Administrative Package Cover Page

This file contains the following documents:

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

Portada de Paquete Administrativo

Este archivo contiene los siguientes documentos:

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

TEXAS COMMISSION ON ENVIRONMENTAL QUALITY

PLAIN LANGUAGE SUMMARY FOR TPDES OR TLAP PERMIT APPLICATIONS

ENGLISH

Targa Midstream Services LLC (CN601301559) operates Mont Belvieu Complex (RN100222900), a natural gas processing facility. The facility is located at 10119 North Highway 146, in Mont Belvieu, Chambers County, Texas 77580. Targa requests the addition of the following waters via Outfall 001 on an intermittent not normal flow basis: reverse osmosis treated water of <0.0016 MGD (million gallons per day), boiler water during inclement weather, process upsets, and maintenance activities of <0.0013 MGD, and cooling water backflush water of <0.003 MGD, all of which constitute <1% of overall flow; to increase the flow to a daily average flow of 0.35 MGD and a daily maximum flow of 1.10 MGD via Outfall 001; and the addition of hydrostatic test water via Outfalls 003, 005, and 006.

Discharges from the facility are permitted to discharge total organic carbon, total copper, total zinc, oil and grease, and 5-day biochemical oxygen demand. Stormwater, fire test water, boiler steam condensate, allowable non-stormwaters, water treatment wastes, and blowdown waters are treated by chemical additives.

SPANISH

Targa Midstream Services LLC (CN601301559) opera Mont Belvieu Complex (RN100222900), una instalación de procesamiento de gas natural. La instalación está ubicada en 10119 North Highway 146, en Mont Belvieu, condado de Chambers, Texas 77580. Targa solicita la adición de las siguientes aguas a través del emisario 001 en forma intermitente, con un flujo anormal: agua tratada por ósmosis inversa de <0,0016 MGD (millones de galones por día), agua de caldera durante condiciones climáticas adversas, alteraciones del proceso y actividades de mantenimiento de <0,0013 MGD, y agua de retrolavado de agua de enfriamiento de <0,003 MGD, todas las cuales constituyen <1% del flujo total; para aumentar el flujo a un flujo promedio diario de 0,35 MGD y un flujo máximo diario de 1,10 MGD a través del emisario 001; y la adición de agua de prueba hidrostática a través de los desagües 003, 005 y 006.

Se permiten descargas de la instalación para descargar carbono orgánico total, cobre total, zinc total, aceite y grasa y la demanda bioquímica de oxígeno de 5 días. Las aguas pluviales, el agua de pruebas de incendio, el condensado de vapor de calderas, las aguas no pluviales permitidas, los desechos de tratamiento de agua y las aguas de purga se tratan con aditivos químicos.

TEXAS COMMISSION ON ENVIRONMENTAL QUALITY

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

PERMIT NO. WQ0005329000

APPLICATION. Targa Midstream Services LLC, 811 Louisiana Street, Suite 2100, Houston, Texas 77002, which owns a natural gas processing facility, has applied to the Texas Commission on Environmental Quality (TCEQ) to amend Texas Pollutant Discharge Elimination System (TPDES) Permit No. WQ0005329000 (EPA I.D. No. TX0002887) to authorize: the addition of the following to discharge via Outfall 001 on an intermittent flow basis: reverse osmosis treated water of 1,600 gallons per day, boiler water during inclement weather, process upsets, and maintenance activities of 1,300 gallons per day, and cooling water backflush water of 3,000 gallons per day, all of which constitute <1% of overall flow; to increase the flow to a daily average flow of 350,000 gallons per day and a daily maximum flow of 1,100,000 gallons per day via Outfall 001; and the addition of hydrostatic test water via Outfalls 003, 005, and 006**.** The facility is located at 10119 North Highway 146, in the city of Mont Belvieu, Chambers County, Texas 77580. The discharge route is from the plant site to various unnamed tributaries via Outfalls 001, 003, 005, and 006, thence to Cedar Bayou Tidal; and via Outfalls 002 and 004 directly to Cedar Bayou Tidal. TCEQ received this application on August 1, 2024. The permit application will be available for viewing and copying at Sam and Carmena Goss Memorial Branch Library, 1 John Hall Drive, Mont Belvieu, in Chambers County, Texas, and at Stratford Branch Library, 509 Stratford Street, Highlands, 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=-94.900555,29.84&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 Targa Midstream Services LLC at the address stated above or by calling Mr. Keith Adams, Senior Operations Manager, at 281-385-3370.

Issuance Date: September 11, 2024

Comisión de Calidad Ambiental del Estado de Texas

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

PERMISO NO. WQ0005329000

SOLICITUD. Targa Midstream Services LLC, 811 Louisiana Street, Suite 2100, Houston, Texas 77002, que posee una planta de procesamiento de gas natural, ha solicitado a la Comisión de Calidad Ambiental de Texas (TCEQ) para modificar el Permiso No. WQ0005329000 (EPA I.D. No. TX0002887) del Sistema de Eliminación de Descargas de Contaminantes de Texas (TPDES) para autorizar: la adición de lo siguiente a la descarga a través del Emisario 001 en forma de flujo intermitente: agua tratada por ósmosis inversa de 1,600 galones por día, agua de caldera durante condiciones climáticas adversas, alteraciones del proceso y actividades de mantenimiento de 1,300 galones por día, y agua de enfriamiento agua de retro lavado de 3000 galones por día, lo cual constituye <1% del flujo total; aumentar el caudal a un caudal promedio diario de 350,000 galones diarios y un caudal máximo diario de 1,100,000 galones diarios a través del Emisario 001; y la adición de agua de prueba hidrostática a través de los Emisarios 003, 005 y 006. La instalación está ubicada en 10119 North Highway 146, en la ciudad de Mont Belvieu, en el condado de Chambers, Texas 77580. La ruta de descarga es desde el sitio de la planta hasta varios afluentes sin nombre a través de los emisarios 001, 003, 005 y 006, desde allí hasta Cedar Bayou Tidal; y a través de los emisarios 002 y 004 directamente a Cedar Bayou Tidal. La TCEQ recibió esta solicitud el 1 de agosto de 2024. La solicitud de permiso estará disponible para ver y copiar en Sam and Carmena Goss Memorial Branch Library, 1 John Hall Drive, Mont Belvieu, en el condado de Chambers, Texas, y en Stratford Branch Library, 509 Stratford. Street, Highlands, en el condado de Harris, Texas, antes de la fecha de publicación de este aviso en el periódico. La solicitud, incluidas las actualizaciones y los avisos asociados, están disponibles 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 instalación se proporciona como cortesía pública y no forma parte de la solicitud o aviso. Para conocer la ubicación exacta, consulte la aplicación.
https://gisweb.tceq.texas.gov/LocationMapper/?marker=-94.900555.29.84&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 especifico. Si desea que se agrega su nombre en una de las listas designe cual lista(s) y envía por correo su pedido a la Oficina del Secretario Principal de la TCEQ.

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

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

También se puede obtener más información de Targa Midstream Services LLC en la dirección indicada anteriormente o llamando al Sr. Keith Adams, Gerente Senior de Operaciones, al 281-385-3370.

Fecha de emisión el 11 de septiembre de 2024

BURNS McDONNELL

July 31, 2024

Executive Director
Application Review and Processing Team, MC-148
Texas Commission on Environmental Quality

12100 Park 35 Circle
Austin, Texas 78753

P.O. Box 13088
Austin, Texas 78711-3088

Re: Application For A Major Amendment and Renewal for Targa Midstream Services LLC
TPDES WQ0005329000
RN100222900; CN601301559

To whom it may concern:

On behalf of Targa Midstream Services LLC (Targa), Burns & McDonnel Engineering, Inc. (Burns & McDonnell) submits herein to the Texas Commission on Environmental Quality (TCEQ) one original and three copies of the enclosed Major Amendment and Renewal for Texas Pollutant Discharge Elimination System Permit Number WQ0005329000.

The application fee has been submitted via TCEQ ePay system and a copy of the vouchers have been included with the enclosed application.

An electronic version of the application has been submitted as required.

If you have any questions or need any additional information, please do not hesitate to reach out to me via email at jmkoenings@burnsmcd.com or via phone at (512) 745-9272.

Sincerely,

Jamie Koenings
Senior Compliance Specialist

Enclosure

cc: Kate Magee, Targa Resources, via email

RECEIVED
AUG 0 1 2024
WATER QUALITY DIVISION
TCEQ

6200 Bridge Point Parkway \ Building 4, Suite 400 \ Austin, TX 78730
O 512-872-7130 \ F 512-872-7127 \ burnsmcd.com

BURNS McDONNELL

TARGA MIDSTREAM SERVICES LLC

APPLICATION FOR A MAJOR AMENDMENT AND RENEWAL OF TPDES PERMIT NO. WQ0005329000

MONT BELVIEU COMPLEX

RN100222900
CN601301559

CONTENTS

Industrial Administrative Report 1.0

TEXAS COMMISSION ON ENVIRONMENTAL QUALITY

INDUSTRIAL WASTEWATER PERMIT APPLICATION CHECKLIST

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

APPLICANT NAME: Targa Midstream Services LLC

PERMIT NUMBER (If new, leave blank): WQ00 05329000

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

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

For TCEQ Use Only

Segment Number _____County _____
Expiration Date _____Region _____
Permit Number _____

TEXAS COMMISSION ON ENVIRONMENTAL QUALITY

INDUSTRIAL WASTEWATER PERMIT APPLICATION ADMINISTRATIVE REPORT 1.0

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

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

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

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

Applicant Name: Targa Midstream Services LLC

Permit No.: WQ0005329000

EPA ID No.: TX0002887

Expiration Date: January 28, 2025

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

☒ Industrial Wastewater (wastewater and stormwater)

☐ Industrial Stormwater (stormwater only)

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

☒ Active ☐ Inactive

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

☒ TPDES Permit ☐ TLAP ☐ TPDES with TLAP component

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

☐ New

☐ Renewal with changes ☐ Renewal without changes

☒ Major amendment with renewal ☐ Major amendment without renewal

☐ Minor amendment without renewal

☐ Minor modification without renewal

f. If applying for an amendment or modification, describe the request:
Targa Midstream Services LLC requests the addition of the following waters via Outfall 001 on an intermittent not normal flow basis: reverse osmosis treated water of <0.0016 MGD (million gallons per day), boiler water during inclement weather, process upsets, and maintenance activities of <0.0013 MGD, and cooling water backflush water of <0.003 MGD, all of which constitute <1% of overall flow; to increase the flow to a daily average flow of

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

0.35 MGD and a daily maximum flow of 1.10 MGD via Outfall 001; and the addition of hydrostatic test water via Outfalls 003, 005, and 006.

For TCEQ Use Only

Segment Number _____County _____
Expiration Date _____Region _____
Permit Number _____

g. Application Fee

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

h. Payment Information

Mailed

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

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

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

Epay

Voucher number: 714805 and 714806

Copy of voucher attachment: See Attachment A

Item 2. Applicant Information (Instructions, Pages 26)

a. Customer Number, if applicant is an existing customer: CN601301559

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

b. Legal name of the entity (applicant) applying for this permit: Targa Midstream Services LLC

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

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

Prefix: Mr. Full Name (Last/First Name): Bill Grantham

Title: Vice President of Operations Credential:

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

☒ Yes ☐ No

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

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

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

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

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

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

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

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

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

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

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

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

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

☐ Yes ☐ No

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

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

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

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

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

a. ☒ Administrative Contact . ☒ Technical Contact

Prefix: Ms. Full Name (Last/First Name): Christina Higgenbotham

Title: ES&H Supervisor Credential:

Organization Name: Targa Resources

Mailing Address: 811 Louisiana Street City/State/Zip: Houston, TX 77002

Phone No: 281-620-7835 Email: chigginbotham@targaresources.com

b. ☒ Administrative Contact ☒ Technical Contact

Prefix: Ms. Full Name (Last/First Name): Jamie Koenings

Title: Sr. Compliance Specialist Credential:

Organization Name: Burns & McDonnell Engineering

Mailing Address: 6200 Point Bridge Parkway, Ste 400 City/State/Zip: Austin, TX 78730

Phone No: 512-745-9272 Email: jmkoenings@burnsmcd.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: Ms. Full Name (Last/First Name): Wendy Forester

Title: Environmental Specialist Credential:.

