protective clothing, when necessary. Not applicable.

General hygiene considerations

Always observe good personal hygiene measures, such as washing after handling the material and before eating, drinking, and/or smoking. Routinely wash work clothing and protective equipment to remove contaminants.

9. Physical and chemical properties

Appearance

Liquid

Physical state

Liquid.

Form

Not available.

Color

Colorless

Odor

Mild

Odor threshold

Not available.

pH (concentrated product)

6.7 Neat

Melting point/freezing point

31 °F (-1 °C)

Initial boiling point and boiling range

219 °F (104 °C)

Flash point

> 199 °F (> 93 °C) P-M(CC)

Evaporation rate

Slower than Ether

Flammability (solid, gas)

Not available.

Upper/lower flammability or explosive limits

Explosive limit - lower (%)

Not available.

Explosive limit - upper (%)

Not available.

Vapor pressure

18 mmHg

Vapor pressure temp.

70 °F (21 °C)

Vapor density

< 1

Relative density

1.02

Relative density temperature

70 °F (21 °C)

Solubility(ies)

Solubility (water)

100 %

Partition coefficient (n-octanol/water)	Not available.
Auto-ignition temperature	Not available.
Decomposition temperature	Not available.
Viscosity	70 mPa.s
Viscosity temperature	70 °F (21 °C)
Other information	
Pour point	36 °F (2 °C)
VOC	0 % ESTIMATED

10. Stability and reactivity

Reactivity	The product is stable and non-reactive under normal conditions of use, storage and transport.
Chemical stability	Not available.
Possibility of hazardous reactions	No dangerous reaction known under conditions of normal use. Hazardous polymerization does not occur.
Conditions to avoid	Avoid contact with strong oxidizers. Protect from freezing.
Incompatible materials	Strong oxidizing agents.
Hazardous decomposition products	Oxides of carbon evolved in fire.

11. Toxicological information

Information on likely routes of exposure

Inhalation	May cause irritation to the respiratory system.
Skin contact	Causes skin irritation.
Eye contact	Causes serious eye damage.
Ingestion	Expected to be a low ingestion hazard.
Symptoms related to the physical, chemical and toxicological characteristics	Symptoms may include stinging, tearing, redness, swelling, and blurred vision. Permanent eye damage including blindness could result. May cause respiratory irritation. May cause redness and pain.

Information on toxicological effects

Acute toxicity	May cause respiratory irritation.
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Product	Species	Test Results
SPECTRUS BD1501E		
<u>Acute</u>		
Dermal		
LD50	Rabbit	> 5000 mg/kg (Calculated according to GHS additivity formula)
Oral		
LD50	Rat	3570 mg/kg (Calculated according to GHS additivity formula (Category 5))

Components	Species	Test Results
Alcohols, C10, alkoxylated (CAS 166736-08-9)		
<u>Acute</u>		
Oral		
LD50	Rat	500 - 2000 mg/kg

Skin corrosion/irritation	Prolonged skin contact may cause temporary irritation.
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Serious eye damage/eye irritation	Causes serious eye damage.
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Respiratory or skin sensitization

Respiratory sensitization	This product is not expected to cause respiratory sensitization. Not a respiratory sensitizer.
Skin sensitization	Not available.

Germ cell mutagenicity	No data available to indicate product or any components present at greater than 0.1% are mutagenic or genotoxic.
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Carcinogenicity	This product is not considered to be a carcinogen by IARC, ACGIH, NTP, or OSHA.
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IARC Monographs. Overall Evaluation of Carcinogenicity

Not listed.

OSHA Specifically Regulated Substances (29 CFR 1910.1001-1053)

Not listed.

US. National Toxicology Program (NTP) Report on Carcinogens

Not listed.

Reproductive toxicity	This product is not expected to cause reproductive or developmental effects.
Specific target organ toxicity - single exposure	May cause respiratory irritation.
Specific target organ toxicity - repeated exposure	Not classified.
Aspiration hazard	Not an aspiration hazard. Based on available data, the classification criteria are not met.
Chronic effects	Prolonged inhalation may be harmful.

12. Ecological information

Ecotoxicity

Product		Species	Test Results
Aquatic Crustacea	IC25	Ceriodaphnia	39.9 mg/l, 7 day
	LC50	Ceriodaphnia	200 mg/l, 48 hour
		Daphnia magna	38.2 mg/l, 48 hour
	NOEL	Ceriodaphnia	100 mg/l, 48 hour
			25 mg/l, 7 day
		Daphnia magna	12.5 mg/l, 48 hour
Fish	LC50	Fathead Minnow	82.5 mg/l, 96 hour
		Rainbow Trout	141.4 mg/l, 96 hour
	NOEL	Fathead Minnow	31.3 mg/l, 96 hour
		Rainbow Trout	100 mg/l, 96 hour

Bioaccumulative potential No data available.

Mobility in soil No data available.

Other adverse effects Not available.

13. Disposal considerations

Disposal instructions	Collect and reclaim or dispose in sealed containers at licensed waste disposal site. 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	Dispose of in accordance with local regulations. Empty containers or liners may retain some product residues. This material and its container must be disposed of in a safe manner (see: Disposal instructions). Empty containers or liners may retain some product residues. This material and its container must be disposed of in a safe manner.
Contaminated packaging	Since emptied containers may retain product residue, follow label warnings even after container is emptied. Empty containers should be taken to an approved waste handling site for recycling or disposal.

14. Transport information

DOT

Not regulated as dangerous goods.

Some containers may be exempt from Dangerous Goods/Hazmat Transport Regulations, please check BOL for exact container classification.

IATA

Not regulated as dangerous goods.

IMDG

Not regulated as dangerous goods.

15. Regulatory information

US federal regulations

This product is a "Hazardous Chemical" as defined by the OSHA Hazard Communication Standard, 29 CFR 1910.1200.

Toxic Substances Control Act (TSCA)

TSCA Section 12(b) Export Notification (40 CFR 707, Subpt. D)

Not regulated.

CERCLA Hazardous Substance List (40 CFR 302.4)

Not listed.

SARA 304 Emergency release notification

Not regulated.

OSHA Specifically Regulated Substances (29 CFR 1910.1001-1053)

Not listed.

Superfund Amendments and Reauthorization Act of 1986 (SARA)

SARA 302 Extremely hazardous substance

Not listed.

SARA 311/312 Hazardous chemical

Classified hazard categories
Skin corrosion or irritation
Serious eye damage or eye irritation
Specific target organ toxicity (single or repeated exposure)

SARA 313 (TRI reporting)

Not regulated.

Other federal regulations

Clean Air Act (CAA) Section 112 Hazardous Air Pollutants (HAPs) List

Not regulated.

Clean Air Act (CAA) Section 112(r) Accidental Release Prevention (40 CFR 68.130)

Not regulated.

Clean Water Act (CWA) Section 112(r) (40 CFR 68.130)

Hazardous substance

Safe Drinking Water Act (SDWA)

Contains component(s) regulated under the Safe Drinking Water Act.

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)

A "No" indicates that one or more components of the product are not listed or exempt from listing on the inventory administered by the governing country(s).

NSF Registered and/or meets USDA (according to 1998 guidelines):

Registration No. – 141060
Category Code(s):
G5 Cooling and retort water treatment products
G7 Boiler, steam line treatment products – nonfood contact

US state regulations

California Proposition 65

California Safe Drinking Water and Toxic Enforcement Act of 2016 (Proposition 65): This material is not known to contain any chemicals currently listed as carcinogens or reproductive toxins. For more information go to www.P65Warnings.ca.gov.

US - California Proposition 65 - CRT: Listed date/Carcinogenic substance

No ingredient listed.

US - California Proposition 65 - CRT: Listed date/Developmental toxin

No ingredient listed.

US - California Proposition 65 - CRT: Listed date/Female reproductive toxin

No ingredient listed.

No ingredient listed.

16. Other information, including date of preparation or last revision

Issue date Oct-27-2014

Revision date Feb-19-2023

Version # 3.1

NFPA ratings Health: 3
Flammability: 0
Instability: 0

NFPA ratings



List of abbreviations

CAS: Chemical Abstract Service Registration Number
TWA: Time Weighted Average
STEL: Short Term Exposure Limit
LD50: Lethal Dose, 50%
LC50: Lethal Concentration, 50%
NOEL: No Observed Effect Level
COD: Chemical Oxygen Demand
BOD: Biochemical Oxygen Demand
TOC: Total Organic Carbon
IATA: International Air Transport Association
IMDG: International Maritime Dangerous Goods Code
NFPA: National Fire Protection Association
ACGIH: American Conference of Governmental Industrial Hygienists
GHS: Globally Harmonized System of Classification and Labeling of Chemicals.
DOT: Department of Transportation (49 CFR 172.101).
IARC: International Agency for Research on Cancer.
OSHA: Occupational Safety & Health Administration.
TSRN indicates a Trade Secret Registry Number is used in place of the CAS number.

References: No data available

Disclaimer The information provided in this Safety Data Sheet is correct to the best of our knowledge, information and belief at the date of its publication. The information given is designed only as a guidance for safe handling, use, processing, storage, transportation, disposal and release and is not to be considered a warranty or quality specification. The information relates only to the specific material designated and may not be valid for such material used in combination with any other materials or in any process, unless specified in the text.

Revision information This document has undergone significant changes and should be reviewed in its entirety.

Prepared by This SDS has been prepared by Veolia Water Technologies & Solutions' Regulatory Department (1-215-355-3300).

* Trademark of Veolia. May be registered in one or more countries.



SAFETY DATA SHEET

SPECTRUS* NX1100

1. Identification

Product identifier	SPECTRUS NX1100
Other means of identification	None.
Recommended use	Biocide
Recommended restrictions	None known.

Company/undertaking identification

SUEZ WTS USA, Inc.
4636 Somerton Road
Trevose, PA 19053
T 215 355 3300, F 215 953 5524

Emergency telephone

(800) 877 1940

2. Hazard(s) identification

Physical hazards	Corrosive to metals	Category 1
Health hazards	Acute toxicity, oral	Category 4
	Acute toxicity, inhalation	Category 4
	Skin corrosion/irritation	Category 1
	Serious eye damage/eye irritation	Category 1
	Sensitization, skin	Category 1
	Specific target organ toxicity, single exposure	Category 3 respiratory tract irritation
OSHA defined hazards	Not classified.	

Label elements



Signal word Danger

Hazard statement May be corrosive to metals. Harmful if swallowed. Harmful if inhaled. Causes severe skin burns and eye damage. May cause an allergic skin reaction. Causes serious eye damage. May cause respiratory irritation.

Precautionary statement

Prevention

Wear eye/face protection. Contaminated work clothing must not be allowed out of the workplace. Wear protective gloves. Wash hands thoroughly after handling. Keep only in original container. Do not breathe mist or vapor. Do not eat, drink or smoke when using this product. Use only outdoors or in a well-ventilated area.

Response

If swallowed: Rinse mouth. Do NOT induce vomiting. If on skin (or hair): Take off immediately all contaminated clothing. Rinse skin with water/shower. If inhaled: Remove person to fresh air and keep comfortable for breathing. If in eyes: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing. Immediately call a POISON CENTER or doctor/physician. If skin irritation or rash occurs: Get medical advice/attention. Wash contaminated clothing before reuse. Absorb spillage to prevent material damage.

Storage	Store in a well-ventilated place. Keep container tightly closed. Store locked up. Store in corrosive resistant container with a resistant inner liner.
Disposal	Dispose of contents/container in accordance with local/regional/national/international regulations.
Hazard(s) not otherwise classified (HNOC)	None known.
Supplemental information	None.

3. Composition/information on ingredients

Mixtures

Components	CAS #	Percent
2-Bromo-2-nitropropane-1,3-diol (Bronopol)	52-51-7	2.5 - 10
Magnesium nitrate	10377-60-3	2.5 - 10
Mixture of: 5-chloro-2-methyl-4-isothiazolin-3-one and 2-methyl-4-isothiazolin-3-one	55965-84-9	2.5 - 10
Magnesium chloride	7786-30-3	1 - 2.5

*Designates that a specific chemical identity and/or percentage of composition has been withheld as a trade secret.

Composition comments Information for specific product ingredients as required by the U.S. OSHA HAZARD COMMUNICATION STANDARD is listed. Refer to additional sections of this SDS for our assessment of the potential hazards of this formulation.

4. First-aid measures

Inhalation	Remove victim to fresh air and keep at rest in a position comfortable for breathing. Oxygen or artificial respiration if needed. Call a POISON CENTER or doctor/physician if you feel unwell.
Skin contact	Remove contaminated clothing immediately and wash skin with soap and water. Call a physician or poison control center immediately. Chemical burns must be treated by a physician. Wash contaminated clothing before reuse.
Eye contact	Immediately flush eyes with plenty of water for at least 15 minutes. Remove contact lenses, if present and easy to do. Continue rinsing. Call a physician or poison control center immediately.
Ingestion	Do not induce vomiting. Call a physician or poison control center immediately. Rinse mouth. If vomiting occurs, keep head low so that stomach content doesn't get into the lungs.
Most important symptoms/effects, acute and delayed	Burning pain and severe corrosive skin damage. Causes serious eye damage. Symptoms may include stinging, tearing, redness, swelling, and blurred vision. Permanent eye damage including blindness could result. May cause respiratory irritation.
Indication of immediate medical attention and special treatment needed	Provide general supportive measures and treat symptomatically. Chemical burns: Flush with water immediately. While flushing, remove clothes which do not adhere to affected area. Call an ambulance. Continue flushing during transport to hospital. Keep victim warm. Keep victim under observation. Symptoms may be delayed. Material is corrosive. It may not be advisable to induce vomiting. Possible mucosal damage may contraindicate the use of gastric lavage. The dilution with water or milk is appropriate if there has been no vomiting (120 to 240 ml for adults, do not exceed 120 ml for children). If swallowed, assess endoscopy results. Contraindication: neutralization and activated Carbon. Symptomatic treatment.
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. Wash contaminated clothing before reuse.

5. Fire-fighting measures

Suitable extinguishing media	Water fog. Foam. Dry chemical powder. Carbon dioxide (CO2).
Unsuitable extinguishing media	Do not use water jet as an extinguisher, as this will spread the fire.
Specific hazards arising from the chemical	During fire, gases hazardous to health may be formed.
Special protective equipment and precautions for firefighters	Wear full protective clothing, including helmet, self-contained positive pressure or pressure demand breathing apparatus, protective clothing and face mask.
Fire fighting equipment/instructions	Use standard firefighting procedures and consider the hazards of other involved materials. Move containers from fire area if you can do so without risk. In case of fire and/or explosion do not breathe fumes. Cool containers / tanks with water spray.
Specific methods	Use standard firefighting procedures and consider the hazards of other involved materials.
General fire hazards	No unusual fire or explosion hazards noted.

6. Accidental release measures

Personal precautions, protective equipment and emergency procedures

Keep unnecessary personnel away. Keep people away from and upwind of spill/leak. Wear appropriate protective equipment and clothing during clean-up. Do not breathe mist or vapor. Do not touch damaged containers or spilled material unless wearing appropriate protective clothing. Ensure adequate ventilation. Local authorities should be advised if significant spillages cannot be contained.

Methods and materials for containment and cleaning up

Prevent entry into waterways, sewer, basements or confined areas.

Large Spills: Stop the flow of material, if this is without risk. Dike the spilled material, where this is possible. Cover with plastic sheet to prevent spreading. Absorb spillage to prevent material damage. Use a non-combustible material like vermiculite, sand or earth to soak up the product and place into a container for later disposal. Following product recovery, flush area with water.

Small Spills: Wipe up with absorbent material (e.g. cloth, fleece). Clean surface thoroughly to remove residual contamination.

Never return spills to original containers for re-use. Deactivate spill area with freshly prepared solution of 5% sodium bicarbonate and 5% sodium hypochlorite in water. Apply solution to the spill area at a ratio of 10 volumes deactivation solution per estimated volume of residual spill to deactivate any residual active ingredient.

Environmental precautions

Avoid discharge into drains, water courses or onto the ground. Prevent from entering sewers or the immediate environment.

7. Handling and storage

Precautions for safe handling

Do not get in eyes, on skin, or on clothing. Do not taste or swallow. Avoid prolonged exposure. When using, do not eat, drink or smoke. Use only outdoors or in a well-ventilated area. Wear appropriate personal protective equipment. Wash hands thoroughly after handling. Observe good industrial hygiene practices. Corrosive liquid. Do not breathe vapors or spray mist.

Conditions for safe storage, including any incompatibilities

Store locked up. Store in a cool, dry place out of direct sunlight. Store in corrosive resistant container with a resistant inner liner. Keep only in the original container. Store in a well-ventilated place. Keep container tightly closed in a dry and well-ventilated place. Store at temperatures below 35°C Use approved containers only. Protect from freezing. If frozen, thaw completely and mix thoroughly prior to use.

8. Exposure controls/personal protection

Biological limit values

No biological exposure limits noted for the ingredient(s).

Appropriate engineering controls

Eye wash facilities and emergency shower must be available when handling this product.

Individual protection measures, such as personal protective equipment

Eye/face protection

Wear safety glasses with side shields (or goggles) and a face shield.

Skin protection

Hand protection

Wear appropriate chemical resistant gloves. The choice of an appropriate glove does not only depend on its material but also on other quality features and is different from one producer to the other. Glove selection must take into account any solvents and other hazards present.

Other

Wear appropriate chemical resistant clothing. Use of an impervious apron is recommended.

Respiratory protection

If engineering controls do not maintain airborne concentrations below recommended exposure limits (where applicable) or to an acceptable level (in countries where exposure limits have not been established), an approved respirator must be worn. A RESPIRATORY PROTECTION PROGRAM THAT MEETS OSHA'S 29 CFR 1910.134 AND ANSI Z88.2 REQUIREMENTS MUST BE FOLLOWED WHENEVER WORKPLACE CONDITIONS WARRANT A RESPIRATOR'S USE.

Thermal hazards

Wear appropriate thermal protective clothing, when necessary.

General hygiene considerations

Keep away from food and drink. Always observe good personal hygiene measures, such as washing after handling the material and before eating, drinking, and/or smoking. Routinely wash work clothing and protective equipment to remove contaminants. Contaminated work clothing should not be allowed out of the workplace.

9. Physical and chemical properties

Appearance

Color

Colorless to yellow green

Physical state

Liquid

Odor

None

Odor threshold

Not available.

pH (concentrated product)	3
pH in aqueous solution	3.7 (5% SOL.)
Melting point/freezing point	24 °F (-4 °C)
Initial boiling point and boiling range	220 °F (104 °C)
Flash point	Not applicable.
Evaporation rate	< 1 (Ether = 1)
Flammability (solid, gas)	Not applicable.

Upper/lower flammability or explosive limits

Flammability limit - lower (%)	Not available.
Flammability limit - upper (%)	Not available.
Explosive limit - lower (%)	Not available.
Explosive limit - upper (%)	Not available.

Vapor pressure	18 mm Hg
Vapor pressure temp.	70 °F (21 °C)
Vapor density	< 1 (Air = 1)
Relative density	1.11
Relative density temperature	70 °F (21 °C)
Solubility(ies)	
Solubility (water)	100 %
Partition coefficient (n-octanol/water)	Not available.
Auto-ignition temperature	Not available.
Decomposition temperature	Not available.
Viscosity	10 cps
Viscosity temperature	70 °F (21 °C)
Other information	
Pour point	29 °F (-2 °C)
Specific gravity	1.107
VOC	0 %

10. Stability and reactivity

Reactivity	May be corrosive to metals.
Chemical stability	Material is stable under normal conditions.
Possibility of hazardous reactions	Hazardous polymerization does not occur.
Conditions to avoid	Contact with incompatible materials.
Incompatible materials	Strong oxidizing agents.
Hazardous decomposition products	Hydrogen bromide, bromine gas, hydrogen chloride, chlorine gas, oxides of carbon and nitrogen evolved in fire. Sulfur oxides.

11. Toxicological information

Information on likely routes of exposure

Inhalation	Harmful if inhaled. May cause irritation to the respiratory system.
Skin contact	Causes severe skin burns. May cause an allergic skin reaction.
Eye contact	Causes serious eye damage.
Ingestion	Causes digestive tract burns. Harmful if swallowed.
Symptoms related to the physical, chemical and toxicological characteristics	Burning pain and severe corrosive skin damage. Causes serious eye damage. Symptoms may include stinging, tearing, redness, swelling, and blurred vision. Permanent eye damage including blindness could result. May cause respiratory irritation.

Information on toxicological effects

Acute toxicity Harmful if swallowed. Harmful if inhaled. May cause an allergic skin reaction. May cause respiratory irritation.

Product	Species	Test Results
SPECTRUS NX1100 (CAS Mixture)		
Acute		
<i>Dermal</i>		
LD50	Rabbit	> 2000 mg/kg
<i>Inhalation</i>		
LC50	Rat	> 1 mg/l, 4 Hour
<i>Oral</i>		
LD50	Rat	1030 mg/kg
Components	Species	Test Results
2-Bromo-2-nitropropane-1,3-diol (Bronopol) (CAS 52-51-7)		
Acute		
<i>Dermal</i>		
LD50	Rat	1600 mg/kg
<i>Inhalation</i>		
LC50	Rat	> 0.59 mg/l, 4 Hour, (Aerosol toxicity)
<i>Oral</i>		
LD50	Rat	324 mg/kg
Magnesium chloride (CAS 7786-30-3)		
Acute		
<i>Dermal</i>		
LD50	Rabbit	> 2000 mg/kg
<i>Oral</i>		
LD50	Rat	> 5000 mg/kg
Magnesium nitrate (CAS 10377-60-3)		
Acute		
<i>Dermal</i>		
LD50	Rabbit	> 5000 mg/kg
<i>Oral</i>		
LD50	Rat	5400 mg/kg
Mixture of: 5-chloro-2-methyl-4-isothiazolin-3-one and 2-methyl-4-isothiazolin-3-one (CAS 55965-84-9)		
Acute		
<i>Dermal</i>		
LD50	Rabbit	90 mg/kg
<i>Inhalation</i>		
LC50	Rat	0.33 mg/l, 4 Hour
<i>Oral</i>		
LD50	Rat	67 mg/kg

* Estimates for product may be based on additional component data not shown.

Skin corrosion/irritation Causes skin burns.

Serious eye damage/eye irritation Corrosive to eyes. Causes serious eye damage.

Respiratory or skin sensitization

Respiratory sensitization This product is not expected to cause respiratory sensitization.

Skin sensitization May cause an allergic skin reaction.

Germ cell mutagenicity No data available to indicate product or any components present at greater than 0.1% are mutagenic or genotoxic.