Organization Name: Targa Resources

Mailing Address: PO Box 10 City/State/Zip: Mont Belvieu, TX 77580

Phone No: 832-415-6689 Email: wforester@targaresources.com

b. Prefix: Ms. Full Name (Last/First Name): Kate Magee

Title: Environmental Specialist Credential: P.G

Organization Name: Targa Supervisor

Mailing Address: PO Box 10 City/State/Zip: Mont Belvieu, TX 77580

Phone No: 832-385-3120 Email: kmagee@targaresources.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: Ms. Full Name (Last/First Name): Wendy Forester

Title: Environmental Specialist Credential:

Organization Name: Targa Resources

Mailing Address: PO Box 10 City/State/Zip: Mont Belvieu, TX 77580

Phone No: 832-415-6689 Email: wforester@targaresources.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): Wendy Forester

Title: Environmental Specialist Credential:

Organization Name: Targa Resources

Mailing Address: PO Box 10 City/State/Zip: Mont Belvieu, TX 77580

Phone No: 832-415-6689 Email: wforester@targaresources.com

Item 9. Notice Information (Instructions, Pages 28)

a. Individual Publishing the Notices

Prefix: Ms. Full Name (Last/First Name): Wendy Forester

Title: Environmental Specialist Credential:

Organization Name: Targa Resources

Mailing Address: PO Box 10 City/State/Zip: Mont Belvieu, TX 77580

Phone No: 832-415-6689 Email: wforester@targaresources.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: wforester@targaresources.com, chigginbotham@targaresources.com, and jmkoenings@burnsmcd.com

☐ Fax: N/A

☐ Regular Mail (USPS)

Mailing Address: N/A

City/State/Zip Code: N/A

c. Contact in the Notice

Prefix: Mr. Full Name (Last/First Name): Keith Adams

Title: Senior Operations Manager Credential:

Organization Name: Targa Resources

Phone No: 281-385-3370 Email: KCadams@targaresources.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: Sam and Carmena Goss Memorial Branch (Chambers)/Stratford Branch Library (Harris) Location within the building: Reference Desk

Physical Address of Building: 1 John Hall Drive (Chambers)/509 Stratford Street (Harris)

City: Mont Belvieu (Chambers)/Highlands (Harris) County: Chambers and Harris

e. Bilingual Notice Requirements

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

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

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

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

☒ Yes ☐ No

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

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

   ☒ Yes ☐ No

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

   ☐ Yes ☒ No

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

   ☐ Yes ☒ No ☐ N/A

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

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

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

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

a. TCEQ issued Regulated Entity Number (RN), if available: RN100222900

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

b. Name of project or site (the name known by the community where located): Mont Belvieu Complex

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

☒ Yes ☐ No ☐ N/A (new permit)

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

d. Owner of treatment facility:

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

or Organization Name: Targa Resources

Mailing Address: PO Box 10 City/State/Zip: Mont Belvieu, TX 77580

Phone No: 281-385-3370 Email: KCadams@targaresources.com

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

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

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

or Organization Name: Targa Resources

Mailing Address: PO Box 10 City/State/Zip: Mont Belvieu, TX 77580

Phone No: 281-385-3370 Email: KCadams@targaresources.com

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

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

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

or Organization Name: Click to enter text.

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

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

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

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

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

or Organization Name: Click to enter text.

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

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

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

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

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

☐ Yes ☒ No

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

☒ One-mile radius

☒ Applicant's property boundaries

☒ Labeled point(s) of discharge

☐ Effluent disposal site boundaries

☐ Sewage sludge disposal site

☒ Three-miles downstream information

☒ Treatment facility boundaries

☒ Highlighted discharge route(s)

☐ All wastewater ponds

☐ New and future construction

Attachment: E

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

☐ Yes ☐ No or New Permit

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

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

☒ Yes ☐ No or New Permit

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

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

☒ Yes ☐ No or New Permit

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

f. City nearest the outfall(s): Mont Belvieu, Texas

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

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

☐ Yes ☒ No

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

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

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

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

☐ Yes No or New Permit ☐ Click to enter text.

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

j. City nearest the disposal site: Click to enter text.

k. County in which the disposal site is located: Click to enter text.

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

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

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: Jamie Koenings, Burns & McDonnell Engineering

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: WQ0005329000

Applicant Name: Targa Midstream Services LLC

Certification: I, Bill Grantham, 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): Bill Grantham

Signatory title: Vice President of Operations

Signature: Bill Grantham Date: July 29, 2024

(Use blue ink)

Subscribed and Sworn to before me by the said _____

on this 29th day of July, 20 24.

My commission expires on the 26th day of October, 20 26.

Notary Public

Harris

County, Texas

LaToiya NaShai Carr
My Commission Expires
10/26/2026
Notary ID 134034720

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

Industrial Administrative Report 1.1

INDUSTRIAL WASTEWATER PERMIT APPLICATION ADMINISTRATIVE REPORT 1.1

The following information is required for new and amendment applications.

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

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

☒ The applicant's property boundaries.

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

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

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

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

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

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

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

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

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

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

Attachment: F

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

☐ Readable/Writeable CD ☒ Four sets of labels

Attachment: F

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

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

☐ Yes ☒ No

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

Item 2. Original Photographs (Instructions, Page 37)

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

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

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

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

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

Attachment: G

Supplemental Permit Information Form

INDUSTRIAL WASTEWATER PERMIT APPLICATION

SUPPLEMENTAL PERMIT INFORMATION FORM (SPIF)

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

Attachment: H

Industrial Technical Report 1.0

TEXAS COMMISSION ON ENVIRONMENTAL QUALITY

INDUSTRIAL WASTEWATER PERMIT APPLICATION TECHNICAL REPORT 1.0

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

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

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

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

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

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

Targa Midstream Services LLC (Targa) operates the Mont Belvieu Complex, a natural gas processing facility (SIC Code 1321 – Natural Gas Liquids, NAICS 211112 – Natural Gas Liquid Extraction). See Attachment I for Facility Description with additional details.

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

See Attachment I for Facility Description

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

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

Materials List

Raw Materials	Intermediate Products	Final Products
Natural gas liquids		Ethane
		Ethane/Propane Mix
		Propane
		Normal Butane
		Isobutane
		Low Sulfur Natural Gasoline
		Ethylene
		Propylene
		Propane/Propylene Mix

Attachment: N/A

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

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

Attachment: J

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 Flood Insurance Rate Map 48071C0160F – 1/19/2018

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: Click to enter text.

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

☐ Yes ☒ No ☐ N/A (renewal only)

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

☐ Yes ☐ No

If **yes**, provide the permit number: 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 I for 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: K

Item 3. Impoundments (Instructions, Page 40)

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

☒ Yes ☐ No

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

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

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

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

Liner Type: Indicate the liner type as Compacted clay liner (**C**), In-situ clay liner (**I**), Synthetic/plastic/rubber liner (**S**), or Alternate liner (**A**). **NOTE:** See instructions for further

detail on liner specifications. If an alternate liner (A) is selected, include an attachment that provides a description of the alternate liner and any additional technical information necessary for an evaluation.

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

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

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

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

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

Impoundment Information

Parameter	Pond#005-1	Pond#006-1	Pond#006-2
Use Designation: (T) (D) (C) or (E)	C	C	C
Associated Outfall Number	005	006	006
Liner Type (C) (I) (S) or (A)	C	C	C
Alt. Liner Attachment Reference	N/A	N/A	N/A
Leak Detection System, Y/N	N	N	N
Groundwater Monitoring Wells, Y/N	N	N	N
Groundwater Monitoring Data Attachment	N/A	N/A	N/A
Pond Bottom Located Above The Seasonal High-Water Table, Y/N	Y	Y	Y
Length (ft)	550	1490	270
Width (ft)	250	65	315
Max Depth From Water Surface (ft), Not Including Freeboard	5	3.5	3.5
Freeboard (ft)	2	2	2
Surface Area (acres)	3.2	2.6	1.4
Storage Capacity (gallons)	5,591,610.5	5,181,037.7 (The ponds operate together)	
40 CFR Part 257, Subpart D, Y/N	N	N	N
Date of Construction	2018	2018	2018

Attachment: N/A

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

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

1. Liner data

☐ Yes ☐ No ☐ Not yet designed

2. Leak detection system or groundwater monitoring data

☐ Yes ☐ No ☐ Not yet designed

3. Groundwater impacts

☐ Yes ☐ No ☐ Not yet designed

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

Attachment: N/A

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

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

Attachment: N/A

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

Attachment: N/A

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

Attachment: N/A

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

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

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

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

Outfall Longitude and Latitude

Outfall No.	Latitude (Decimal Degrees)	Longitude (Decimal Degrees)
001	29.837458	-94.904419
002	29.829122	94.912036
003	29.833839	-94.900261
004	29.827556	-94.909928
005	29.829086	-98.907611
006	29.826731	-94.904408

Outfall Location Description

Outfall No.	Location Description
001	West end of Central Ditch (north of Brine Ponds 4/5)
002	West of railroad tracks, pipeline to Cedar Bayou
003	Southwest corner of Train 5
004	West of railroad tracks, pipeline to Cedar Bayou
005	West of Train 7 Stormwater Detention Pond, on an unnamed tributary
006	South of Train 8

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

Outfall No.	Description of sampling point
001	Same as Outfall Location
002	At intersection of drainage lines for Train 4, LEP 1, and Cedar Bayou Fractionator; Northeast of Outfall 001
003	Same as Outfall Location
004	South of Train 7 Stormwater Detention Pond
005	Substantially similar to Outfall 003; Outfall 003 sampling location
006	Substantially similar to Outfall 003; Outfall 003 sampling location

Outfall Flow Information – Permitted and Proposed

Outfall No.	Permitted Daily Avg Flow (MGD)	Permitted Daily Max Flow (MGD)	Proposed Daily Avg Flow (MGD)	Proposed Daily Max Flow (MGD)	Anticipated Discharge Date (mm/dd/yy)
001	Flow Variable	Flow Variable	0.35	1.10	---
002	Flow Variable	Flow Variable	1.25	2.25	---
003	Flow Variable	Flow Variable	Flow Variable	Flow Variable	---
004	Flow Variable	Flow Variable	1.95	3.50	---
005	Flow Variable	Flow Variable	Flow Variable	Flow Variable	---
006	Flow Variable	Flow Variable	Flow Variable	Flow Variable	---

Outfall Discharge – Method and Measurement

Outfall No.	Pumped Discharge? Y/N	Gravity Discharge? Y/N	Type of Flow Measurement Device Used
001	N	Y	ISCO Signature 310 Flow Meter
002	Y	N	In-line orifice meter
003	N	Y	Estimate
004	Y	N	In-line orifice meter
005	N	Y	Estimate
006	N	Y	Estimate

Outfall Discharge – Flow Characteristics

Outfall No.	Intermittent Discharge? Y/N	Continuous Discharge? Y/N	Seasonal Discharge? Y/N	Discharge Duration (hrs/day)	Discharge Duration (days/mo)	Discharge Duration (mo/yr)
001	N	Y	N	24	30	12
002	N	Y	N	24	30	12
003	Y	N	N	24	30	12
004	N	Y	N	24	30	12
005	Y	N	N	24	30	12
006	Y	N	N	24	30	12

Outfall Wastestream Contributions

Outfall No.: 001

Contributing Wastestreams	Volume (MGD)	% of Total Flow
CBF Trains 1-3, LEP1, and Train 4 Stormwater Runoff	0.193 (long-term average)	66
Fire Testing Water	0.10	34
Boiler Steam Condensate	<0.0005	<1
Hydrostatic Test Water	<0.002	<1
Cooling water backflush	<.003	<1
Boiler water (during inclement weather, process upsets, or maintenance activities)	<.0013	<1
RO-treated water	<.0016	<1

Outfall No.: 002

Contributing Wastestreams	Volume (MGD)	% of Total Flow
CBF Trains 1-3, LEP1, and Train 4 Cooling Tower Blowdown, R.O. Reject, Boiler Blowdown	1.25	100

Outfall No.: 003

Contributing Wastestreams	Volume (MGD)	% of Total Flow
LEP2 and Trains 5 and 6 Stormwater	Intermittent	100

Outfall No.: 004

Contributing Wastestreams	Volume (MGD)	% of Total Flow
Trains 5-10 and LEP2 Cooling Tower Blowdown, R.O. Reject water	1.95	100

Outfall No.: 005

Contributing Wastestreams	Volume (MGD)	% of Total Flow
Train 7 Stormwater	Intermittent	100

Outfall No.: 006

Contributing Wastestreams	Volume (MGD)	% of Total Flow
Trains 8, 9, and 10 Stormwater	Intermittent	100

Attachment: See Attachment I for Facility Description with additional details

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: L

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	14	1,756,800	3,297,600
Boilers	7	50,300	250,500

Item 6. Stormwater Management (Instructions, Page 44)

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

☒ Yes ☐ No

If **yes**, briefly describe the industrial processes and activities that occur outdoors or in a manner which may result in exposure of the activities or materials to stormwater: See Attachment I for 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: Click to enter text.

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

Domestic Sewage Plant/Hauler Name

Plant/Hauler Name	Permit/Registration No.
City of Mont Belvieu Wastewater Treatment Plant	TX0022721
On-site aerobic septic system	N/A

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: Expansion and improvement projects are ongoing at the facility, this application does not include any additions related to construction projects.

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: Targa was required to conduct quarterly chronic whole effluent toxicity testing at Outfalls 001, 002, and 004 according to NPDES Permit No. TX0002887. All data was submitted in DMRs as required. Whole effluent toxicity requirements have been removed from TPDES Permit WQ5329 with the previous application process.

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)
Filters containing NORM stored in covered or sealed containers	N/A

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

☐ Yes ☒ No

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

Radioactive Materials Present in the Discharge

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

Item 12. Cooling Water (Instructions, Page 46)

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

☒ Yes ☐ No

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

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

☒ Yes ☐ No

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

c. Cooling Water Supplier

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

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

CWIS ID	N/A			
Owner	N/A			
Operator	N/A			

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

☐ Yes ☐ No

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

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

☐ Yes ☐ No

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

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

☐ Yes ☐ No

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

d. 316(b) General Criteria

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

☐ Yes ☐ No

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

☐ Yes ☐ No

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

☐ Yes ☐ No

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

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

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

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

☐ Yes ☐ No

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

f. Oil and Gas Exploration and Production

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

☐ Yes ☐ No

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

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

☐ Yes ☐ No

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

g. Compliance Phase and Track Selection

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

☐ Yes ☐ No

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

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

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

☐ Track I – AIF greater than 10 MGD

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

☐ Track II

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

Attachment: Click to enter text.

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

☐ Yes ☐ No

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

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

   ☐ Yes ☐ No

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

   ☐ Track I – Fixed facility

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

   ☐ Track I – Not a fixed facility

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

   ☐ Track II – Fixed facility

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

   Attachment: Click to enter text.