Carcinogenicity Not classified.

IARC Monographs. Overall Evaluation of Carcinogenicity

Not listed.

OSHA Specifically Regulated Substances (29 CFR 1910.1001-1052)

Not regulated.

US. National Toxicology Program (NTP) Report on Carcinogens

Not listed.

Reproductive toxicity	This product is not expected to cause reproductive or developmental effects.
Specific target organ toxicity - single exposure	May cause respiratory irritation.
Specific target organ toxicity - repeated exposure	Not classified.
Aspiration hazard	Based on available data, the classification criteria are not met. Aspiration of this product may cause the same corrosiveness/irritation impacts as if it were ingested.
Chronic effects	Prolonged inhalation may be harmful. Prolonged exposure may cause chronic effects.

12. Ecological information**Ecotoxicity**

Product		Species	Test Results
SPECTRUS NX1100 (CAS Mixture)			
Aquatic			
Crustacea	LC50	Ceriodaphnia	4.7 mg/l, Static Renewal Bioassay, 48 hour
		Daphnia magna	5 mg/l, Static Renewal Bioassay, 48 hour
		Mysid Shrimp	40.5 mg/l, Static Renewal Bioassay, 48 hour
	NOEL	Ceriodaphnia	0.63 mg/l, Static Renewal Bioassay, 48 hour
		Daphnia magna	2.5 mg/l, Static Renewal Bioassay, 48 hour
		Mysid Shrimp	18 mg/l, Static Renewal Bioassay, 48 hour
Fish	LC50	Fathead Minnow	3.5 mg/l, Static Renewal Bioassay, 96 hour
		Menidia beryllina (Siversides)	15.9 mg/l, Static Renewal Bioassay, 96 hour
		Rainbow Trout	7.2 mg/l, Static Renewal Bioassay, 96 hour
		Sheepshead Minnow	26.7 mg/l, Static Renewal Bioassay, 96 hour
	NOEL	Fathead Minnow	1.8 mg/l, Static Renewal Bioassay, 96 hour
		Menidia beryllina (Siversides)	12.5 mg/l, Static Renewal Bioassay, 96 hour
		Rainbow Trout	3.1 mg/l, Static Renewal Bioassay, 96 hour
		Sheepshead Minnow	15.5 mg/l, Static Renewal Bioassay, 96 hour

Components		Species	Test Results
2-Bromo-2-nitropropane-1,3-diol (Bronopol) (CAS 52-51-7)			
Aquatic	EC50	Daphnia Magna	1.4 mg/l, 48 hour
Fish	LC50	Rainbow Trout	41 mg/l, 96 hour

Bioaccumulative potential Not bioaccumulating (Refers to active component) 2-Bromo-2-nitropropane-1,3-diol**Partition coefficient n-octanol / water (log Kow)**

Mixture of: 5-chloro-2-methyl-4-isothiazolin-3-one and 2-methyl-4-isothiazolin-3-one 0.49

Mobility in soil No data available.

Material name: SPECTRUS* NX1100

Version number: 1.1

Other adverse effects Nutrients: N = 8.03 mg/g

Persistence and degradability

- COD (mgO ₂ /g)	77
- BOD 5 (mgO ₂ /g)	2 (calculated data)
- BOD 28 (mgO ₂ /g)	4 (calculated data)
- Closed Bottle Test (% Degradation in 28 days)	2 (calculated data)
- Zahn-Wellens Test (% Degradation in 28 days)	8 (calculated data)
- TOC (mg C/g)	29 (calculated data)

13. Disposal considerations

Disposal instructions	Dispose of in approved pesticide facility or according to label instructions. Collect and reclaim or dispose in sealed containers at licensed waste disposal site. Dispose of contents/container in accordance with local/regional/national/international regulations. Incinerate the material under controlled conditions in an approved incinerator.
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. D002= Corrosive
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.
Contaminated packaging	Dispose of in approved pesticide facility or according to label instructions. Since emptied containers may retain product residue, follow label warnings even after container is emptied. Empty containers should be taken to an approved waste handling site for recycling or disposal.

14. Transport information

DOT

UN number	UN3265
UN proper shipping name	Corrosive liquid, acidic, organic, n.o.s. (2-BROMO-2-NITROPROPANE-1,3-DIOL, 5-Chloro-2-Methyl-4-Isothiazolin-3-One Mixture With 2-Methyl-4-Isothiazolin-3-One)
Transport hazard class(es)	
Class	8
Subsidiary risk	-
Packing group	II
Special precautions for user	Not available.
ERG number	153
Some containers may be exempt from Dangerous Goods/Hazmat Transport Regulations, please check BOL for exact container classification.	

IATA

UN number	UN3265
UN proper shipping name	Corrosive liquid, acidic, organic, n.o.s. (mixture of 5-chloro-2-methyl-4-isothiazolin-3-one and 2-methyl-4-isothiazolin-3-one, 2-bromo-2-nitropropane-1,3-diol)
Transport hazard class(es)	
Class	8
Subsidiary risk	-
Packing group	II
Environmental hazards	Yes
Special precautions for user	Not available.

IMDG

UN number	UN3265
UN proper shipping name	CORROSIVE LIQUID, ACIDIC, ORGANIC, N.O.S. (mixture of 5-chloro-2-methyl-4-isothiazolin-3-one and 2-methyl-4-isothiazolin-3-one, 2-bromo-2-nitropropane-1,3-diol), MARINE POLLUTANT
Transport hazard class(es)	
Class	8
Subsidiary risk	-
Packing group	II
Environmental hazards	
Marine pollutant	Yes
EmS	Not available.
Special precautions for user	Not available.

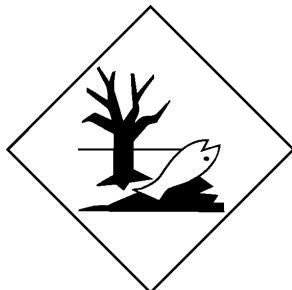
DOT



IATA; IMDG



Marine pollutant



15. Regulatory information

US federal regulations

This is an EPA registered biocide and is exempt from TSCA inventory requirements. See FIFRA registry number. This product is a "Hazardous Chemical" as defined by the OSHA Hazard Communication Standard, 29 CFR 1910.1200.

TSCA Section 12(b) Export Notification (40 CFR 707, Subpt. D)

Not regulated.

CERCLA Hazardous Substance List (40 CFR 302.4)

Not listed.

SARA 304 Emergency release notification

Not regulated.

OSHA Specifically Regulated Substances (29 CFR 1910.1001-1052)

Not regulated.

Superfund Amendments and Reauthorization Act of 1986 (SARA)

SARA 302 Extremely hazardous substance

Not listed.

SARA 311/312 Hazardous chemical

Yes

Classified hazard categories

Corrosive to metal
Acute toxicity (any route of exposure)
Skin corrosion or irritation
Serious eye damage or eye irritation
Respiratory or skin sensitization
Specific target organ toxicity (single or repeated exposure)

SARA 313 (TRI reporting)

Chemical name	CAS number	% by wt.
Magnesium nitrate	10377-60-3	2.5 - 10

Other federal regulations

Clean Air Act (CAA) Section 112 Hazardous Air Pollutants (HAPs) List

Not regulated.

Clean Air Act (CAA) Section 112(r) Accidental Release Prevention (40 CFR 68.130)

Sulphuric acid (CAS 7664-93-9)

Clean Water Act (CWA) Hazardous substance
Section 112(r) (40 CFR 68.130)

Safe Drinking Water Act (SDWA) Not regulated.

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)

A "No" indicates that one or more components of the product are not listed or exempt from listing on the inventory administered by the governing country(s).

FIFRA registration number 3876-151

TSCA This is an EPA registered biocide and is exempt from TSCA inventory requirements.

FIFRA hazard statement This chemical is a pesticide product registered by the Environmental Protection Agency and is subject to certain labeling requirements under federal pesticide law. These requirements differ from the classification criteria and hazard information required for safety data sheets, and for workplace labels of non-pesticide chemicals. Following is the hazard information as required on the pesticide label:

DANGER
Corrosive
Causes irreversible eye damage
Causes skin burns
Harmful if swallowed or absorbed through the skin
Harmful if inhaled
Prolonged or frequently repeated skin contact may cause allergic reaction in some individuals
This pesticide is toxic to fish and aquatic organisms

Food and drug administration 21 CFR 176.300 & 176.170 (slimicides and as a preservative)

NSF Registered and/or meets Registration No. – 141064

USDA (according to 1998 guidelines): Category Code(s):
G5 Cooling and retort water treatment products
G7 Boiler, steam line treatment products – nonfood contact

US state regulations

US. California Proposition 65

WARNING: This product can expose you to Sulphuric acid, which is known to the State of California to cause cancer. For more information go to www.P65Warnings.ca.gov.

US - California Proposition 65 - CRT: Listed date/Carcinogenic substance

Sulphuric acid (CAS 7664-93-9) Listed: March 14, 2003

US - California Proposition 65 - CRT: Listed date/Developmental toxin

No ingredient listed.

US - California Proposition 65 - CRT: Listed date/Female reproductive toxin

No ingredient listed.

US - California Proposition 65 - CRT: Listed date/Male reproductive toxin

No ingredient listed.

16. Other information, including date of preparation or last revision

Issue date Jul-03-2014

Revision date Aug-02-2019

Version # 1.1

NFPA ratings Health: 3
Flammability: 0
Instability: 0

NFPA ratings**List of abbreviations**

CAS: Chemical Abstract Service Registration Number
ACGIH: American Conference of Governmental Industrial Hygienists
TWA: Time Weighted Average
STEL: Short Term Exposure Limit
LD50: Lethal Dose, 50%
LC50: Lethal Concentration, 50%
EC50: Effect Concentration, 50%
NOEL: No Observed Effect Level
COD: Chemical Oxygen Demand
BOD: Biochemical Oxygen Demand
TOC: Total Organic Carbon
IATA: International Air Transport Association
IMDG: International Maritime Dangerous Goods Code
TSRN indicates a Trade Secret Registry Number is used in place of the CAS number.

References:

CNS 15030
UN Transportation Regulations Safety data sheets of raw materials.

Disclaimer

The information provided in this Safety Data Sheet is correct to the best of our knowledge, information and belief at the date of its publication. The information given is designed only as a guidance for safe handling, use, processing, storage, transportation, disposal and release and is not to be considered a warranty or quality specification. The information relates only to the specific material designated and may not be valid for such material used in combination with any other materials or in any process, unless specified in the text.

Revision information

Hazard(s) identification: Prevention
Hazard(s) identification: Response
Physical & Chemical Properties: Multiple Properties
GHS: Classification

Prepared by

This SDS has been prepared by SUEZ Regulatory Department (1-215-355-3300).

* Trademark of SUEZ. May be registered in one or more countries.



SAFETY DATA SHEET

STEAMATE* NA0660

1. Identification

Product identifier	STEAMATE NA0660
Other means of identification	None.
Recommended use	Neutralizing amine
Recommended restrictions	None known.

Company/undertaking identification

Veolia WTS USA, Inc.
3600 Horizon Blvd.
Trevose, PA 19053
T 215 355 3300, F 215 953 5524

Emergency telephone

(800) 877 1940

2. Hazard(s) identification

Physical hazards	Flammable liquids	Category 3
Health hazards	Acute toxicity, oral	Category 4
	Acute toxicity, dermal	Category 4
	Skin corrosion/irritation	Category 1A
	Serious eye damage/eye irritation	Category 1
	Sensitization, skin	Category 1B
	Reproductive toxicity	Category 2
	Specific target organ toxicity, single exposure	Category 3 respiratory tract irritation
OSHA defined hazards	Not classified.	