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

This item is only applicable to existing permitted facilities.

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

   ☒ Yes ☐ No

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

Targa Midstream Services LLC requests the addition of the following waters via Outfall 001 on an intermittent not normal flow basis: reverse osmosis treated water of <0.0016 MGD (million gallons per day), boiler water during inclement weather, process upsets, and maintenance activities of <0.0013 MGD, and cooling water backflush water of <0.003 MGD, all of which constitute <1% of overall flow; to increase the flow to a daily average flow of 0.35 MGD and a daily maximum flow of 1.10 MGD via Outfall 001; and the addition of hydrostatic test water via Outfalls 003, 005, and 006.

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

   ☐ Yes ☒ No

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

Click to enter text.

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

☐ Yes ☒ No

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

Click to enter text.

Item 14. Laboratory Accreditation (Instructions, Page 49)

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

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

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

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

CERTIFICATION:

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

Printed Name: Bill Grantham

Title: Vice President

Signature: _____

Date: _____

This will be signed when the analytical data is submitted.

Worksheet 1.0 EPA Effluent Guidelines

INDUSTRIAL WASTEWATER PERMIT APPLICATION WORKSHEET 1.0: EPA CATEGORICAL EFFLUENT GUIDELINES

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

Item 1. Categorical Industries (Instructions, Page 53)

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

☐ Yes ☒ No

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

40 CFR Effluent Guideline

Industry	40 CFR Part

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

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

a. Production Data

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

Production Data

Subcategory	Actual Quantity/Day	Design Quantity/Day	Units

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

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

Percentage of Total Production

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

c. Refineries (40 CFR Part 419)

Provide the applicable subcategory and a brief justification.

Click to enter text.

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

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

Click to enter text.

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

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

Wastewater Generating Processes Subject to Effluent Guidelines

Process	EPA Guideline Part	EPA Guideline Subpart	Date Process/ Construction Commenced

Worksheet 2.0 Pollutant Analysis Requirements

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): TBD – Samples were not collected at the time of application submittal. Targa will submit analytical data under separate cover when it becomes available.

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

c. Read the general testing requirements in the instructions for important information about sampling, test methods, and MALs. If a contact laboratory was used, attach a list which includes the name, contact information, and pollutants analyzed for each laboratory/firm. **Attachment:** Click to enter text.

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

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

TABLE 1 and TABLE 2 (Instructions, Page 58)

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

Table 1 for Outfall No.: Click to enter text. **Samples are (check one):** ☐ **Composite** ☒ **Grab**

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

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

Table 2 for Outfall No.: Click to enter text. **Samples are (check one):** ☐ **Composite** ☐ **Grab**

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

TABLE 3 (Instructions, Page 58)

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

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

Table 3 for Outfall No.: Click to enter text. **Samples are (check one):** ☐ **Composite** ☐ **Grab**

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

Pollutant	Sample 1 (µg/L)*	Sample 2 (µg/L)*	Sample 3 (µg/L)*	Sample 4 (µg/L)*	MAL (µg/L)*
1,1-Dichloroethene [1,1-Dichloroethylene]					10
Dichloromethane [Methylene chloride]					20
1,2-Dichloropropane					10
1,3-Dichloropropene [1,3-Dichloropropylene]					10
2,4-Dimethylphenol					10
Di-n-Butyl phthalate					10
Ethylbenzene					10
Fluoride					500
Hexachlorobenzene					5
Hexachlorobutadiene					10
Hexachlorocyclopentadiene					10
Hexachloroethane					20
Methyl ethyl ketone					50
Nitrobenzene					10
N-Nitrosodiethylamine					20
N-Nitroso-di-n-butylamine					20
Nonylphenol					333
Pentachlorobenzene					20
Pentachlorophenol					5
Phenanthrene					10
Polychlorinated biphenyls (PCBs) (**)					0.2
Pyridine					20
1,2,4,5-Tetrachlorobenzene					20
1,1,2,2-Tetrachloroethane					10
Tetrachloroethene [Tetrachloroethylene]					10
Toluene					10
1,1,1-Trichloroethane					10
1,1,2-Trichloroethane					10
Trichloroethene [Trichloroethylene]					10

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

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

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

TABLE 4 (Instructions, Pages 58-59)

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

a. **Tributyltin**

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

☐ Yes ☐ No

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

☐ Manufacturers and formulators of tributyltin or related compounds.

☐ Painting of ships, boats and marine structures.

☐ Ship and boat building and repairing.

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

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

☐ Facilities engaged in wood preserving.

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

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

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

☐ Yes ☐ No

Domestic wastewater is/will be discharged.

☐ Yes ☐ No

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

c. E. coli (discharge to freshwater)

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

☐ Yes ☐ No

Domestic wastewater is/will be discharged.

☐ Yes ☐ No

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

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

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

TABLE 5 (Instructions, Page 59)

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

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

☐ N/A

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

Pollutant	**Sample 1 (µg/L)***	**Sample 2 (µg/L)***	**Sample 3 (µg/L)***	**Sample 4 (µg/L)***	**MAL (µg/L)***
Aldrin					0.01
Carbaryl					5
Chlordane					0.2
Chlorpyrifos					0.05
4,4'-DDD					0.1
4,4'-DDE					0.1
4,4'-DDT					0.02
2,4-D					0.7
Danitol [Fenpropathrin]					—
Demeton					0.20
Diazinon					0.5/0.1
Dicofol [Kelthane]					1
Dieldrin					0.02
Diuron					0.090

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

* Indicate units if different from µg/L.

TABLE 6 (Instructions, Page 59)

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

Table 6 for Outfall No.: Click to enter text. **Samples are (check one):** ☐ **Composite** ☐ **Grab**

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

TABLE 7 (Instructions, Page 60)

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

☐ N/A

Table 7 for Applicable Industrial Categories

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

* Test if believed present.

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

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

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

Table 8 for Outfall No.: Click to enter text. **Samples are (check one):** ☐ **Composite** ☐ **Grab**

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

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

* Indicate units if different from µg/L.

Table 9 for Outfall No.: Click to enter text. **Samples are (check one):** ☐ **Composite** ☐ **Grab**

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

* Indicate units if different from µg/L.

Table 10 for Outfall No.: Click to enter text. **Samples are (check one):** ☐ **Composite** ☐ **Grab**

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

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

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

* Indicate units if different from µg/L.

Table 11 for Outfall No.: Click to enter text. **Samples are (check one):** ☐ **Composite** ☐ **Grab**

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

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

* Indicate units if different from µg/L.

Attachment: Click to enter text.

TABLE 12 (DIOXINS/FURAN COMPOUNDS)

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

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

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

Description: Click to enter text.

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

☐ Yes ☐ No

Description: Click to enter text.

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

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

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

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

TABLE 13 (HAZARDOUS SUBSTANCES)

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

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

☐ Yes ☐ No

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

☐ Yes ☐ No

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

Table 13 for Outfall No.: Click to enter text. **Samples are (check one):** ☐ **Composite** ☐ **Grab**

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

Worksheet 4.0 Receiving Waters

INDUSTRIAL WASTEWATER PERMIT APPLICATION WORKSHEET 4.0: RECEIVING WATERS

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

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

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

☐ Yes ☒ No

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

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

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

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

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

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

a. Width of the receiving water at the outfall: ~50 feet

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

☐ Yes ☒ No

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

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

☐ Yes ☒ No

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

Item 3. Classified Segment (Instructions, Page 80)

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

☒ Yes ☐ No

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

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

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

a. Name of the immediate receiving waters: Click to enter text.

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

☐ Lake or Pond

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

☐ Man-Made Channel or Ditch

☐ Stream or Creek

☐ Freshwater Swamp or Marsh

☒ Tidal Stream, Bayou, or Marsh

☐ Open Bay

☐ Other, specify:

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

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

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

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

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

☒ Perennial (normally flowing)

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

☐ USGS flow records

☒ personal observation

☐ historical observation by adjacent landowner(s)

☐ other, specify: Click to enter text.

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

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

☐ Yes ☒ No

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

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

Date and time of observation: Click to enter text.

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

☐ Yes ☐ No

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

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

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

☐ oil field activities
☐ agricultural runoff
☐ upstream discharges
☐ urban runoff
☐ septic tanks
☐ other, specify: Click to enter text.

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

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

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

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

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

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

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

INDUSTRIAL WASTEWATER PERMIT APPLICATION WORKSHEET 4.0: RECEIVING WATERS

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

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

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

☐ Yes ☒ No

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

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

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

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

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

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

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

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

☐ Yes ☐ No

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

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

☐ Yes ☐ No

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

Item 3. Classified Segment (Instructions, Page 80)

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

☐ Yes ☒ No

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

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

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

a. Name of the immediate receiving waters: Click to enter text.

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

☐ Lake or Pond

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

☐ Man-Made Channel or Ditch

☐ Stream or Creek

☐ Freshwater Swamp or Marsh

☐ Tidal Stream, Bayou, or Marsh

☐ Open Bay

☐ Other, specify:

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

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

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

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

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

☐ Perennial (normally flowing)

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

☐ USGS flow records

☐ personal observation

☐ historical observation by adjacent landowner(s)

☐ other, specify: Click to enter text.

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

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

☐ Yes ☒ No

If **yes**, describe how: The outfalls discharge into unnamed ditches that flow to Cedar Bayou Tidal.

f. General observations of the water body during normal dry weather conditions: Typically there is no water in the drainage ditch except after rain events.
Date and time of observation: June 2024

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

☐ Yes ☒ No

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

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

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

☐ oil field activities
☐ agricultural runoff
☒ upstream discharges
☐ urban runoff
☐ septic tanks
☐ other, specify: Click to enter text.

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

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

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

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

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

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

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

Worksheet 7.0 Stormwater Runoff

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

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

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

Item 1. Applicability (Instructions, Page 89)

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

☒ Yes ☐ No

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

Item 2. Stormwater Coverage (Instructions, Page 89)

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

Authorization Coverage

Outfall	Authorization under MSGP	Authorized Under Individual Permit
SW-001	☒	☐
SW-002	☒	☐
SW-003	☒	☐
SW-005	☒	☐
SW-006	☒	☐
003	☐	☒
005	☐	☒
006	☐	☒

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

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

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

Item 3. Site Map (Instructions, Page 90)

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

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

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

Attachment: J

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

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

Impervious Surfaces

Outfall	Area of Impervious Surface (include units)	Total Area Drained (include units)
003	~24 acres	39.5-acres
005	~28 acres	48.0-acres
006	~29 Acres	48.3-acres

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

Wettest month: June

Average rainfall for wettest month (total inches): 6.5-inches

25-year, 24-hour rainfall (inches): 10.01-inches

Source: USGS TP 40 publication

c. Attach an inventory, or list, of materials currently handled at the facility that may be exposed to precipitation. **Attachment:** Materials are not normally exposed to stormwater.

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

e. Describe any BMPs and controls the facility uses/proposes to prevent or effectively reduce pollution in stormwater discharges from the facility: See Attachment I

Item 5. Pollutant Analysis (Instructions, Page 91)

a. Provide the date range of all sampling events conducted to obtain the analytical data submitted with this application (e.g., 05/01/2018-05/30/2018): TBD – Samples were not collected at the time of application submittal. Targa will submit analytical data under separate cover when it becomes available.

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

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

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

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

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

* Taken during first 30 minutes of storm event

** Flow-weighted composite sample

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

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

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

* Taken during first 30 minutes of storm event

** Flow-weighted composite sample

Attachment: Click to enter text.

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

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

Date of storm event: Click to enter text.

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

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

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

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

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

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

APPENDIX A APPLICATION FEE

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:	582EA000619206
Date:	07/29/2024 02:34 PM
Payment Method:	CC - Authorization 0000069358
ePay Actor:	FORESTER WENDY
Actor Email:	wforester@targaresources.com
IP:	66.18.6.130
TCEQ Amount:	$350.00
Texas.gov Price:	$358.13*

* 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:	FORESTER WENDY
Company:	TARGA RESOURCES
Address:	10119 HWY 146 N, MONT BELVIEU, TX 77580
Phone:	832-415-6689

Cart Items

Click on the voucher number to see the voucher details.

Voucher	Fee Description	AR Number	Amount
714805	WW PERMIT - MINOR FACILITY NOT SUBJECT TO 40 CFR 400-471 - MAJOR AMENDMENT		$300.00
714806	30 TAC 305.53B WQ NOTIFICATION FEE		$50.00
		TCEQ Amount:	$350.00

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.