Label elements



Signal word Danger

Hazard statement Flammable liquid and vapor. Harmful if swallowed. Harmful in contact with skin. Causes severe skin burns and eye damage. Suspected of damaging fertility or the unborn child. May cause an allergic skin reaction. Causes serious eye damage. May cause respiratory irritation.

Precautionary statement

Prevention

Obtain special instructions before use. Do not handle until all safety precautions have been read and understood. Keep away from heat/sparks/open flames/hot surfaces. - No smoking. Keep container tightly closed. Ground/bond container and receiving equipment. Use explosion-proof electrical/ventilating/lighting equipment. Use only non-sparking tools. Take precautionary measures against static discharge. Do not breathe mist or vapor. Wash thoroughly after handling. Do not eat, drink or smoke when using this product. Use only outdoors or in a well-ventilated area. Contaminated work clothing must not be allowed out of the workplace. Wear protective gloves/protective clothing/eye protection/face protection.

Response	If swallowed: Rinse mouth. Do NOT induce vomiting. If on skin (or hair): Take off immediately all contaminated clothing. Rinse skin with water/shower. If inhaled: Remove person to fresh air and keep comfortable for breathing. If in eyes: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing. If skin irritation or rash occurs: Get medical advice/attention. Take off contaminated clothing and wash before reuse. In case of fire: Use appropriate media for extinction.
Storage	Store in a well-ventilated place. Keep container tightly closed. Store in a well-ventilated place. Keep cool. Store locked up.
Disposal	Dispose of contents/container in accordance with local/regional/national/international regulations.
Hazard(s) not otherwise classified (HNOC)	None known.
Supplemental information	None.

3. Composition/information on ingredients

Mixtures

Components	CAS #	Percent
Methoxypropylamine, 3-	5332-73-0	20 - 40
Cyclohexylamine	108-91-8	10 - 20

Composition comments	Information for specific product ingredients as required by the U.S. OSHA HAZARD COMMUNICATION STANDARD is listed. Refer to additional sections of this SDS for our assessment of the potential hazards of this formulation.
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4. First-aid measures

Inhalation	Remove victim to fresh air and keep at rest in a position comfortable for breathing. Call a POISON CENTER or doctor/physician if you feel unwell.
Skin contact	Remove contaminated clothing immediately and wash skin with soap and water. Call a physician or poison control center immediately. Chemical burns must be treated by a physician. Wash contaminated clothing before reuse.
Eye contact	Immediately flush eyes with plenty of water for at least 15 minutes. Remove contact lenses, if present and easy to do. Continue rinsing. Call a physician or poison control center immediately.
Ingestion	Call a physician or poison control center immediately. Rinse mouth. Do not induce vomiting. If vomiting occurs, keep head low so that stomach content doesn't get into the lungs.
Most important symptoms/effects, acute and delayed	Burning pain and severe corrosive skin damage. Causes serious eye damage. Symptoms may include stinging, tearing, redness, swelling, and blurred vision. Permanent eye damage including blindness could result. May cause respiratory irritation.
Indication of immediate medical attention and special treatment needed	Provide general supportive measures and treat symptomatically. Thermal burns: Flush with water immediately. While flushing, remove clothes which do not adhere to affected area. Call an ambulance. Continue flushing during transport to hospital. Chemical burns: Flush with water immediately. While flushing, remove clothes which do not adhere to affected area. Call an ambulance. Continue flushing during transport to hospital. Keep victim warm. Keep victim under observation. Symptoms may be delayed.
General information	Take off all contaminated clothing immediately. IF exposed or concerned: Get medical advice/attention. If you feel unwell, seek medical advice (show the label where possible). Ensure that medical personnel are aware of the material(s) involved, and take precautions to protect themselves. Show this safety data sheet to the doctor in attendance. Wash contaminated clothing before reuse.

5. Fire-fighting measures

Suitable extinguishing media	Alcohol resistant foam. Powder. Carbon dioxide, dry chemicals, foam. Water spray should be used only to cool fire-exposed containers and disperse vapours.
Unsuitable extinguishing media	Do not use water jet as an extinguisher, as this will spread the fire.
Specific hazards arising from the chemical	Vapors may form explosive mixtures with air. Vapors may travel considerable distance to a source of ignition and flash back. Elemental oxides.
Special protective equipment and precautions for firefighters	Wear full protective clothing, including helmet, self-contained positive pressure or pressure demand breathing apparatus, protective clothing and face mask.
Fire fighting equipment/instructions	In case of fire and/or explosion do not breathe fumes. Use standard firefighting procedures and consider the hazards of other involved materials. Move containers from fire area if you can do so without risk. Cool containers / tanks with water spray.
Specific methods	Use standard firefighting procedures and consider the hazards of other involved materials.
General fire hazards	Flammable liquid and vapor.

6. Accidental release measures

Personal precautions, protective equipment and emergency procedures

Keep people away from and upwind of spill/leak. Eliminate all ignition sources (no smoking, flares, sparks, or flames in immediate area). Wear appropriate protective equipment and clothing during clean-up. Do not breathe mist or vapor. Do not touch damaged containers or spilled material unless wearing appropriate protective clothing. Ventilate closed spaces before entering them. Local authorities should be advised if significant spillages cannot be contained.

Methods and materials for containment and cleaning up

Eliminate all ignition sources (no smoking, flares, sparks, or flames in immediate area). Keep combustibles (wood, paper, oil, etc.) away from spilled material. Take precautionary measures against static discharge. Use only non-sparking tools. Dike far ahead of spill for later disposal. Use a non-combustible material like vermiculite, sand or earth to soak up the product and place into a container for later disposal. Absorb with earth, sand or other non-combustible material and transfer to containers for later disposal.

Environmental precautions

Avoid discharge into drains, water courses or onto the ground. Water contaminated with this product may be sent to a sanitary sewer treatment facility, or a permitted waste treatment facility, in accordance with any local agreements.

7. Handling and storage

Precautions for safe handling

Obtain special instructions before use. Do not handle until all safety precautions have been read and understood. Do not handle, store or open near an open flame, sources of heat or sources of ignition. Protect material from direct sunlight. Explosion-proof general and local exhaust ventilation. Take precautionary measures against static discharges. All equipment used when handling the product must be grounded. Use non-sparking tools and explosion-proof equipment. Do not breathe mist or vapor. Do not get in eyes, on skin, or on clothing. Do not taste or swallow. When using, do not eat, drink or smoke. Pregnant or breastfeeding women must not handle this product. Should be handled in closed systems, if possible. Wear appropriate personal protective equipment. Wash hands thoroughly after handling. Wash contaminated clothing before reuse. Observe good industrial hygiene practices.

Conditions for safe storage, including any incompatibilities

Store locked up. Keep away from heat, sparks and open flame. Prevent electrostatic charge build-up by using common bonding and grounding techniques. Store in a cool, dry place out of direct sunlight. Store in original tightly closed container. Store in a well-ventilated place. Keep in an area equipped with sprinklers. Do not freeze. If frozen, thaw completely and mix thoroughly prior to use.

8. Exposure controls/personal protection

Occupational exposure limits

US. ACGIH Threshold Limit Values

Components	Type	Value
Cyclohexylamine (CAS 108-91-8)	TWA	10 ppm

US. NIOSH: Pocket Guide to Chemical Hazards

Components	Type	Value
Cyclohexylamine (CAS 108-91-8)	TWA	40 mg/m3
		10 ppm

US. Workplace Environmental Exposure Level (WEEL) Guides

Components	Type	Value
Methoxypropylamine, 3- (CAS 5332-73-0)	STEL	15 ppm
	TWA	5 ppm

Biological limit values

No biological exposure limits noted for the ingredient(s).

Appropriate engineering controls

Explosion-proof general and local exhaust ventilation. Eye wash facilities and emergency shower must be available when handling this product.

Individual protection measures, such as personal protective equipment

Eye/face protection

Wear safety glasses with side shields (or goggles) and a face shield.

Skin protection

Hand protection

Wear appropriate chemical resistant gloves. The choice of an appropriate glove does not only depend on its material but also on other quality features and is different from one producer to the other. Suitable gloves can be recommended by the glove supplier. Glove selection must take into account any solvents and other hazards present.

Other

Wear appropriate chemical resistant clothing. Use of an impervious apron is recommended.

Respiratory protection	If engineering controls do not maintain airborne concentrations below recommended exposure limits (where applicable) or to an acceptable level (in countries where exposure limits have not been established), an approved respirator must be worn. A respiratory protection program that meets OSHA's 29 CFR 1910.34 and ANSI Z88.2 requirements must be followed whenever workplace conditions warrant a respirator's use.
Thermal hazards	Wear appropriate thermal protective clothing, when necessary.
General hygiene considerations	Observe any medical surveillance requirements. When using do not smoke. Keep away from food and drink. Always observe good personal hygiene measures, such as washing after handling the material and before eating, drinking, and/or smoking. Routinely wash work clothing and protective equipment to remove contaminants. Contaminated work clothing should not be allowed out of the workplace.

9. Physical and chemical properties

Appearance	Liquid
Physical state	Liquid.
Form	Not available.
Color	Colorless to yellow
Odor	Amine odor
Odor threshold	Not available.
pH (concentrated product)	13 Neat
Melting point/freezing point	< -30 °F (< -34 °C)
Initial boiling point and boiling range	219 °F (104 °C)
Flash point	117 °F (47 °C) P-M(CC)
Evaporation rate	Slower than Ether
Flammability (solid, gas)	Not applicable.
Upper/lower flammability or explosive limits	
Explosive limit - lower (%)	Not available.
Explosive limit - upper (%)	Not available.
Vapor pressure	18 mmHg
Vapor pressure temp.	70 °F (21 °C)
Vapor density	> 1
Relative density	0.96
Relative density temperature	70 °F (21 °C)
Solubility(ies)	
Solubility (water)	100 %
Partition coefficient (n-octanol/water)	Not available.
Auto-ignition temperature	Not available.
Decomposition temperature	Not available.
Viscosity	17 mPa.s
Viscosity temperature	70 °F (21 °C)
Other information	
Explosive properties	Not explosive.
Oxidizing properties	Not oxidizing.
Percent volatile	99.99
pH in aqueous solution	12 (5% Solution)
Pour point	< -30 °F (< -34 °C)
VOC	59 % CALCULATED

10. Stability and reactivity

Reactivity	The product is stable and non-reactive under normal conditions of use, storage and transport.
Chemical stability	Material is stable under normal conditions.

Possibility of hazardous reactions	Hazardous polymerization does not occur.
Conditions to avoid	Friction, heat or other sources of ignition may cause a violent reaction releasing heat and toxic fumes. Contact with incompatible materials. None under normal conditions.
Incompatible materials	Avoid contact with strong acids and oxidisers.
Hazardous decomposition products	Ammonia, oxides of carbon and nitrogen evolved in fire.

11. Toxicological information

Information on likely routes of exposure

Inhalation	May cause irritation to the respiratory system. Prolonged inhalation may be harmful.
Skin contact	Causes severe skin burns. Harmful in contact with skin. May cause an allergic skin reaction.
Eye contact	Causes serious eye damage.
Ingestion	Causes digestive tract burns. Harmful if swallowed.