APPENDIX B CORE DATA FORM

TCEQ Use Only

TCEQ Core Data Form

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

SECTION I: General Information

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

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

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

☒ Other **Major Amendment**

2. Customer Reference Number *(if issued)*	Follow this link to search for CN or RN numbers in Central Registry**	**3. Regulated Entity Reference Number** *(if issued)*
CN 601301559		**RN 100222900**

SECTION II: Customer Information

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

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

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

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

Targa Midstream Services LLC

7. TX SOS/CPA Filing Number	**8. TX State Tax ID** (11 digits)	**9. Federal Tax ID** (9 digits)	**10. DUNS Number** *(if applicable)*
0009136511	17605078918		

11. Type of Customer: ☒ Corporation ☐ Individual Partnership: ☐ General ☐ Limited
Government: ☐ City ☐ County ☐ Federal ☐ Local ☐ State ☐ Other ☐ Sole Proprietorship ☐ Other:

12. Number of Employees
☐ 0-20 ☐ 21-100 ☐ 101-250 ☐ 251-500 ☒ 501 and higher

13. Independently Owned and Operated?
☒ **Yes** ☐ **No**

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

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

15. Mailing Address:	811 Louisiana St Suite 2100							
	City	Houston	**State**	TX	**ZIP**	77002	**ZIP + 4**	1412

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)*
( ) -		( ) -

SECTION III: Regulated Entity Information

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

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

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

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

Mont Belvieu Complex

23. Street Address of the Regulated Entity: *(No PO Boxes)*	10119 Highway 146							
	City	Mont Belvieu	**State**	TX	**ZIP**	77580	**ZIP + 4**	
24. County	Chambers							

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

25. Description to Physical Location:	

26. Nearest City	**State**	**Nearest ZIP Code**

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

27. Latitude (N) In Decimal:	29.837454		**28. Longitude (W) In Decimal:**	-94.904631	
Degrees	Minutes	Seconds	Degrees	Minutes	Seconds

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)
1321	5171	211112	424710

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

Natural gas fractionation

34. Mailing Address:	P.O. Box 10							
	City	Mont Belvieu	**State**	TX	**ZIP**	77580	**ZIP + 4**	
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.

☐ Dam Safety	☐ Districts	☐ Edwards Aquifer	☐ Emissions Inventory Air	☐ Industrial Hazardous Waste
☐ Municipal Solid Waste	☐ New Source Review Air	☐ OSSF	☐ Petroleum Storage Tank	☐ PWS
☐ Sludge	☐ Storm Water	☐ Title V Air	☐ Tires	☐ Used Oil
☐ Voluntary Cleanup	☒ Wastewater	☐ Wastewater Agriculture	☐ Water Rights	☐ Other:
	WQ0005329000			

SECTION IV: Preparer Information

40. Name:	Kate Magee	**41. Title:**	Environmental Supervisor

42. Telephone Number	**43. Ext./Code**	**44. Fax Number**	**45. E-Mail Address**
(832) 385-3120		( ) -	kmagee@targaresources.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:	Targa Midstream Services LLC	**Job Title:**	Vice President Operations
Name *(In Print):*	Bill Grantham	**Phone:**	(713) 584- **1828**
Signature:	Bill Grantham	**Date:**	July 29, 2024

APPENDIX C PLAIN LANGUAGE SUMMARY

TEXAS COMMISSION ON ENVIRONMENTAL QUALITY

PLAIN LANGUAGE SUMMARY FOR TPDES OR TLAP PERMIT APPLICATIONS

ENGLISH

Targa Midstream Services LLC (CN601301559) operates Mont Belvieu Complex (RN100222900), a natural gas processing facility. The facility is located at 10119 North Highway 146, in Mont Belvieu, Chambers County, Texas 77580. Targa requests the addition of the following waters via Outfall 001 on an intermittent not normal flow basis: reverse osmosis treated water of <0.0016 MGD (million gallons per day), boiler water during inclement weather, process upsets, and maintenance activities of <0.0013 MGD, and cooling water backflush water of <0.003 MGD, all of which constitute <1% of overall flow; to increase the flow to a daily average flow of 0.35 MGD and a daily maximum flow of 1.10 MGD via Outfall 001; and the addition of hydrostatic test water via Outfalls 003, 005, and 006.

Discharges from the facility are permitted to discharge total organic carbon, total copper, total zinc, oil and grease, and 5-day biochemical oxygen demand. Stormwater, fire test water, boiler steam condensate, allowable non-stormwaters, water treatment wastes, and blowdown waters are treated by chemical additives.

SPANISH

Targa Midstream Services LLC (CN601301559) opera Mont Belvieu Complex (RN100222900), una instalación de procesamiento de gas natural. La instalación está ubicada en 10119 North Highway 146, en Mont Belvieu, condado de Chambers, Texas 77580. Targa solicita la adición de las siguientes aguas a través del emisario 001 en forma intermitente, con un flujo anormal: agua tratada por ósmosis inversa de <0,0016 MGD (millones de galones por día), agua de caldera durante condiciones climáticas adversas, alteraciones del proceso y actividades de mantenimiento de <0,0013 MGD, y agua de retrolavado de agua de enfriamiento de <0,003 MGD, todas las cuales constituyen <1% del flujo total; para aumentar el flujo a un flujo promedio diario de 0,35 MGD y un flujo máximo diario de 1,10 MGD a través del emisario 001; y la adición de agua de prueba hidrostática a través de los desagües 003, 005 y 006.

Se permiten descargas de la instalación para descargar carbono orgánico total, cobre total, zinc total, aceite y grasa y la demanda bioquímica de oxígeno de 5 días. Las aguas pluviales, el agua de pruebas de incendio, el condensado de vapor de calderas, las aguas no pluviales permitidas, los desechos de tratamiento de agua y las aguas de purga se tratan con aditivos químicos.

APPENDIX D PUBLIC INVOLVEMENT PLAN

Texas Commission on Environmental Quality

Public Involvement Plan Form for Permit and Registration Applications

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

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

Section 1. Preliminary Screening

☐ New Permit or Registration Application

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

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

Section 2. Secondary Screening

☒ Requires public notice,

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

☐ Located within any of the following geographical locations:

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

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

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

No anticipated interest: no public comments received on past permitting actions for this facility.

Section 3. Application Information

Type of Application (check all that apply):

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

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

Water Quality

☐ Texas Pollutant Discharge Elimination System (TPDES)

- ☐ Texas Land Application Permit (TLAP)
- ☐ State Only Concentrated Animal Feeding Operation (CAFO)
- ☐ Water Treatment Plant Residuals Disposal Permit

☐ Class B Biosolids Land Application Permit

☐ Domestic Septage Land Application Registration

Water Rights New Permit

☐ New Appropriation of Water

☐ New or existing reservoir

Amendment to an Existing Water Right

☐ Add a New Appropriation of Water

☐ Add a New or Existing Reservoir

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

Section 4. Plain Language Summary

Provide a brief description of planned activities.

Section 5. Community and Demographic Information

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

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

(City)

(County)

(Census Tract)
Please indicate which of these three is the level used for gathering the following information.

☐ City ☐ County ☐ Census Tract

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

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

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

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

(e) Languages commonly spoken in area by percentage

(f) Community and/or Stakeholder Groups

(g) Historic public interest or involvement

Section 6. Planned Public Outreach Activities

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

☐ Yes ☐ No

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

☐ Yes ☐ No

If Yes, please describe.

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

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

☐ Yes ☐ No

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

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

☐ Publish in alternative language newspaper

☐ Posted on Commissioner's Integrated Database Website

☐ Mailed by TCEQ's Office of the Chief Clerk

☐ Other (specify)

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

☐ Yes ☐ No

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

☐ Yes ☐ No

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

☐ TCEQ Regional Office ☐ TCEQ Central Office

☐ Public Place (specify)

Section 7. Voluntary Submittal

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

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

☐ Yes ☐ No

What types of notice will be provided?

☐ Publish in alternative language newspaper

☐ Posted on Commissioner's Integrated Database Website

☐ Mailed by TCEQ's Office of the Chief Clerk

☐ Other (specify)

APPENDIX E USGS MAP

Path: C:\Users\deallcott\OneDrive - Burns & McDonnell\Projects\1. WORKING\166348_Targa_TPDES_Permit Amendment\166348_Targa_TPDES_PermitAmendment\166348_Targa_TPDES_PermitAmendment.aprx deallcott 7/23/2024
Service Layer Credits: World Imagery: Maxar

MONT BELVIEU QUADRANGLE
TEXAS
7.5 MINUTE SERIES (TOPOGRAPHIC)
7043 IV NE (MOSS BLUFF)

Outfall 001
Outfall 002
Outfall 003
Outfall 004
Outfall 005
Outfall 006

Discharge to Cedar Bayou Classified Segment at Outfall 001

Discharge to Cedar Bayou Classified Segment at Outfall 003

Discharge to Cedar Bayou Classified Segment at Outfall 006

Discharge to Cedar Bayou Classified Segment at Outfall 005

Facility Boundary
One Mile Facility Radius
Ponds
Discharge Route
Stormwater Path
Surface Water Flow Direction
Outfalls
Public Water Supply Wells
Park/Recreation Area

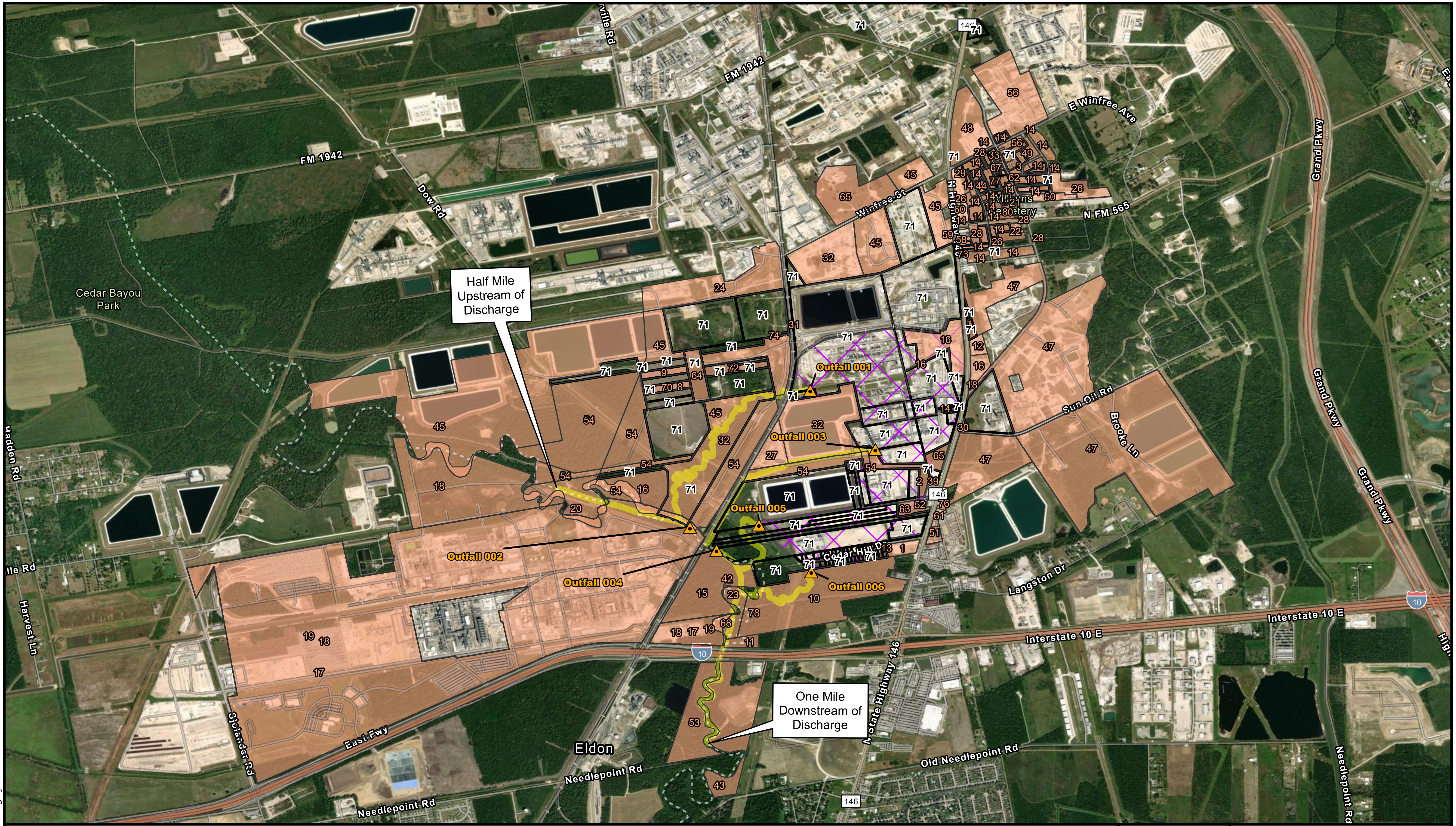
NORTH
0 2,000 4,000
Scale in Feet

BURNS McDONNELL

Attachment E
Targa Midstream Services LLC
Mont Belvieu Complex
2024 Major Amendment and Renewal
WQ0005329000
Chambers County, TX

Source: ESRI; USGS; Burns & McDonnell
Issued: 7/23/2024

APPENDIX F AFFECTED LANDOWNER INFORMATION



Facility Boundary
Adjacent Targa-owned Property
Adjacent Landowners
Discharge Routes
Outfalls

NORTH

0 0.5 1
Miles

BURNS MCDONNELL

Attachment F
Targa Midstream Services LLC
Mont Belvieu Complex
2024 Major Amendment and Renewal
WQ0005329000
Chambers County, TX

Source: ESRI; Chambers County Appraisal District; Harris County Appraisal District; Burns &McDonnell

Issued: 8/1/2024

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Service Layer Credits: World Imagery: Maxar

Outfall 003

Outfall 005

Outfall 002

Outfall 004

Outfall 006

Cedar Bayou

Smith Gully

Sun Oil Rd

Park Rd

N State Highway 146

Warren Rd

Cedar Hill Dr

Americas Best Value Inn & Suites Mont Belvieu Houston

Langston Dr

Super 8

Motel 6

McDonald's

Chevron

Idleair

Shell

Chevron Cemical

East Fwy

Interstate 10 E

796B

797

146

Facility Boundary

Adjacent Targa-owned Property

Adjacent Landowners

Discharge Routes

Outfalls

NORTH

0 750 1,500

US Feet

BURNS McDONNELL

Attachment F
Targa Midstream Services LLC
Mont Belvieu Complex
2024 Major Amendment and Renewal
WQ0005329000
Chambers County, TX