Symptoms related to the physical, chemical and toxicological characteristics	Burning pain and severe corrosive skin damage. Causes serious eye damage. Symptoms may include stinging, tearing, redness, swelling, and blurred vision. Permanent eye damage including blindness could result. May cause respiratory irritation.
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Information on toxicological effects

Acute toxicity	Harmful in contact with skin. Harmful if swallowed.
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Product	Species	Test Results
STEAMATE NA0660		
<u>Acute</u>		
Dermal		
LD50	Rabbit	1150 mg/kg (Estimated value)
Oral		
LD50	Rat	560 mg/kg (Estimated value)
Components	Species	Test Results

Cyclohexylamine (CAS 108-91-8)

<u>Acute</u>		
Dermal		
LD50	Rabbit	277 mg/kg
Oral		
LD50	Rat	156 mg/kg

Methoxypropylamine, 3- (CAS 5332-73-0)

<u>Acute</u>		
Dermal		
LD50	Rabbit	> 2000 mg/kg
Oral		
LD50	Rat	690 mg/kg

Skin corrosion/irritation	Causes severe skin burns and eye damage.
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Serious eye damage/eye irritation	Causes serious eye damage.
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Respiratory or skin sensitization

Respiratory sensitization	Not a respiratory sensitizer.
Skin sensitization	May cause an allergic skin reaction.

Germ cell mutagenicity	No data available to indicate product or any components present at greater than 0.1% are mutagenic or genotoxic.
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Carcinogenicity	Not classified.
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IARC Monographs. Overall Evaluation of Carcinogenicity

Not listed.

OSHA Specifically Regulated Substances (29 CFR 1910.1001-1053)

Not listed.

US. National Toxicology Program (NTP) Report on Carcinogens

Not listed.

Reproductive toxicity	Suspected of damaging fertility or the unborn child.
Specific target organ toxicity - single exposure	May cause respiratory irritation.
Specific target organ toxicity - repeated exposure	Not classified.
Aspiration hazard	Based on available data, the classification criteria are not met. Not an aspiration hazard.
Chronic effects	Prolonged inhalation may be harmful.

12. Ecological information

Ecotoxicity

Product		Species	Test Results
Aquatic			
Crustacea	LC50	Daphnia magna	600 mg/L, 48 hour
	NOEL	Daphnia magna	178.5 mg/L, 48 hour
Fish	LC50	Fathead Minnow	280 mg/L, 96 hour (Estimated)
	NOEL	Fathead Minnow	130 mg/L, 96 hour (Estimated)

Persistence and degradability No data is available on the degradability of this product.

No data is available on the degradability of this product.

- COD (mgO ₂ /g)	1279 (calculated data)
- BOD 5 (mgO ₂ /g)	1 (calculated data)
- BOD 28 (mgO ₂ /g)	45 (calculated data)
- Closed Bottle Test (% Degradation in 28 days)	12 (calculated data)
- Zahn-Wellens Test (% Degradation in 28 days)	39 (calculated data)
- TOC (mg C/g)	316 (calculated data)

Bioaccumulative potential

Partition coefficient n-octanol / water (log K_{ow})

Cyclohexylamine 1.49

Mobility in soil No data available.

Other adverse effects Not available.

13. Disposal considerations

Disposal instructions Collect and reclaim or dispose in sealed containers at licensed waste disposal site. Incinerate the material under controlled conditions in an approved incinerator. Do not incinerate sealed containers. If discarded, this product is considered a RCRA ignitable waste, D001. Dispose of contents/container in accordance with local/regional/national/international regulations.

Local disposal regulations Dispose in accordance with all applicable regulations.

Hazardous waste code D001: Waste Flammable material with a flash point <140 F
D002: Waste Corrosive material [pH ≤2 or ≥12.5, or corrosive to steel]
The waste code should be assigned in discussion between the user, the producer and the waste disposal company.

Waste from residues / unused products 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). Dispose of in accordance with local regulations.

Contaminated packaging Via an authorized waste disposal contractor to an approved waste disposal site, observing all local and national regulations. Since emptied containers may retain product residue, follow label warnings even after container is emptied. Empty containers should be taken to an approved waste handling site for recycling or disposal.

14. Transport information

DOT

UN number UN2734

UN proper shipping name Amines, liquid, corrosive, flammable, n.o.s. (METHOXYPROPYLAMINE,3-, CYCLOHEXYLAMINE)

Transport hazard class(es)**Class** 8**Subsidiary risk** 3**Packing group** II**Special precautions for user** Not available.**ERG number** 132

Some containers may be exempt from Dangerous Goods/Hazmat Transport Regulations, please check BOL for exact container classification.

IATA**UN number** UN2734**UN proper shipping name** Amines, liquid, corrosive, flammable, n.o.s. (METHOXYPROPYLAMINE,3-, CYCLOHEXYLAMINE)**Transport hazard class(es)****Class** 8**Subsidiary risk** 3**Packing group** II**Environmental hazards** No.**ERG Code** 132**Special precautions for user** Not available.**IMDG****UN number** UN2734**UN proper shipping name** AMINES, LIQUID, CORROSIVE, FLAMMABLE, N.O.S. (METHOXYPROPYLAMINE,3-, CYCLOHEXYLAMINE)**Transport hazard class(es)****Class** 8**Subsidiary risk** 3**Packing group** II**Environmental hazards****Marine pollutant** No**EmS** F-E, S-C**Special precautions for user** Not available.**DOT****IATA; IMDG****15. Regulatory information****US federal regulations**

This product is a "Hazardous Chemical" as defined by the OSHA Hazard Communication Standard, 29 CFR 1910.1200.

Toxic Substances Control Act (TSCA)**TSCA Section 12(b) Export Notification (40 CFR 707, Subpt. D)**

Not regulated.

CERCLA Hazardous Substance List (40 CFR 302.4)

Not listed.

SARA 304 Emergency release notification

Cyclohexanamine (CAS 108-91-8)

10000 LBS

OSHA Specifically Regulated Substances (29 CFR 1910.1001-1053)

Not listed.

Superfund Amendments and Reauthorization Act of 1986 (SARA)**SARA 302 Extremely hazardous substance**

Chemical name	CAS number	Reportable quantity (pounds)	Threshold planning quantity (pounds)	Threshold planning quantity, lower value (pounds)	Threshold planning quantity, upper value (pounds)
Cyclohexylamine	108-91-8	10000	10000		

SARA 311/312 Hazardous chemical

Yes

Classified hazard categories

Flammable (gases, aerosols, liquids, or solids)
Acute toxicity (any route of exposure)
Skin corrosion or irritation
Serious eye damage or eye irritation
Respiratory or skin sensitization
Reproductive toxicity
Specific target organ toxicity (single or repeated exposure)

SARA 313 (TRI reporting)

Not regulated.

Other federal regulations**Clean Air Act (CAA) Section 112 Hazardous Air Pollutants (HAPs) List**

Aniline (CAS 62-53-3)

Clean Air Act (CAA) Section 112(r) Accidental Release Prevention (40 CFR 68.130)

Cyclohexylamine (CAS 108-91-8)

Safe Drinking Water Act (SDWA)

Contains component(s) regulated under the Safe Drinking Water Act.

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)

A "No" indicates that one or more components of the product are not listed or exempt from listing on the inventory administered by the governing country(s).

Food and drug administration

All ingredients in this product are authorized in 21 CFR176.170 for use in boilers where the steam will be used for manufacturing paper or paperboard.

US state regulations**California Proposition 65**

WARNING: WARNING: This product can expose you to Aniline, which is known to the State of California to cause cancer. For more information go to www.P65Warnings.ca.gov.

US - California Proposition 65 - CRT: Listed date/Carcinogenic substance

Aniline (CAS 62-53-3)

Listed: January 1, 1990

US - California Proposition 65 - CRT: Listed date/Developmental toxin

No ingredient listed.

US - California Proposition 65 - CRT: Listed date/Female reproductive toxin

No ingredient listed.

US - California Proposition 65 - CRT: Listed date/Male reproductive toxin

No ingredient listed.

16. Other information, including date of preparation or last revision**Issue date**

Oct-09-2014

Revision date

Feb-11-2023

Version #
NFPA ratings

4.1
Health: 3
Flammability: 3
Instability: 0

NFPA ratings



List of abbreviations

CAS: Chemical Abstract Service Registration Number
ACGIH: American Conference of Governmental Industrial Hygienists
TWA: Time Weighted Average
STEL: Short Term Exposure Limit
LD50: Lethal Dose, 50%
LC50: Lethal Concentration, 50%
NOEL: No Observed Effect Level
COD: Chemical Oxygen Demand
BOD: Biochemical Oxygen Demand
TOC: Total Organic Carbon
TSRN indicates a Trade Secret Registry Number is used in place of the CAS number.
IATA: International Air Transport Association
IMDG: International Maritime Dangerous Goods Code

References:

No data available

Disclaimer

The information provided in this Safety Data Sheet is correct to the best of our knowledge, information and belief at the date of its publication. The information given is designed only as a guidance for safe handling, use, processing, storage, transportation, disposal and release and is not to be considered a warranty or quality specification. The information relates only to the specific material designated and may not be valid for such material used in combination with any other materials or in any process, unless specified in the text.

Revision information

This document has undergone significant changes and should be reviewed in its entirety.

Prepared by

This SDS has been prepared by Veolia Water Technologies & Solutions' Regulatory Department (1-215-355-3300).

* Trademark of Veolia. May be registered in one or more countries.

146 ENTERPRISES INC 1108 MAXI CIR FRIENDSWOOD TX 77546-4324	3500 DECKER HOLDINGS LLC 712 WILCREST DR STE 313 HOUSTON TX 77042-1348	ABDELSAYED MAGDY & DALLAL 6 BAYVILLA ST BAYTOWN TX 77520-2103
AGUILERA JOSE DEJESUS & MARGARITA 103 ARBOR ST BAYTOWN TX 77520-1905	ALEMAN-HERNANDEZ CRISTINA 407 SCARLETT ST BAYTOWN TX 77520-1949	ALFORD MARK 13807 LAKEWATER DR PEARLAND TX 77584-3441
ALMENDAREZ THERESA K 3815 PATRAS DR PASADENA TX 77505-3368	ALVARADO SILVIA J 16523 OAK LN CHANNELVIEW TX 77530-2937	AMADOR ANTONIO V & MARY E 2419 LOCH LOMOND ST HIGHLANDS TX 77562-2300
AMERICAN PIONEER INV INC 8556 KATY FWY STE 128 HOUSTON TX 77024-1806	ANDRADE AUGUSTIN & JUANITA 2005 KANSAS ST BAYTOWN TX 77520-6319	APTCS LLC 2205 AVENUE I STE 117 ROSENBERG TX 77471-2651
ARBOR BAY VILLAS I LLC 115 ARBOR ST 21 BAYTOWN TX 77520-1914	ARENAS NOHEMI & JOSE F 1700 BROKEN ARROW ST BAYTOWN TX 77521-2569	ASBM FAMILY LIMITED PARTNERSHIP 87 PIPER WALK SUGAR LAND TX 77479-2516
AVELLANEDA FRANCISCO 500 N AIRHART DR BAYTOWN TX 77520-2205	BAGUIO CORSINO JR & MYRTLE 6330 BAYWAY DR BAYTOWN TX 77520-1712	BARAGAN MA DALILA 209 ARBOR ST BAYTOWN TX 77520-1907
BARNETT MARTHA F 7 BAYVILLA ST BAYTOWN TX 77520-2102	BARRIENTES RICHARD & SYLVIA 23 WILLOW POINT PLACE SPRING TX 77382-1646	BAY AREA HOMELESS SERVICES PO BOX 4130 BAYTOWN TX 77522-4130
BAYCREEK PROPERTIES LIMITED PARTNERSHIP PO BOX 2241 BAYTOWN TX 77522-2241	BENAVIDES JAVIER & PORFIRIA 9801 LARKWOOD DR APT 2524 HOUSTON TX 77096-7203	BENAVIDES JUAN 1306 HARBOR ST BAYTOWN TX 77520-4122
BENOIT LAURIE WHITE POPE 1112 SMITH DRIVE ALVIN TX 77511-5562	BOC GROUP INC 575 MOUNTAIN AVE NEW PROVIDENCE NJ 07974-2097	BONILLA MARIA G 905 BECKMAN ST HOUSTON TX 77076-2706
BRC FAMILY LIMITED PARTNERSHIP 11302 CEDAR GULLY RD BEACH CITY TX 77523-8277	BUCHANAN TRUDY T 411 SCARLETT ST BAYTOWN TX 77520-1949	BURNETT CECIL THERESE 301 ARBOR ST BAYTOWN TX 77520-1909

BUSE WILLIAM E 416 SCARLETT ST BAYTOWN TX 77520-1950	CALVERY BAPTIST CHURCH 501 S ATLANTIC ST BAYTOWN TX 77520-4306	CAPETILLO THOMAS & KAREN 5713 BAYWAY DR BAYTOWN TX 77520-2110
CARDENAS HECTOR & BELLA 225 FORTNER ST BAYTOWN TX 77520-1933	CARDENAS HECTOR III 113 FORTNER ST BAYTOWN TX 77520-1931	CARGILL RICHARD NATHAN 1721 MISSOURI ST BAYTOWN TX 77520-6436
CASTRO NICANORA 3315 MICHIGAN ST BAYTOWN TX 77520-5931	CASTRO NORA L 3313 MICHIGAN ST BAYTOWN TX 77520-5931	CENTERPOINT ENERGY HOU ELE PO BOX 1475 HOUSTON TX 77251-1475
CERINO ELEAZAR 3317 MICHIGAN ST BAYTOWN TX 77520-5931	CHAPA JORGE 2205 DORRIS ST BAYTOWN TX 77520-4229	CHAPA MARY E 318 N HIGHWAY 146 BAYTOWN TX 77520-2246
CHAVEZ CARMELA PO BOX 3287 BAYTOWN TX 77522-3287	CHAVEZ PEDRO MARTINEZ 2211 SPRING HOLLOW DR BAYTOWN TX 77521-7645	CHAVIRA J J 3311 MICHIGAN ST BAYTOWN TX 77520-5931
CHUKWUOCHA MOTORS INC 5015 LARK CREEK CT SUGAR LAND TX 77479-3866	CITY OF BAYTOWN PO BOX 2805 BAYTOWN TX 77522-2805	CITY OF BAYTOWN TR FOR PO BOX 2805 BAYTOWN TX 77522-2805
CONTRERAS LUDMILLA G 3228 IOWA ST BAYTOWN TX 77520-	CORTES ABEL 204 NORTH ST BAYTOWN TX 77520-1946	COUNTRY CLUB PROFESSIONAL PARK INC PO BOX 1091 BAYTOWN TX 77522-1091
COY ANNA E 5308 LORRAINE DR BAYTOWN TX 77521-1732	CRE & LAND LLC PO BOX 741109 HOUSTON TX 77274-1109	CUEVAS JOSE M & ANGELITA 6524 BAYWAY DR BAYTOWN TX 77520-1716
CURRIE MARVIN A III 5505 BAYWAY DR BAYTOWN TX 77520-2106	CURRY FAMILY TRUST 6A BAYVILLA ST BAYTOWN TX 77520-2103	DAMIAN DISTRIBUTE LLC 11911 ARCADIA BEND HOUSTON TX 77041-6219
DE LA CRUZ JAVIER 1309 ASH ST BAYTOWN TX 77520-6801	DEHARGROVE NORMA H 12702 STILLINGTON DR HOUSTON TX 77015-2013	DELGADO MARY E 316 SCARLETT ST BAYTOWN TX 77520-1948