Issued: 8/1/2024

Source: ESRI; Chambers County Appraisal District; Harris County Appraisal District; Burns &McDonnell

Path: C:\Users\deallcott\OneDrive - Burns & McDonnell\Projects\1_WORKING\166348_Targa_TPDES_PermitAmendment\166348_Targa_TPDES_PermitAmendment.aprx deallcott 8/1/2024
Service Layer Credits: Hybrid Reference Layer: Esri Community Maps Contributors, Texas Parks & Wildlife, © OpenStreetMap, Microsoft, CONANP, Esri, TomTom, Garmin, Foursquare, SafeGraph, GeoTechnologies, Inc, METI/NASA, USGS, EPA, NPS, US Census Bureau, USDA, USFWS

Facility Boundary
Adjacent Targa-owned Property
Adjacent Landowners
Discharge Routes
Outfalls

NORTH
0 500 1,000
US Feet

BURNS McDONNELL

Attachment F
Targa Midstream Services LLC
Mont Belvieu Complex
2024 Major Amendment and Renewal
WQ0005329000
Chambers County, TX

Source: ESRI; Chambers County Appraisal District; Harris County Appraisal District; Burns &McDonnell

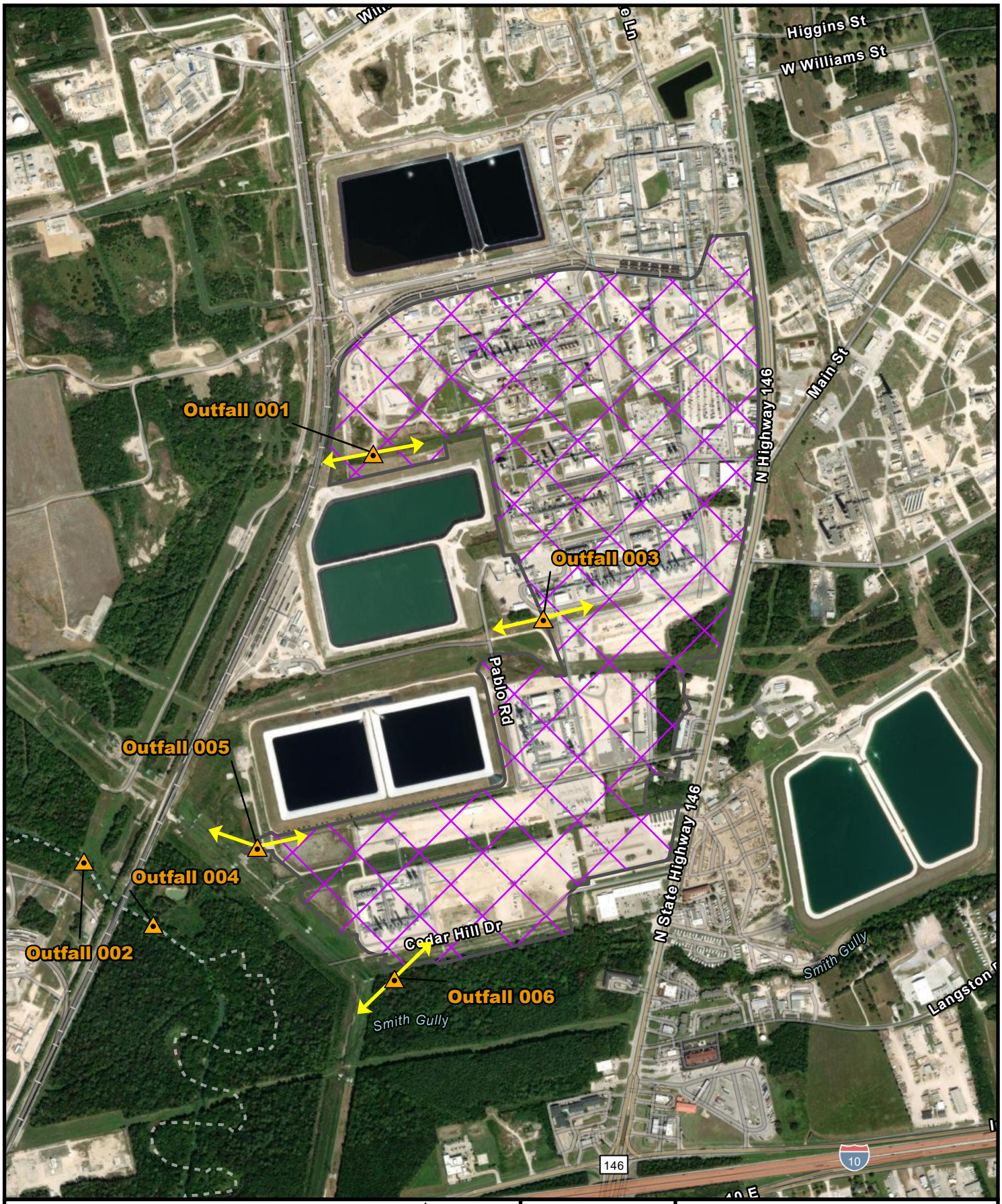
Issued: 8/1/2024

Number	Name	Care of	Address		
1	9235 HWY 146 TRUST		811 LOUISIANA, STE 2100	HOUSTON TX	77002
2	ACCENT INVESTMENTS		131 CR 163	LONG BRANCH TX	75669
3	ANDERSON BLYTHE		11767 CANDY LANE	LOWER LAKE CA	95457-9499
4	ANDERSON HEATHER		33600 LITTLE VALLEY RD	FORT BRAGG CA	95457
5	ANDERSON JUDY		325 HAVANA AVENUE	MEDFORD OR	97504
6	ANDERSON KEITH		33533 LITTLE VALLEY RD	FORT BRAGG CA	95437
7	ANDERSON MEREDITH		1914 PACIFIC AVE	ALAMEDA CA	94501
8	BARBER ELSIE M		P O BOX 67	MONT BELVIEU TX	77580
9	BARBER O E & IRENE		434 LAZY RIVER LANE	BAYTOWN TX	77523
10	BHK HOSPITALITY LLC		4602 KATY FREEWAY	HOUSTON TX	77007
11	BIG EASTEX #1 LIMITED		PO BOX 8522	HOUSTON TX	77249
12	CENTERPOINT ENERGY INC		P O BOX 1475	HOUSTON TX	77251-1475
13	CENTURY SERVICE CORP		811 LOUISIANA, STE 2100	HOUSTON TX	77002
14	CHAMBERS COUNTY LAND CO TR		PO BOX 4018	HOUSTON TX	77210
15	CHEVON PHILLIPS CHEMICAL COMPANY LP		10001 SIX PINES DR ROOM 7048B	THE WOODLANDS TX	77380
16	CHEVRON PHILLIPS CHEM CO LP	REAL ESTATE & PROP TAX SERVICE	10001 SIX PINES DR ROOM 7048B	THE WOODLANDS TX	77380
17	CHEVRON PHILLIPS CHEMICAL		10001 SIX PINES DR RM 7056B	SPRING TX	77380-1498
18	CHEVRON PHILLIPS CHEMICAL CO LP		10001 SIX PINES DR ROOM 7048B	THE WOODLANDS TX	77380
19	CHEVRON PHILLIPS CHEMICAL COMPANY LP		10001 SIX PINES DR	THE WOODLANDS TX	77380
20	CHEVRON U S A INC	PROP TAX DEPARTMENT	PO BOX 285	HOUSTON TX	77001
21	CHURCH OF CHRIST		1131 NORTH MAIN ST	MONT BELVIEU TX	77523
22	CITY OF MONT BELVIEU		P O BOX 1048	MONT BELVIEU TX	77580
23	COON EMELIA HENRY		P O BOX 1274	NEW ULM TX	78950
24	DOW HYDROCARBONS & RESOURCES LLC		TAX DEPT, APB BLDG., FLOOR 4A	LAKE JACKSON TX	77566
25	ENTERPRISE PRODUCTS COMPANY		P O BOX 4018	HOUSTON TX	77210-4018
26	ENTERPRISE PRODUCTS LP		P O BOX 4018	HOUSTON TX	77210-4018
27	ENTERPRISE PRODUCTS OPERATING LLC	c/o Enterprise Products Company	PO BOX 4018	HOUSTON TX	77210
28	ENTERPRISE PRODUCTS OPERATING LP		PO BOX 4018	HOUSTON TX	77210-4018
29	ENTERPRISE TE PRODUCTS PIPELINE CO	PROPERTY TAX DEPARTMENT	PO BOX 4018	HOUSTON TX	77210-4018
30	EUBANKS THOMAS PERRY III		17511 WOOD OAK DR	DAYTON TX	77535
31	EXXON MOBIL PIPELINE CO		PO BOX 64106	SPRING TX	77387
32	EXXON PIPELINE CO		P O BOX 64106	THE WOODLANDS TX	77387
33	FREGIA MICHAEL L		PO BOX 127	ANAHUAC TX	77514
34	FREGIA SAUNDRA SHARRI		PO BOX 127	ANAHUAC TX	77514
35	FREGIA SUSAN ANNETT		PO BOX 127	ANAHUAC TX	77514

Number	Name	Care of	Address		
36	FREGIA WILLIAM PAUL		PO BOX 127	ANAHUAC TX	77514
37	GILBERT JOHN N III		1022 WOODLAND	HOUSTON TX	77009
38	GILBERT SUSAN		2529 12TH ST	HEMPSTEAD TX	77445-2017
39	GRIFFIN ROBERT & ROBERT GRIFFIN JR	KYLE CAULEY & RONALD C GRIFFIN	P O BOX 2059	MT BELVIEU TX	77580
40	HARP EDWARD L ETUX		P O BOX 538	MONT BELVIEU TX	77580-538
41	HENRY WILLIS M		P O BOX 1274	NEW ULM TX	78950
42	KM 146 PARTNERS LP	A TEXAS LIMITED PARTNERSHIP	5555 SAN FELIPE ST STE 150	HOUSTON TX	77056
43	LAWRENCE BILLY GENE	LARRY LAWRENCE	319 WALLACE RD	HANKAMER TX	77560
44	LONE STAR NGL MONT BELVIEU LP		1300 MAIN ST	HOUSTON TX	77002
45	MCKISSICK ELEANOR & BEARD MARRIANNE	& MUSE MARSHALL G III	P.O. BOX 263228	HOUSTON TX	77207
46	MONT BELVIEU CAVERNS LLC		ATTN: PROPERTY TAX DEPARTMENT	HOUSTON TX	77210-4018
47	MONT BELVIEU CAVERNS, LLC		PO BOX 4018	HOUSTON TX	77210-4018
48	MONT BELVIEU METHODIST CHURCH		10629 EAGLE DRIVE	MONT BELVIEU TX	77523
49	MORRIS SUE ELLEN		125 OLIVER DR	BAYTOWN TX	77523
50	MTBV CAVERNS LLC	ATTN: AD VALOREM TAX DEPT	PO BOX 4018	HOUSTON TX	77210-4018
51	NEQ INVESTMENTS LTD		9400 HWY 146 NORTH	BAYTOWN TX	77523
52	NICOLINI CYNTHIA I		10311 KRYSTINE DR	BAYTOWN TX	77523
53	NILOK CHEMICALS INC	C/O EVONIK CORPORATION	2 TURNER PL	PISCATAWAY NJ	08854-3839
54	OCCIDENTAL CHEMICAL CORP		P O BOX 27570	HOUSTON TX	77227-7570
55	OLIVER KAREN		752 CABALLO TRL	CANYON LAKE TX	78133-4796
56	ONEOK MONT BELVIEU STORAGE CO LLC		100 WEST FIFTH STREET	TULSA OK	74103
57	ORIGINAL LERCYS LLC		2122 HWY 124	WINNIE TX	77665
58	PATTERSON RONALD L		PO BOX 673	MT BELVIEU TX	77580-1434
59	PATTERSON RONALD L & FRANK		P O BOX 673	MT. BELVIEU TX	77580-673
60	PATTERSON RONALD L & LINDA		PO BOX 673	MONT BELVIEU TX	77580
61	QUINTERO RAUL & FRANCES		1710 MARYON ST	BAYTOWN TX	77523
62	REDMON BRIGET OLIVER		8024 N FM 565 RD	COVE TX	77523
63	REGENCY OF TEXAS INC		40 NORTH 4TH ST	CARBONDALE CO	81623
64	REIDLAND FRED	C/O EDITH REIDLAND GRANTHAM	3011 OLD ELM WAY	SAN ANTONIO TX	78230
65	S WINFREE HEIRS LLC		P O BOX 1807	MONT BELVIEU TX	77580
66	SCANTLEN CONNIE T & WARREN CHERYL T		9034 WATER POINT DRIVE	BAYTOWN TX	77523-9805
67	SMITH ROBERT B FAMILY TRUST		112 DEVON'S COVE	BUDA TX	78610
68	SMITH WINSTON G	CHARLES RITTER	14988 SALINE DR	BULLARD TX	75757
69	STANCOPIA LLC		PO BOX 7215	METAIRIE LA	70010

Number	Name	Care of		Address	
70	STEADHAM ALVIS L	% LEIGH ANN TUTTLE	2114 ETON DR	PEARLAND TX	77581
71	TARGA DOWNSTREAM LLC				
72	THOMSON C D TRUST	C/O STAR BANK N A	REAL ESTATE TAX DESK	ST PAUL MN	55164-0142
73	TRIPLE C PROJECT SERVICE		BOX 145	MT BELVIEU TX	77580
74	UNITED BRINE PIPELINE COMPANY LLC		4800 SAN FELIPE STE 1400	HOUSTON TX	77056
75	VERIZON COMMUNICATIONS-TEXAS	FRONTIER - % DUFF & PHELPS LLC	PO BOX 2629	ADDISON TX	75001
76	WALLACE WILLIAM O JR		PO BOX 808	MONT BELVIEU TX	77580-9526
77	WALTON BETTY M		12810 W RIVER RUN DR	BAYTOWN TX	77523
78	WILBURN ALICE		P O BOX 1274	NEW ULM TX	78950
79	WILBURN L C JR & FLORETTA		PO BOX 111	MT BELVIEU TX	77580
80	WILLIAMS CEMETERY		1123 NORTH MAIN ST	MONT BELVIEU TX	77523
81	YBARRA VICTOR P & BONNIE K		3819 RIVER RUN DR	BAYTOWN TX	77523

APPENDIX G ORIGINAL PHOTOGRAPHS



Facility Boundary

Outfall Upstream/ Downstream

Outfalls

NORTH

0 500 1,000

Scale in Feet

BURNS McDONNELL

Attachment G
Targa Midstream Services LLC
Mont Belvieu Complex
2024 Major Amendment and Renewal
WQ0005329000
Chambers County, TX

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Service Layer Credits: Hybrid Reference Layer: Esri Community Maps Contributors, Texas Parks & Wildlife, CONANP, Esri, TomTom, Garmin, Foursquare, SafeGraph, GeoTechnologies, Inc, METI/NASA, USGS, EPA, NPS, US Census Bureau, USDA, USFWS
World Imagery: Maxar

Source: ESRI; Burns & McDonnell, Inc.