DENNY TOM R & DONNA MARIE
1805 MISSOURI ST
BAYTOWN TX 77520-6437

DIAZ WILLIAM NOE
6318 BAYWAY DR
BAYTOWN TX 77520-1712

DLV PROPERTIES LLC
138 VIEUX CARRE
HOUSTON TX 77009-4760

DOMINGUEZ SANDRA
1606 OLIVE ST
BAYTOWN TX 77520-5734

DONATO JEROME N
2318 HODGES ST
BAYTOWN TX 77521-1241

DOT CONSTRUCTION CO INC
PO BOX 223
FREDERICKSBURG TX 78624-0223

EARP REAL ESTATE MANAGEMENT LLC
2201 CENTER ST
DEER PARK TX 77536-4165

ECO SERVICES OPERATIONS CORP
300 LINDENWOOD DR
MALVERN PA 19355-1740

EGW ROLLINGBROOK INVESTMENTS LP
1185 W GEORGIA ST STE 1045
VANCOUVER BC UGE 4E6

EKURRO RESOURCES LLC
3950 ASHBURNHAM DR APT 47
HOUSTON TX 77082-5941

ELLIS DAVID L & MARSHA A
14 BAYVILLA ST
BAYTOWN TX 77520-2103

ENTERPRISE LOGISTICS SERVICES LLC
PO BOX 4018
HOUSTON TX 77210-4018

EQUISTAR CHEMICALS LP
PO BOX 3646
HOUSTON TX 77253-3646

ERICKSON CARMEN
5902 W DAVIS ST
CONROE TX 77304-4897

ERNST BYRON L & KAREN S
5011 GLENHAVEN DR
BAYTOWN TX 77521-2913

ETC NGL TRANSPORT LLC
711 LOUISIANA ST STE 900
HOUSTON TX 77002-2831

FAITH LIFE CHRISTIAN CENTER
6711 BAYWAY DR
BAYTOWN TX 77520-1530

FAUST DON
5 BAYVILLA ST
BAYTOWN TX 77520-2102

FINK LILLIAN
12 BAYVILLA ST
BAYTOWN TX 77520-2103

FIRST CHURCH BAYTOWN
1850 BROADWAY ST
PEARLAND TX 77581

FIRST OAKLAND PROPERTIES LLC
SERIES 209
4119 CROWNWOOD DR
SEABROOK TX 77586-4003

FLANDERS EMMANUEL E ESTATE OF
2004 BRUCE DR
BAYTOWN TX 77520-5602

FLORES TROY
16054 SPINNAKER DR
CROSBY TX 77532-5577

FLOWERS KEN
6110 BAYWAY DR
BAYTOWN TX 77520-1708

FOUBISTER LIEN &
31 MARLIN LN
BAYTOWN TX 77520-7406

FRALEY MARGARET
247 ARBOR ST
BAYTOWN TX 77520-

FUENTES JUAN ORTEGA
1211 CHERRY ST
BAYTOWN TX 77520-4110

GARCIA ADAN HEREDIA & CRISTAL
HEREDIA
4611 SENECA CT
BAYTOWN TX 77521

GARCIA JOSE LUIS & SAN JUANA
300 FORTINBERRY ST
BAYTOWN TX 77520-2212

GARCIA LESDY
706 MCCARDELL ST
CHANNELVIEW TX 77530-3414

GARCIA ROQUE & VERONICA V
5330 BUSH RD
BAYTOWN TX 77521-1605

GARCIA ROXANA
3415 ROLLINGCREEK DR
BAYTOWN TX 77521-3650

GOLD FINANCIAL SVC INC
1302 WAUGH DR STE 250
HOUSTON TX 77019-3908

GONZALES JOHNNY
241 ARBOR ST
BAYTOWN TX 77520-1907

GONZALES JOSE & SANDRA
406 ARBOR ST
BAYTOWN TX 77520-1912

GONZALEZ ARNULFO
6309 BAYWAY DR
BAYTOWN TX 77520-1711

GONZALEZ CRUZ
2409 MISSOURI ST
BAYTOWN TX 77520-6139

GONZALEZ MARIA
301 SCARLETT ST
BAYTOWN TX 77520-1947

GONZALEZ MARIA DE LA LUZ
412 ARBOR ST
BAYTOWN TX 77520-1912

GONZALEZ TEODORO & MARIA
807 W ELLAINE AVE
PASADENA TX 77506-4323

GOOSE CREEK ISD
PO BOX 2805
DEER PARK TX 77536

GOOSE CREEK RESERVE COMMUNITY
ASSOCGOOSE
PO BOX 727
HOUSTON TX 77001

GORMAN SHARON E
4 BAYVILLA ST
BAYTOWN TX 77520-2103

GRDEN JOHN PAUL JR & MARY DIANNE
3227 MISSOURI ST
BAYTOWN TX 77520-5935

GRUVER DANIEL R & MARY A
410 BARNES ST
BAYTOWN TX 77520-1922

GUADIANA JUAN & ANA
401 SCARLETT
BAYTOWN TX 77520-1949

GUAJARDO MONICA
3710 DECKER DR APT 1
BAYTOWN TX 77520-1659

GUERRA AMANDA
939 ELTON ST
HOUSTON TX 77034-1205

GUERRERO AVILA JUAN
5524 EAST RD
BAYTOWN TX 77521-9005

GUILLEN JAIME
5003 GLENHAVEN DR
BAYTOWN TX 77521-2913

GULF REFINING
PO BOX 285
HOUSTON TX 77001-0285

HAMASH INVESTMENTS LLC
11610 LEGEND MANOR DR
HOUSTON TX 77082-3080

HARGRAVES NORMAN R
5305 BAYWAY DR
BAYTOWN TX 77520-2104

HAROLD L SHEARN FAMILY TRUST
24523 RIMROCK CYN CT
SALINAS CA 93908-9408

HARRIS COUNTY FLOOD CONTROL
DISTRICT
9900 NW FRWY
HOUSTON TX 77092-8601

HARVEST TEMPLE MINISTRIES
3105 ROLLINGBROOK DR
BAYTOWN TX 77521-3661

HAWKINS ROCIO
1305 CHERRY ST
BAYTOWN TX 77520-4112

HEERNANDEZ BENITO
17119 WILD TURKEY DR
CYPRESS TX 77429-1520

HENSLEY GUY SHERWOOD
3819 BAYOU CIRCLE
DICKINSON TX 77539-6403

HERNANDEZ JOSE RAMON
3125 OHIO ST
BAYTOWN TX 77520-6022

HERNANDEZ OSCAR G 320 SCARLETT ST BAYTOWN TX 77520-1948	HERRERA APOLINAR 906 MASSEY TOMPKINS BAYTOWN TX 77521-4318	HFI WYNDHAM PARK APTS LP 1500 N POST OAK RD STE 190 HOUSTON TX 77055-5487
HILL R G & MARY 702 GRESHAM ST BAYTOWN TX 77520-2304	HOLMSLEY DELL T & MARY K 5709 BAYWAY DR BAYTOWN TX 77520-2110	HOME CASH OFFER PROS LLC 6075 ROSEWELL RD STE 174 ATLANTA GA 30328-4337
HSC PIPELINE PARTNERSHIP LLC PO BOX 4018 HOUSTON TX 77210-4018	HUGHEY GINA CIRELLI 421 MEADOW BEND DR FRIENDSWOOD TX 77546-2493	ICB REALTY INVESTMENT LLC 1251 S KIRKWOOD RD HOUSTON TX 77077-2602
INDUSTRIAL SAFETY TRAINING COUNCIL 8200 N MAIN ST BAYTOWN TX 77521-9506	IRG ROLLINGBROOK LLC 180 YORICK ST STE 1100 NEW YORK NY 10014	JACKSON JANICE L 1606 LOCH LAKE DR EL LAGO TX 77586-5906
JACKSON JOEL H 4900 GOOSE CREEK DR BAYTOWN TX 77521-2918	JD INTEREST LLC 3107 LAUREN LN HOUSTON TX 77082-3463	JIMENEZ MARTHA 11418 BRANDY LN HOUSTON TX 77044-5860
JOHN P GANNON INC 525 PARK GROVE LN KATY TX 77450-1759	JOHNSON ROBERT A & HAMILTON DIANA K 2407 MISSOURI ST BAYTOWN TX 77520-6139	JUAN VAZQUEZ 118 GRAHAM ST BAYTOWN TX 77520-7002
JUSTIN & BRANDON NGUYEN INVESTMENT 540 S MAIN ST HIGHLANDS TX 77562-4230	KELEASE PROPERTIES 1 LTD 6604 BAYWAY DR BAYTOWN TX 77520-1718	KENNINGTON WILLIAM MORRIS 236 ARBOR ST BAYTOWN TX 77520-1908
KM HOLDINGS LP 5901 BAYWAY DR BAYTOWN TX 77520-2113	KRIZAK DANIEL J & LOIS M 2001 MISSOURI ST BAYTOWN TX 77520-6441	KRIZAK KIM S 3411 GARTH RD BAYTOWN TX 77520-6139
KRIZAK TIMOTHY E & CHERYL J 2417 MISSOURI ST BAYTOWN TX 77520-6139	KRIZAK ZOE 2401 MISSOURI ST BAYTOWN TX 77520-6139	KSG INVESTMENTS LLC 4383 KATY HOCKLEY CUT OFF RD KATY TX 77493-7842
KURBAD ANTHONY D 6518 BAYWAY DR BAYTOWN TX 77520-1716	L & J FINAL EDITION LTD 5044 TIMBER CREEK DR HOUSTON TX 77017-5954	LAZARO RAMIRO & MARIA I 404 ARBOR ST BAYTOWN TX 77520-1912

LCY ELASTOMERS LP 4803 DECKER DR BAYTOWN TX 77520-1447	LINARES ALYSSA 5013 GLENHAVEN DR BAYTOWN TX 77521-2913	LINDSEY DANNY C 6202 BAYWAY DR BAYTOWN TX 77520-1710
LOPEZ JANIE 315 SCARLET BAYTOWN TX 77520-1947	LOPEZ JOSE & ROSA 3212 NEBRASKA ST BAYTOWN TX 77520-5940	LUNDY FRANK J JR & FRANCES 2415 MISSOURI ST BAYTOWN TX 77520-6139
M A M ENTERPRISE PO BOX 1426 TOMBALL TX 77377-1426	MANZO DAVID & ADELINA 6516 BAYWAY DR BAYTOWN TX 77520-1716	MARTINEZ DANIEL 4623 BARKALOO RD BAYTOWN TX 77521-9209
MARTINEZ JUAN C & SYLVIA E 3409 MICHIGAN ST BAYTOWN TX 77520-5933	MATTHEWS EUGENE E & HAZEL 5415 BAYWAY DR BAYTOWN TX 77520-2105	MCCARTNEY BEVERLEY N ESTATE OF 8502 MEADOWLARK DR BAYTOWN TX 77523-9633
MCCLENDON ROBERT L & JANICE J 2105 MISSOURI ST BAYTOWN TX 77520-6443	MEDINA JOSE MANUEL GRANDA 17422 WILTON PARK CT SPRING TX 77379-4678	MELENDEZ MARI 235 ARBOR ST BAYTOWN TX 77520-1907
MINOR ISAAC III & MARGIE M 4811 SAINT ANDREWS DR BAYTOWN TX 77521-3015	MISSOURI PACIFIC RAILROAD COMPANY 1400 DOUGLAS ST STOP 1640 OMAHA NE 68179-1001	MONUMENT CHEMICAL BAYTOWN LLC 6510 TELECOM DR STE 425 INDIANAPOLIS IN 46278-6330
MORELOCK MICHAEL M 6819 BAYWAY DR BAYTOWN TX 77520-1501	MORENO ANTONIO 2166 COLONIAL ST ALVIN TX 77511-4374	MORENO CYNTHIA 1245 CHERRY ST BAYTOWN TX 77520-4110
MORGAN SHIRLEY 1805 E TEXAS AVE BAYTOWN TX 77520-7441	MUNGLE KENNETH & MYNA 5901 BAYWAY DR BAYTOWN TX 77520-2113	NAVARRO CATHERINE M 2109 MISSOURI ST BAYTOWN TX 77520-6443
NEGRETE JUAN J 3225 INDIANA ST BAYTOWN TX 77520-5925	NGUYEN LIEN T 14930 CUTLEAF LN CYPRESS TX 77429-7588	NILES RYAN K 1807 MISSOURI ST BAYTOWN TX 77520-6437
NUNEZ MANUEL N 604 MEADOWICK DR BAYTOWN TX 77521-4419	OCCIDENTAL CHEMICAL CORP PO BOX 27570 HOUSTON TX 77227-7570	OLIVARES BRAULIO 16811 KINNEY POINT LN HOUSTON TX 77073-3265

OLVERA MARIA E
3303 MICHIGAN ST
BAYTOWN TX 77520-5931

ORION CONSTRUCTION LP ET AL
12000 AEROSPACE AVE STE 300
HOUSTON TX 77034-5588

ORTIZ FRANCISCO
3403 MICHIGAN ST
BAYTOWN TX 77520-5933

ORTIZ PEGGY SUE
105 ARBOR ST
BAYTOWN TX 77520-1905

PAEZ LEONARDO H
1231 CHERRY ST
BAYTOWN TX 77520-4110

PARKER JOSHUA LEHI & ANA
3419 ROLLINGCREEK DR
BAYTOWN TX 77521

PENA ALMA & RODRIGO
3228 INDIANA ST
BAYTOWN TX 77520-5926

PEOPLE OF GOD INC
3403 MARKET ST
BAYTOWN TX 77520-5954

PEQUENO JOSE & FELIPA
2009 MONTANA ST
BAYTOWN TX 77520-6662

PEREZ AMOS G JR
15 BAYVILLA ST
BAYTOWN TX 77520-2102

PEREZ ERNESTO D
2 BAYVILLA DR
BAYTOWN TX 77520-2103

PEREZ GILBERT III
8027 STAFFFLOWER DR
BAYTOWN TX 77521-7505

PEREZ SALUD C
1215 CHERRY ST
BAYTOWN TX 77520-4110

PHAM TUAN D & SILVIA V
514 LAGO TRACE DR
HUFFMAN TX 77336-4687

PIERCE DAVID A
13 BAYVILLA ST
BAYTOWN TX 77520-2102

POHLER WILLIAM J
2110 HUGGINS ST
BAYTOWN TX 77520-5918

POLO JUANITA MOLINA
3230 NEBRASKA ST
BAYTOWN TX 77520-5940

PONCE RODOLFO
307 SCARLETT ST
BAYTOWN TX 77520-1947

PORT OF HOUSTON AUTHORITY
111 EAST LOOP N
HOUSTON TX 77029-4326

PRADO HECTOR & SANDRA
3229 NEBRASKA ST
BAYTOWN TX 77520-5939

PUENTE JULIO C
3229 MICHIGAN ST
BAYTOWN TX 77520-5929

RAMBARRAN ALISON
225 ARBOR ST
BAYTOWN TX 77520-1907

RAMBARRAN OSCAR & ALISON
225 ARBOR ST
BAYTOWN TX 77520-1907

RAMERIZ HUGO & ADELA
1223 CHERRY ST
BAYTOWN TX 77520-4110

RAMIREZ ADELA GONZALEZ
6712 BAYWAY DR
BAYTOWN TX 77520-1524

RAMIREZ HUGO & ADELA
1227 CHERRY ST
BAYTOWN TX 77520-4110

RAMOS JOSE A
2308 DORRIS ST
BAYTOWN TX 77520-2253

RAMOS ROMUALDO & DEINORA
5407 BAYWAY DR
BAYTOWN TX 77520-2105

REITER JOHN F JR
5715 BAYWAY DR
BAYTOWN TX 77520-2110

RENDON JOSE H & ELSA
7515 N MAIN ST
BAYTOWN TX 77521-9501

RENDON LUIS R 6512 BAYWAY DR BAYTOWN TX 77520-1716	REYNOLDS LORETTA 407 ARBOR ST BAYTOWN TX 77520-1911	RIFFLE KIMBERLY 1100 UVALDE RD HOUSTON TX 77015-3706
RIOS JOHNNY & ESTHER T 2111 MISSOURI ST BAYTOWN TX 77520-6443	RIOS JOSE C 400 ARBOR ST BAYTOWN TX 77520-1912	RIOS MAGDALENS & 6314A BAYWAY DR BAYTOWN TX 77520-
RL EQUITY LLC 110 AVENUE B STE 100 STAFFORD TX 77477-5501	ROBBINS TIMOTHY S 5900 BAYWAY DR BAYTOWN TX 77520-2114	ROBLES SANDRA M 3415 MICHIGAN ST BAYTOWN TX 77520-5933
RODRIGUEZ GUSTAVO A 4003 E LINDBERGH CT BAYTOWN TX 77521-2193	RODRIGUEZ JUAN A & DALIA G 415 ARBOR ST BAYTOWN TX 77520-1911	RODRIGUEZ MARC D & DEBRA L 16 BAYVILLA ST BAYTOWN TX 77520-2103
RODRIGUEZ RANULFO 414 SCARLETT ST BAYTOWN TX 77520-1950	RODRIGUEZ RENE & SANDRA 3229 IOWA ST BAYTOWN TX 77520-5927	RODRIGUEZ SALVADOR & GRACIELA 420 SCARLETT ST BAYTOWN TX 77520-1950
RODRIQUEZ JESUS M & LENORA 3401 MICHIGAN ST BAYTOWN TX 77520-5933	ROLLINGBROOK HOMEOWNERS ASSOCIATION INC 16000 BARKERS POINT LN HOUSTON TX 77079-4023	ROSS JOYN S & SYLVIA 4502 HAZELTON HOUSTON TX 77035-3712
ROUX DON 3416 WISCONSIN ST BAYTOWN TX 77520-5951	ROYCHOWDMURY DEBASHISH 8703 RUDDY DUCK CT BAYTOWN TX 77521-5010	RT BAYTOWN PARTNERS LLC 30242 ESPERANZA RANCHO SANTA MARGARITA CA 92688-2121
RUIZ ANTONIO 3700 BUFFALO SPEEDWAY STE 420 HOUSTON TX 77098	SALAZAR OSCAR A & PATRICIA 3407 MICHIGAN ST BAYTOWN TX 77520-5933	SALDANA ELEAZAR & MERCE 1237 CHERRY ST BAYTOWN TX 77520-4110
SALINAS ELBERT 6703 HAIDER AVE BAYTOWN TX 77521-7007	SALINAS NOLBERTO & SANJUANA 416 ARBOR ST BAYTOWN TX 77520-1912	SAMUEL ELFREDA H 6601 BAYWAY DR BAYTOWN TX 77520-1717
SAN JACINTO RIVER AUTHORITY P O BOX 329 CONROE TX 77305-0329	SANCHEZ NOE 3411 MICHIGAN ST BAYTOWN TX 77520-5933	SAPP SHARON ESTATE OF 3415 MICHIGAN ST BAYTOWN TX 77520-5933

SEPULVEDA MIGUEL 5009 GLENHAVEN DR BAYTOWN TX 77521-2913	SI GROUP INC 1790 HUGHES LANDING BLVD STE 600 THE WOODLANDS TX 77380-1691	SIARKOWSKI-BROWN REBECCA L 3228 ARKANSAS ST BAYTOWN TX 77520-5915
SIMMONS DANNY D & LUZ A 5707 BAYWAY DR BAYTOWN TX 77520-2110	SIMPSON CORY 2310 GARTH RD BAYTOWN TX 77520-2348	SMITH DONNA MARIE & TIMOTHY JOHN 1308 WEST GLEN ST TUCSON AZ 85705-4030
SMITH JIMMY D & LOLA J 5007 GLENHAVEN DR BAYTOWN TX 77521-2913	SORRENTO PROPERTY HOLDINGS LP 3917 RIGA BLVD TAMPA FL 33619-1345	SOUTHERN PACIFIC RAILROAD COMPANY 1400 DOUGLAS ST STOP 1640 OMAHA NE 68179-1001
SOUTHWEST RESOURCE CREDIT UNION PO BOX 3181 BAYTOWN TX 77522-3181	SPOTO VIRGINIA 421 SCARLETT ST BAYTOWN TX 77520-1949	SR MOTORSPORTS LLC 5907 PATRICK HENRY ST SAN ANTONIO TX 78233-5220
SWEET DOUGLAS H 3415 MARKET ST BAYTOWN TX 77520-5954	T & B YOUNG LTD 410 W ERWIN ST TYLER TX 75702-7133	TARINA PROPERTIES LLC 3035 DAHLGREN TR SUGAR LAND TX 77479
TAYLOR TRENA & FRANK 315 ARBOR ST BAYTOWN TX 77520-1909	TEMPLE EMANUEL 1328 CHERRY ST BAYTOWN TX 77520-4113	TEPPCO TERMINALS COMPANY LLC PO BOX 4018 HOUSTON TX 77210-4018
TEXAS RE INVESTMENTS LLC 6315 GRAND PROMINENCE CT KATY TX 77494-7685	THOMAS NERV ET UX 17422 NAREMORE CT SPRING TX 77379-4635	THOMAS RONNIE JR 915 AMARYLLIS RD BAYTOWN TX 77521-7013
TIJERINA FILBERTO A JR 221 ARBOR ST BAYTOWN TX 77520-1907	TORRES JUAN G 101 YORK ST SOUTH HOUSTON TX 77587-3435	TORRES RAYMUNDO 5015 SJOLANDER RD BAYTOWN TX 77521-9379
TORRES SALVADOR 412 WILLOW LN BAYTOWN TX 77520-1119	TYLER STACEY 3 BAYVILLA ST BAYTOWN TX 77520-2102	U S POST OFFICE 3508 MINNESOTA ST BAYTOWN TX 77520
UNITED STEELWORKERS 311 S HIGHWAY 146 BAYTOWN TX 77520-2257	VAN HOUTEN WILLIAM 6817 BAYWAY DR BAYTOWN TX 77520-1501	VAZQUEZ ANA G 9821 KATY FWY STE 110 HOUSTON TX 77024-1208

VELA EMILIA F
9510 VICKSBURG RD
BAYTOWN TX 77521-1693

VENABLE J R
3416 WISCONSIN ST
BAYTOWN TX 77520-5951

VERDUZCO OSCAR MANUEL
2720 MASSEY TOMPKINS RD # 12
BAYTOWN TX 77521-4846

VILLA MARIANA
3405 MICHIGAN ST
BAYTOWN TX 77520-5933

VILLEGAS ARTURO
2205 NEW YORK ST
BAYTOWN TX 77520-6624

WALKER CHARLES R JR
220 NORTH ST
BAYTOWN TX 77520-1946

WILLIAMS ARTHUR
5005 GLENHAVEN DR
BAYTOWN TX 77521-2913

WILSON ALLEN L
424 INDEPENDENCE PKWY N
BAYTOWN TX 77520-1037

WILSON WILLIAM E JR
2615 CALDER ST STE 1050
BEAUMONT TX 77702-1935

WINDHAM ROBERT
242 LITTLE YORK RD
HOUSTON TX 77076-1023

WOOD MELVIN C
3229 OHIO ST
BAYTOWN TX 77520-5942

WOODCOX REED K
8 BAYVILLA ST
BAYTOWN TX 77520-2103

YBARRA VICTOR P
3819 RIVER RUN DR
BAYTOWN TX 77523-8566

Leah Whallon

From: Gardner, Mesha Covington <mesha.c.gardner@exxonmobil.com>
Sent: Monday, March 3, 2025 3:56 PM
To: Leah Whallon
Cc: Eastburn, Jessica A
Subject: RE: Application to Amend Permit No. WQ0001215000; Exxon Mobil Corporation; Baytown Chemical Plant
Attachments: BTCP Response to TPDES Application Review 3-2-25.pdf; BTCP WQ0001215000 Spanish NORI 3-2-25.docx

Follow Up Flag: Follow up
Flag Status: Flagged

Good Afternoon,

Please see the attached response to the letter dated February 24, 2025 and the translated Spanish NORI in Word format.

Please do not hesitate to reach out in the event that you have any questions.

Thank you,

Mesha C. Gardner, CHMM
Baytown Area Water Advisor

ExxonMobil Product Solutions
5000 Bayway Drive, CAB SE-168
Baytown, Texas 77520
346-424-5029 Office
281-628-4573 Mobile

From: Leah Whallon <Leah.Whallon@Tceq.Texas.Gov>
Sent: Monday, February 24, 2025 11:34 AM
To: Gardner, Mesha Covington <mesha.c.gardner@exxonmobil.com>
Cc: Eastburn, Jessica A <jessica.a.eastburn@exxonmobil.com>
Subject: Application to Amend Permit No. WQ0001215000; Exxon Mobil Corporation; Baytown Chemical Plant

Good Afternoon,

Please see the attached Notice of Deficiency letter dated February 24, 2025 requesting additional information needed to declare the application administratively complete. Please send the complete response by March 10, 2025.

Please let me know if you have any questions.

Thank you,



Leah Whallon

Texas Commission on Environmental Quality

Water Quality Division

512-239-0084

leah.whallon@tceq.texas.gov

How is our customer service? Fill out our online customer satisfaction survey at
www.tceq.texas.gov/customersurvey

Exxon Mobil Corporation

5000 Bayway Drive
P.O. Box 4004
Baytown, Texas 77522-4004



SUBMITTED VIA EMAIL

Leah.Whallon@Tceq.Texas.Gov

March 3, 2025

Ms. Leah Whallon
Water Quality Division (MC-148)
Applications Review and Processing Team
Texas Commission on Environmental Quality
P.O. Box 13087
Austin, TX 78711-3087

**Re: Exxon Mobil Corporation (CN600123939)
Baytown Chemical Plant (RN102574803)
Application to renew/amend TPDES Permit No. WQ0001215000 (EPA ID TX0007013)
Response to letter dated February 24, 2025**

Dear Ms. Whallon:

Exxon Mobil Corporation is in receipt of your February 24, 2025 letter, which requested additional information for the TPDES renewal/amendment application for the Baytown Chemical Plant that was submitted on February 14, 2025. Below are responses to the requested information.

TCEQ Item 1

Administrative Report 1.0, Item 1.h

The \$1,250.00 application fee covers postage for up to 100 affected landowners. An additional \$50.00 is required for each increment of 100 landowners. Please provide payment of \$100.00 for landowners 101-283. Payment can be made by check mailed to the TCEQ cashier's office or via ePay using Option 3 / Other / Water Quality / ADDITIONAL 30 TAC 305.53B WQ NOTIFICATION FEE. Please include the check or voucher number in your response.

Response to Item 1

Payment was made via ePay on 2-25-25. The payment voucher number is 752674.

TCEQ Item 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.

Response to Item 2

There are no errors or omissions in the NORI text.

TCEQ Item 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.

Response to Item 3

The translated Spanish NORI in Word format will be included in our email with this response letter.

Should you have any questions, please contact me at mesha.c.gardner@exxonmobil.com or (346) 424-5029.

Sincerely,



Mesha C. Gardner
ExxonMobil Baytown Area Environmental Water Advisor

Enclosures

Spanish NORI (email attachment – BTCP WQ0001215000 Spanish NORI 3-2-25.docx)

Comisión de Calidad Ambiental del Estado de Texas



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

PERMISO NO. WQ000_____

SOLICITUD. Exxon Mobil Corporation, P.O. Box 4004, Baytown, Texas 77522, propietaria de una planta de fabricación petroquímica, ha solicitado a la Comisión de Calidad Ambiental de Texas (TCEQ) para modificar el Permiso No. WQ0001215000 (EPA I.D. No. TX0007013) del Sistema de Eliminación de Descargas Contaminantes de Texas (TPDES) para autorizar la adición de aguas residuales de proceso de minimis de una posible unidad de fabricación de amoníaco propuesta al Outfall 003; la modificación del Otro requisito No. 4 para incluir las aguas residuales de la posible unidad de fabricación de amoníaco propuesta; y la adición de un límite de concentración máxima diaria de amoníaco al Outfall 003 y el muestreo des aguas solo cuando haya una descarga de la unidad de amoníaco. La instalación está ubicada en 5000 Bayway Drive, en la ciudad de Baytown, en el Condado de Harris, Texas 77520. La ruta de descarga es del sitio de la planta a través del Outfall 003 hasta una ensenada sin nombre, de ahí a la bahía de Scott y a través del Outfall 007 hasta una zanja del Distrito de Control de Inundaciones del Condado de Harris (HCFCD), de ahí a West Fork Goose Creek, de ahí a Goose Creek, de ahí a Tabbs Bay. La TCEQ recibió esta solicitud el 14 de febrero de 2025. La solicitud para el permiso estará disponible para leerla y copiarla en el Sterling Municipal Biblioteca, 1 Mary Elizabeth Wilbanks Avenue, Baytown, en el Condado de Harris, Texas, antes de la fecha de publicación de este aviso en el periódico. La solicitud (cualquier actualización y aviso inclusive) está disponible electrónicamente en la siguiente página web:

<https://www.tceq.texas.gov/permitting/wastewater/pending-permits/tpdes-applications>. Este enlace a un mapa electrónico de la ubicación general del sitio o de la instalación es proporcionado como una cortesía y no es parte de la solicitud o del aviso. Para la ubicación exacta, consulte la solicitud.

<https://gisweb.tceq.texas.gov/LocationMapper/?marker=-95.025555,29.742222&level=18>

[Insert web link from English notice]

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 area, 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 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 del Exxon Mobil Corporation a la dirección indicada arriba o llamando a Sra. Jessica Eastburn, BTA Environmental Water Advisor al 832-864-4924.

Fecha de emisión _____ *[Date notice issued]*