Issued: 7/23/2024

Photographs
Targa Midstream Services LLC
Mont Belvieu Complex

Targa Midstream Services LLC (Targa) operates the Mont Belvieu Complex (Complex), a natural gas processing facility, located at 10119 North Highway 146, in the City of Mont Belvieu, Chambers County, Texas. The following are photographs of the outfalls associated with TPDES Permit No. WQ0005329000. Normal conditions to view Outfalls 002 and 004 are not safe to traverse to take photographs.

Downstream of Outfall 001

Upstream of Outfall 001

Outfall 003 and upstream

Downstream of Outfall 003

Upstream of Outfall 005

Downstream of Outfall 005

Downstream of Outfall 006 and towards 004

Upstream of Outfall 006

APPENDIX H SPIF

TEXAS COMMISSION ON ENVIRONMENTAL QUALITY

SUPPLEMENTAL PERMIT INFORMATION FORM (SPIF)

FOR AGENCIES REVIEWING DOMESTIC OR INDUSTRIAL TPDES WASTEWATER PERMIT APPLICATIONS

TCEQ USE ONLY:

Application type: _____Renewal _____Major Amendment ____Minor Amendment _____New

County: _____ Segment Number: _____

Admin Complete Date: _____

Agency Receiving SPIF:

_____ Texas Historical Commission _____ U.S. Fish and Wildlife

_____ Texas Parks and Wildlife Department _____ U.S. Army Corps of Engineers

This form applies to TPDES permit applications only. (Instructions, Page 53)

Complete this form as a separate document. TCEQ will mail a copy to each agency as required by our agreement with EPA. If any of the items are not completely addressed or further information is needed, we will contact you to provide the information before issuing the permit. Address each item completely.

Do not refer to your response to any item in the permit application form. Provide each attachment for this form separately from the Administrative Report of the application. The application will not be declared administratively complete without this SPIF form being completed in its entirety including all attachments. Questions or comments concerning this form may be directed to the Water Quality Division's Application Review and Processing Team by email at WQ-ARPTeam@tceq.texas.gov or by phone at (512) 239-4671.

The following applies to all applications:

1. Permittee: Targa Midstream Services LLC

   Permit No. WQ00 05329000 EPA ID No. TX 0002887

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

   10119 Highway 146, Mont Belvieu TX 77580

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

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

First and Last Name: Keith Adams

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

Title: Senior Operations Manager

Mailing Address: PO Box 10

City, State, Zip Code: Mont Belvieu, TX 77580

Phone No.: 281-385-3370 Ext.: N/A Fax No.: N/A

E-mail Address: KCadams@targaresources.com

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

Water discharges to various unnamed tributaries via Outfalls 001, 003, 005, and 006, thence to Cedar Bayou Tidal; and via Outfalls 002 and 004 directly to Cedar Bayou Tidal in Segment No. 0901 of the Trinity-San Jacinto Coastal Basin.

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

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

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

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

☐ Disturbance of vegetation or wetlands

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

N/A

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

N/A

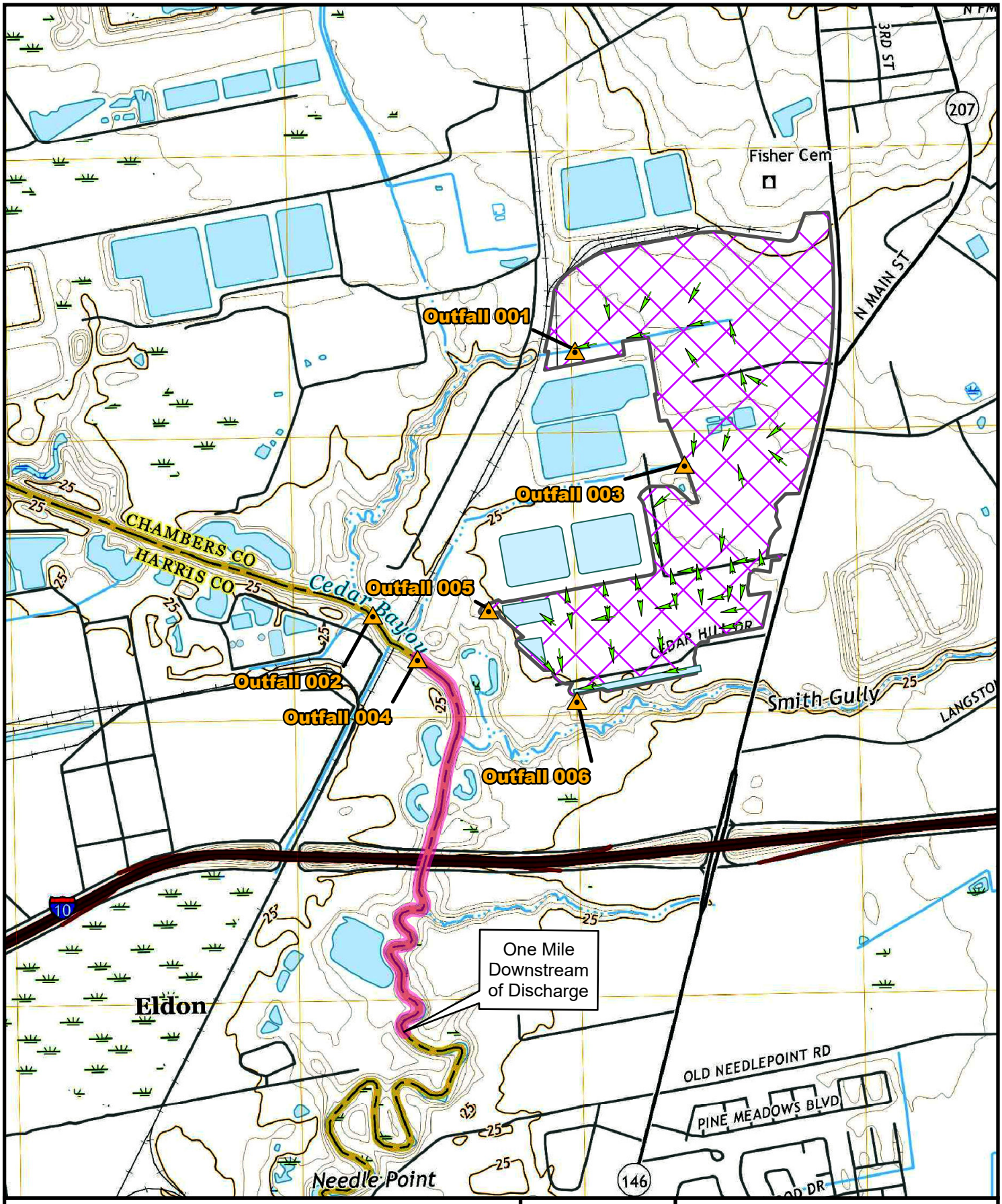
THE FOLLOWING ITEMS APPLY ONLY TO APPLICATIONS FOR NEW TPDES PERMITS AND MAJOR AMENDMENTS TO TPDES PERMITS

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

Targa began developing the facility in 1958. Trains 4-10 construction began in 2016 and will be completed in 2024.

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

The property was previously vacant land, some of which was also used for agricultural purposes



Facility Boundary

1 Mile Downstream Discharge Route

Surface Water Flow Direction

Outfalls

NORTH

0 1,000 2,000

Scale in Feet

BURNS McDONNELL

Attachment H
Targa Midstream Services LLC
Mont Belvieu Complex
2024 Major Amendment and Renewal
WQ0005329000
Chambers County, TX

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Service Layer Credits:

Source: ESRI; USGS; Burns and McDonnell

Issued: 7/23/2024

APPENDIX I FACILITY DESCRIPTION

Technical Report 1.0, Page 1 of 83

Technical Report 1.0, Page 3 of 83

Technical Report 1.0, Page 8 of 83

Technical Report 1.0, Page 9 of 83

Technical Report 1.0, Page 14 of 83

Worksheet 7.0, Page 60 of 83

Facility Description
Targa Midstream Services LLC
Mont Belvieu Complex

Targa Midstream Services LLC (Targa) operates the Mont Belvieu Complex (Complex), a natural gas processing facility, located at 10119 North Highway 146, in the City of Mont Belvieu, Chambers County, Texas.

Facility Operations

The Complex separates natural gas liquids (NGLs) into marketable fractions including ethane, ethane/propane mix, propane, normal butane, isobutane, and natural gasoline (e.g., unrefined heavier hydrocarbon fractions). The Complex receives natural gas liquids (NGLs) via pipeline, railcar, or transport truck.

Underground salt dome storage of both raw NGLs and other fractionated NGLs also occurs at the Complex. Finished product storage and distribution systems (i.e. transportation-related facilities) are operated by another entity and are not included as part of this permit authorization.

The facility currently uses raw water produced from a groundwater supply system with a capacity of over 14.3 MGD. The primary water usage at the facility is associated with the operation of cooling towers and process boilers. Smaller quantities of raw water usage include the reverse osmosis (RO) treatment system, facility wash water (generated from washdown of uncontaminated areas), and the fire water system which is sourced from the coastal water authority canal.

Authorized Discharges

Wastewater

Outfall 001 is authorized to discharge industrial stormwaters generated from an approximately 126.5-acre area consisting of Cedar Bayou Fractionator, Train 4 and LEP 1 and associated plant support areas, fire testing water, boiler steam condensate, hydrostatic test water, and the following allowable non-stormwaters:

- discharges from emergency firefighting activities and uncontaminated fire hydrant and fire monitor flushings (excluding discharges of hyperchlorinated water, unless the water is first dechlorinated, and discharges are not expected to adversely affect aquatic life)
- potable water sources (excluding discharges of hyperchlorinated water, unless the water is first dechlorinated, and discharges are not expected to adversely affect aquatic life)
- lawn watering and similar irrigation drainage, provided that all pesticides, herbicides, and fertilizer have been applied in accordance with the approved labeling
- water from the routine external washing of buildings, conducted without the use of detergents or other chemicals
- water from the routine washing of pavement conducted without the use of detergents or other chemicals and where spills or leaks of toxic or hazardous materials have not occurred (unless all spilled material has been removed)
- uncontaminated air conditioner condensate, compressor condensate, and steam condensate, and condensate from the outside storage of refrigerated gases or liquids
- water from foundation or footing drains where flows are not contaminated with pollutants (e.g., process materials, solvents, and other pollutants)

- uncontaminated water used for dust suppression
- springs and other uncontaminated raw water (groundwater or sourced from Coastal Water Authority)
- incidental windblown mist from cooling towers that collects on rooftops or adjacent portions of the facility but excluding intentional discharges from the cooling tower (e.g., "piped" cooling tower blowdown or drains)

Targa requests the addition of the following not normal flow of wastewaters to be discharged via Outfall 001:

- Cooling water and backflush of the cooling system will be discharged intermittently during maintenance activities or after a turnaround, typically one time per year up to 100,000 gallons per month.

- Boiler water will be discharged intermittently during maintenance activities or in the event of an emergency or inclement weather up to 480,000 gallons annually.

- Reverse osmosis water will be discharged intermittently during maintenance activities or in the event of a tank overflow up to 50,000 gallons per month.

Stormwater and wastewater discharged via Outfall 001 is to an unnamed tributary of Cedar Bayou, then to Cedar Bayou Tidal.

Outfall 002 is authorized to discharge cooling tower blowdown, reverse osmosis reject water, and boiler blowdown from Cedar Bayou Fractionator Trains 1-3, Train 4, and LEP 1. Wastewater is conveyed from the Complex directly to Cedar Bayou Tidal via a dedicated discharge pipe.

Outfall 004 is authorized to discharge cooling tower blowdown and reverse osmosis reject water. Wastewater is conveyed from the Complex directly to Cedar Bayou Tidal via a dedicated discharge pipe.

<u>Stormwater</u>

Outfalls 003, 005, and 006 are authorized to discharge intermittent stormwater runoff from industrial areas and the following allowable non-stormwaters:

- discharges from emergency firefighting activities and uncontaminated fire hydrant and fire monitor flushings (excluding discharges of hyperchlorinated water, unless the water is first dechlorinated, and discharges are not expected to adversely affect aquatic life)
- potable water sources (excluding discharges of hyperchlorinated water, unless the water is first dechlorinated, and discharges are not expected to adversely affect aquatic life)
- lawn watering and similar irrigation drainage, provided that all pesticides, herbicides, and fertilizer have been applied in accordance with the approved labeling
- water from the routine external washing of buildings, conducted without the use of detergents or other chemicals
- water from the routine washing of pavement conducted without the use of detergents or other chemicals and where spills or leaks of toxic or hazardous materials have not occurred (unless all spilled material has been removed)
- uncontaminated air conditioner condensate, compressor condensate, and steam condensate, and condensate from the outside storage of refrigerated gases or liquids
- water from foundation or footing drains where flows are not contaminated with pollutants (e.g., process materials, solvents, and other pollutants)
- uncontaminated water used for dust suppression

- springs and other uncontaminated raw water (groundwater or sourced from Coastal Water Authority)
- incidental windblown mist from cooling towers that collects on rooftops or adjacent portions of the facility but excluding intentional discharges from the cooling tower (e.g., "piped" cooling tower blowdown or drains)
- Hydrostatic test water from new vessels/piping.

Outfall 003 is authorized to discharge a collection of industrial stormwaters generated from an approximately 39.5-acre area consisting of LEP 2 and Trains 5 and 6 and associated plant support areas. Discharge of stormwater is to an unnamed tributary of Cedar Bayou.

Outfall 005 is authorized to discharge stormwater from a retention pond for collection of industrial stormwaters generated from an approximately 22.5-acre area consisting of Train 7 and associated plant support areas. Discharge of accumulated stormwater from the Train 7 retention pond is to an unnamed tributary of Cedar Bayou.

Outfall 006 is authorized to discharge stormwater from two connected retention ponds used for collection of industrial stormwaters generated from an approximately 37.6-acre area consisting of Trains 8, 9 and 10 and associated plant support areas. These ponds are connected to allow for accumulated stormwater to equalize within each basin prior to discharging via Outfall 006. Discharge of accumulated stormwater from Outfall 006 is to an unnamed tributary of Cedar Bayou.

Outfalls 003, 005, and 006 are considered substantially similar and stormwater monitored at Outfall 003 is representative of Outfalls 005 and 006.

Wastewater Treatment and Stormwater Management

Raw water is obtained from on-site wells and flows to cooling towers, reverse osmosis (RO) filters, and Wet Surface Air Cooling Systems. RO water is routed to either process usage, boilers, or cooling towers. The resulting blowdown waters and water treatment wastes are pH adjusted with sulfuric acid and then discharged at Outfalls 002 and 004. Various chemical additives (Elimin-Ox™, Tri-Act™ 1800, and Nalco® 22305) are also used to treat the RO water and cooling water systems prior to discharge.

Stormwater runoff, boiler steam condensate, hydrostatic test water from new piping vessels, fire testing water, and allowable non-stormwaters from this facility are transferred directly to Outfall 001 without treatment. Stormwater runoff from the trains (i.e., the liquefaction units) is discharged without treatment directly to Outfalls 003, 005, and 006.

The Complex maintains a Stormwater Pollution prevention Plan which includes a set of best management practices (BMPs) to eliminate or lessen the exposure of stormwater to industrial activities and pollutants.

APPENDIX J FACILITY MAPS

Technical Report 1.0, Page 2 of 83

Worksheet 7.0, Page 59 of 83

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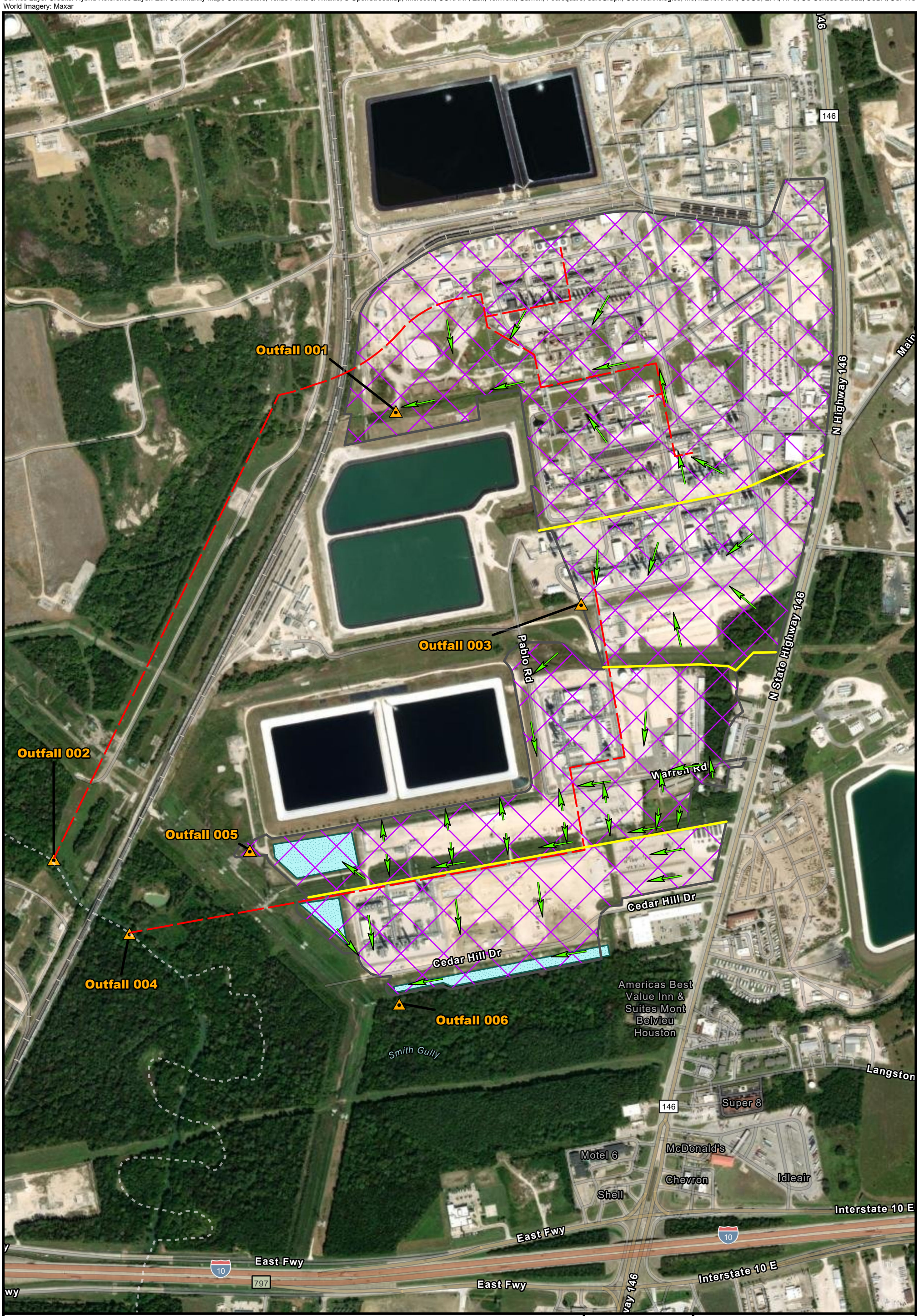
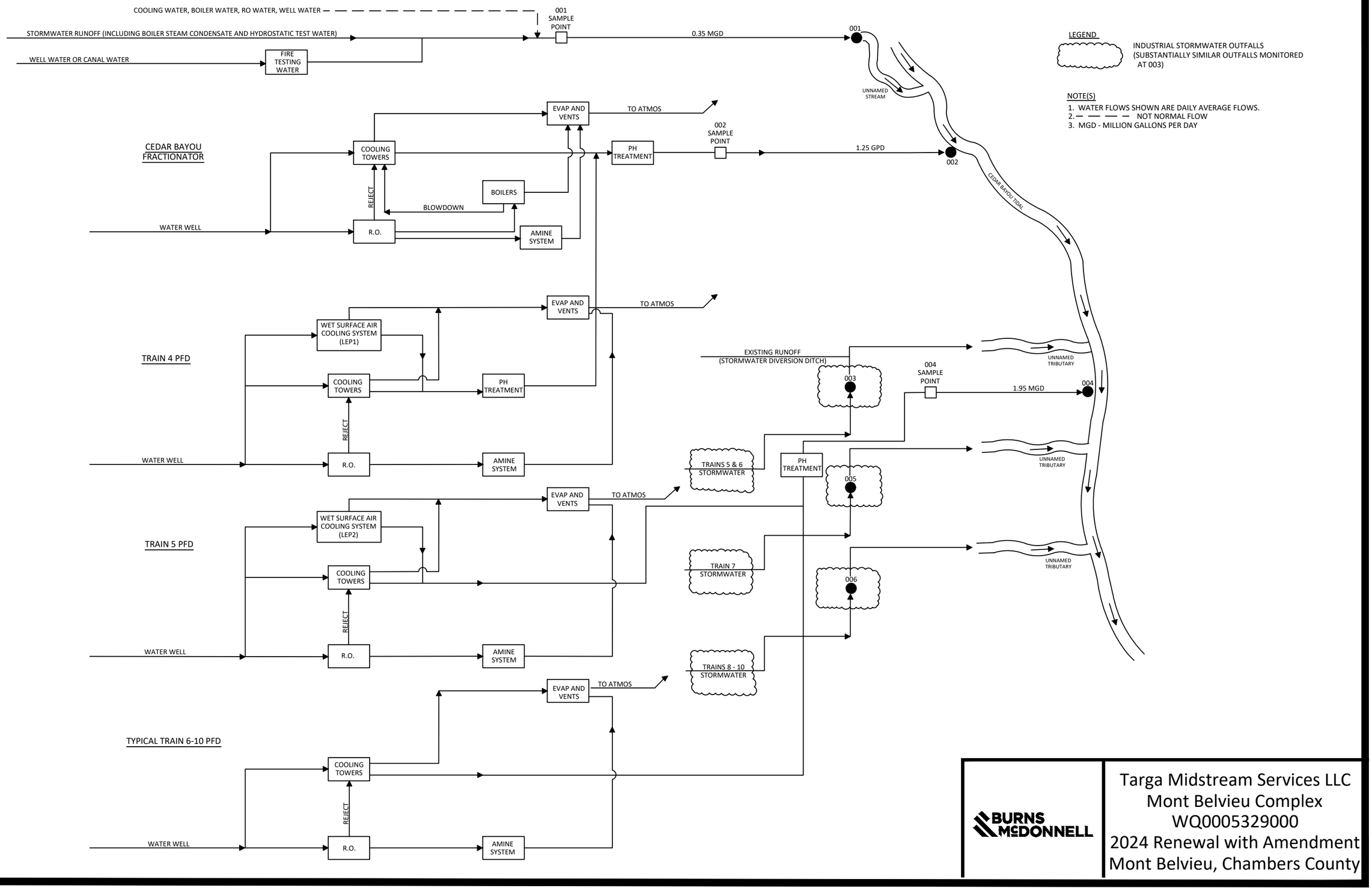
Service Layer Credits: Hybrid Reference Layer: Esri Community Maps Contributors, Texas Parks & Wildlife, © OpenStreetMap, Microsoft, CONANP, Esri, TomTom, Garmin, Foursquare, SafeGraph, GeoTechnologies, Inc, METI/NASA, USGS, EPA, NPS, US Census Bureau, USDA, USFWS
World Imagery: Maxar



Source: ESRI; Burns and McDonnell

Issued: 7/23/2024

APPENDIX K WATER BALANCE



BURNS McDONNELL

Targa Midstream Services LLC
Mont Belvieu Complex
WQ0005329000
2024 Renewal with Amendment
Mont Belvieu, Chambers County

APPENDIX L SAFETY DATA SHEETS

Safety Data Sheets
Targa Midstream Services LLC
Mont Belvieu Complex

Targa Midstream Services LLC (Targa) operates the Mont Belvieu Complex (Complex), a natural gas processing facility, located at 10119 North Highway 146, in the City of Mont Belvieu, Chambers County, Texas.

With this application for major amendment with renewal for TPDES Permit No. WQ0005329000 Targa is including the attached Safety Data Sheets (SDS) for chemical additives currently utilized in raw water treatment, wastewater treatment, and boiler and cooling water systems at the Complex. Chemical additives may be changed depending on conditions and operations. If other additives are utilized at the Complex the additives will likely be similar to those currently in use and Targa will provide copies of those SDS to the TCEQ.

All chemical additives will be utilized in accordance with the manufacturer's recommendations.

Chemical Additive	Use	Outfall(s)	Frequency of Use
Nalco 22305.91	Water treatment	002	Daily, as needed
Nalco Eliminox.91	Water treatment	002	Daily, as needed
Nalco 1800.91K	Water treatment	002	Daily, as needed
Nalco PC-191T.61	Water treatment	002	Daily, as needed
Nalco PC-7408.61	Water treatment	002	Daily, as needed
Nalco PC-11.36	Water treatment	002	Daily, as needed
Nalco H-550	Water treatment	002 004	Daily, as needed
Nalco Y308450.91 Bleach	Water treatment	002	Daily, as needed
Nalco 3DT337	Water treatment	002 004	Daily, as needed
Nalco 3DT397	Water treatment	002 004	Daily, as needed
Nalco 7396.91	Water treatment	002 004	Daily, as needed
Nalco 1318.91B	Water treatment	002 004	Daily, as needed
Nalco Purate.61T	Water treatment	002 004	Daily, as needed
Nalco Y78 Southwest.61 Acid	Water treatment, pH control of chillers	002 004	Daily, as needed
Nalco 3DT401	Cooling Tower Water treatment	002 004	After turnaround

Chemical Additive	Use	Outfall(s)	Frequency of Use
Nalco 71D5+	Water treatment	002 004	Daily, as needed
Sulfuric Acid 98%	pH control prior to permitted outfall discharge	002 004	Daily, as needed
3DT470	Water treatment, will replace 3DT337, conversion in progress	002 004	Daily, as needed

NALCO Water
An Ecolab Company

SAFETY DATA SHEET

NALCO® 22305

Section: 1. PRODUCT AND COMPANY IDENTIFICATION

Product name	:	NALCO® 22305
Other means of identification	:	Not applicable
Recommended use	:	BOILER WATER INTERNAL TREATMENT
Restrictions on use	:	Refer to available product literature or ask your local Sales Representative for restrictions on use and dose limits.
Company	:	Nalco Company 1601 W. Diehl Road Naperville, Illinois 60563-1198 USA TEL: (630)305-1000
Emergency telephone number	:	(800) 424-9300 (24 Hours) CHEMTREC
Issuing date	:	03/06/2018

Section: 2. HAZARDS IDENTIFICATION

GHS Classification

Not a hazardous substance or mixture.

GHS Label element

Precautionary Statements : **Prevention:**
Wash hands thoroughly after handling.
Response:
Get medical advice/ attention if you feel unwell.
Storage:
Store in accordance with local regulations. Protect product from freezing.
Protect product from freezing.

Other hazards : None known.

Section: 3. COMPOSITION/INFORMATION ON INGREDIENTS

Pure substance/mixture : Mixture

No hazardous ingredients

Section: 4. FIRST AID MEASURES

In case of eye contact	:	Rinse with plenty of water. Get medical attention if symptoms occur.
In case of skin contact	:	Wash off with soap and plenty of water. Get medical attention if symptoms occur.
If swallowed	:	Rinse mouth. Get medical attention if symptoms occur.

If inhaled	:	Get medical attention if symptoms occur.
Protection of first-aiders	:	In event of emergency assess the danger before taking action. Do not put yourself at risk of injury. If in doubt, contact emergency responders. Use personal protective equipment as required.
Notes to physician	:	Treat symptomatically.
Most important symptoms and effects, both acute and delayed	:	See Section 11 for more detailed information on health effects and symptoms.

Section: 5. FIREFIGHTING MEASURES

Suitable extinguishing media	:	Use extinguishing measures that are appropriate to local circumstances and the surrounding environment.
Unsuitable extinguishing media	:	None known.
Specific hazards during firefighting	:	Not flammable or combustible.
Hazardous combustion products	:	Decomposition products may include the following materials: Carbon oxides metal oxides
Special protective equipment for firefighters	:	Use personal protective equipment.
Specific extinguishing methods	:	Fire residues and contaminated fire extinguishing water must be disposed of in accordance with local regulations.

Section: 6. ACCIDENTAL RELEASE MEASURES

Personal precautions, protective equipment and emergency procedures	:	Refer to protective measures listed in sections 7 and 8.
Environmental precautions	:	No special environmental precautions required.
Methods and materials for containment and cleaning up	:	Stop leak if safe to do so. Contain spillage, and then collect with non-combustible absorbent material, (e.g. sand, earth, diatomaceous earth, vermiculite) and place in container for disposal according to local / national regulations (see section 13). For large spills, dike spilled material or otherwise contain material to ensure runoff does not reach a waterway. Flush away traces with water.

Section: 7. HANDLING AND STORAGE

Advice on safe handling	:	For personal protection see section 8. Wash hands after handling.
Conditions for safe storage	:	Keep out of reach of children. Keep container tightly closed. Store in suitable labelled containers.

Suitable material	:	The following compatibility data is suggested based on similar product data and/or industry experience: Stainless Steel 304, Buna-N, Polypropylene, Polyethylene, CPVC (rigid), Polyurethane, HDPE (high density polyethylene), Epoxy phenolic resin, 100% phenolic resin liner The following compatibility data is suggested based on similar product data and/or industry experience: Compatibility with Plastic Materials can vary; we therefore recommend that compatibility is tested prior to use.
Unsuitable material	:	The following compatibility data is suggested based on similar product data and/or industry experience: EPDM, Brass, Neoprene, Fluoroelastomer, Chlorosulfonated polyethylene rubberThe following compatibility data is suggested based on similar product data and/or industry experience:

Section: 8. EXPOSURE CONTROLS/PERSONAL PROTECTION

Components with workplace control parameters

Contains no substances with occupational exposure limit values.

Engineering measures	:	Good general ventilation should be sufficient to control worker exposure to airborne contaminants.

Personal protective equipment

Eye protection	:	Safety glasses
Hand protection	:	Wear protective gloves. Gloves should be discarded and replaced if there is any indication of degradation or chemical breakthrough.
Skin protection	:	Wear suitable protective clothing.
Respiratory protection	:	No personal respiratory protective equipment normally required.
Hygiene measures	:	Wash hands before breaks and immediately after handling the product.

Section: 9. PHYSICAL AND CHEMICAL PROPERTIES

Appearance	:	Liquid
Colour	:	Orange fluorescent
Odour	:	odourless
Flash point	:	> 93.3 °C
pH	:	9.0 - 10.8,(100 %), (25 °C)
Odour Threshold	:	no data available
Melting point/freezing point	:	FREEZING POINT: -1.0 °C
Initial boiling point and boiling range	:	no data available
Evaporation rate	:	no data available
Flammability (solid, gas)	:	no data available
Upper explosion limit	:	no data available

Lower explosion limit	:	no data available
Vapour pressure	:	0.5 mm Hg, (38 °C),
Relative vapour density	:	no data available
Relative density	:	1.05, (25.0 °C),
Density	:	1.04 g/cm3 , 8.7 lb/gal
Water solubility	:	completely soluble
Solubility in other solvents	:	no data available
Partition coefficient: n-octanol/water	:	no data available
Auto-ignition temperature	:	no data available
Thermal decomposition	:	no data available
Viscosity, dynamic	:	7 mPa.s (25 °C)
Viscosity, kinematic	:	no data available
Molecular weight	:	no data available
VOC	:	0 %, EPA Method 24

Section: 10. STABILITY AND REACTIVITY

Chemical stability	:	Stable under normal conditions.
Possibility of hazardous reactions	:	No dangerous reaction known under conditions of normal use.
Conditions to avoid	:	Freezing temperatures.
Incompatible materials	:	None known.
Hazardous decomposition products	:	Decomposition products may include the following materials: Carbon oxides metal oxides

Section: 11. TOXICOLOGICAL INFORMATION

Information on likely routes of exposure	:	Inhalation, Eye contact, Skin contact

Potential Health Effects

Eyes	:	Health injuries are not known or expected under normal use.
Skin	:	Health injuries are not known or expected under normal use.
Ingestion	:	Health injuries are not known or expected under normal use.
Inhalation	:	Health injuries are not known or expected under normal use.
Chronic Exposure	:	Health injuries are not known or expected under normal use.

Experience with human exposure

Eye contact	:	No symptoms known or expected.
Skin contact	:	No symptoms known or expected.
Ingestion	:	No symptoms known or expected.
Inhalation	:	No symptoms known or expected.

Toxicity

Product

Acute oral toxicity	:	Acute toxicity estimate: > 5,000 mg/kg
Acute inhalation toxicity	:	no data available
Acute dermal toxicity	:	Acute toxicity estimate: > 5,000 mg/kg
Skin corrosion/irritation	:	no data available
Serious eye damage/eye irritation	:	no data available
Respiratory or skin sensitisation	:	no data available
Carcinogenicity	:	no data available
Reproductive effects	:	no data available
Germ cell mutagenicity	:	no data available
Teratogenicity	:	no data available
STOT - single exposure	:	no data available
STOT - repeated exposure	:	no data available
Aspiration toxicity	:	no data available

Section: 12. ECOLOGICAL INFORMATION

Ecotoxicity

Environmental Effects	:	This product has no known ecotoxicological effects.

Product

Toxicity to fish	:	LC50 Pimephales promelas (fathead minnow): 3,624 mg/l Exposure time: 96 hrs Test substance: Product LC50 Oncorhynchus mykiss (rainbow trout): > 5,000 mg/l Exposure time: 96 hrs Test substance: Product NOEC Pimephales promelas (fathead minnow): 2,500 mg/l Exposure time: 96 hrs Test substance: Product

		NOEC Oncorhynchus mykiss (rainbow trout): > 5,000 mg/l Exposure time: 96 hrs Test substance: Product
Toxicity to daphnia and other aquatic invertebrates	:	EC50 Daphnia magna (Water flea): 2,973 mg/l Exposure time: 48 hrs Test substance: Product NOEC Daphnia magna (Water flea): 2,500 mg/l Exposure time: 48 hrs Test substance: Product
Toxicity to fish (Chronic toxicity)	:	EC25 / IC25: 4,997 mg/l Exposure time: 7 Days Species: Fathead Minnow Test substance: Product LOEC: > 6,000 mg/l Exposure time: 7 Days Species: Fathead Minnow Test substance: Product LOEC: 6,000 mg/l Exposure time: 7 Days Species: Fathead Minnow Test substance: Product NOEC: 6,000 mg/l Exposure time: 7 Days Species: Fathead Minnow Test substance: Product NOEC: 3,000 mg/l Exposure time: 7 Days Species: Fathead Minnow Test substance: Product
Toxicity to daphnia and other aquatic invertebrates (Chronic toxicity)	:	LOEC: 6,000 mg/l Exposure time: 21 Days Species: Daphnia magna Test substance: Product LOEC: 6,000 mg/l Exposure time: 21 Days Species: Daphnia magna Test substance: Product EC25 / IC25: 3,318 mg/l Exposure time: 21 Days Species: Daphnia magna Test substance: Product NOEC: 3,000 mg/l Exposure time: 21 Days

Species: Daphnia magna
Test substance: Product

NOEC: 3,000 mg/l
Exposure time: 21 Days
Species: Daphnia magna
Test substance: Product

Persistence and degradability

The organic portion of this preparation is expected to be inherently biodegradable.

Chemical Oxygen Demand (COD): 96,000 mg/l

Biochemical Oxygen Demand (BOD):

Incubation Period	Value	Test Descriptor
5 d	111 mg/l	Product

Mobility

The environmental fate was estimated using a level III fugacity model embedded in the EPI (estimation program interface) Suite TM, provided by the US EPA. The model assumes a steady state condition between the total input and output. The level III model does not require equilibrium between the defined media. The information provided is intended to give the user a general estimate of the environmental fate of this product under the defined conditions of the models.
If released into the environment this material is expected to distribute to the air, water and soil/sediment in the approximate respective percentages;

Air	:	<5%
Water	:	10 - 30%
Soil	:	70 - 90%

The portion in water is expected to be soluble or dispersible.

Bioaccumulative potential

This preparation or material is not expected to bioaccumulate.

Other information

no data available

Section: 13. DISPOSAL CONSIDERATIONS

If this product becomes a waste, it is not a hazardous waste as defined by the Resource Conservation and Recovery Act (RCRA) 40 CFR 261, since it does not have the characteristics of Subpart C, nor is it listed under Subpart D.

Disposal methods	:	Where possible recycling is preferred to disposal or incineration. If recycling is not practicable, dispose of in compliance with local regulations. Dispose of wastes in an approved waste disposal facility.
Disposal considerations	:	Dispose of as unused product. Empty containers should be taken to an approved waste handling site for recycling or disposal. Do not re-use empty containers.

Section: 14. TRANSPORT INFORMATION

The shipper/consignor/sender is responsible to ensure that the packaging, labeling, and markings are in compliance with the selected mode of transport.

Land transport (DOT)

Proper shipping name : PRODUCT IS NOT REGULATED DURING TRANSPORTATION

Air transport (IATA)

Proper shipping name : PRODUCT IS NOT REGULATED DURING TRANSPORTATION

Sea transport (IMDG/IMO)

Proper shipping name : PRODUCT IS NOT REGULATED DURING TRANSPORTATION

Section: 15. REGULATORY INFORMATION

TSCA list : Not relevant

EPCRA - Emergency Planning and Community Right-to-Know Act

CERCLA Reportable Quantity

This material does not contain any components with a CERCLA RQ.

SARA 304 Extremely Hazardous Substances Reportable Quantity

This material does not contain any components with a section 304 EHS RQ.

SARA 311/312 Hazards : No SARA Hazards

SARA 302 : No chemicals in this material are subject to the reporting requirements of SARA Title III, Section 302.

SARA 313 : This material does not contain any chemical components with known CAS numbers that exceed the threshold (De Minimis) reporting levels established by SARA Title III, Section 313.

California Prop 65

This product does not contain any chemicals known to State of California to cause cancer, birth defects, or any other reproductive harm.

INTERNATIONAL CHEMICAL CONTROL LAWS :

United States TSCA Inventory

The substances in this preparation are included on or exempted from the TSCA 8(b) Inventory (40 CFR 710)

Australia. Industrial Chemical (Notification and Assessment) Act

All substances in this product comply with the National Industrial Chemicals Notification & Assessment Scheme (NICNAS).

Canadian Domestic Substances List (DSL)

The substance(s) in this preparation are included in or exempted from the Domestic Substance List (DSL).

Japan. ENCS - Existing and New Chemical Substances Inventory

All substances in this product comply with the Law Regulating the Manufacture and Importation Of Chemical Substances and are listed on the Existing and New Chemical Substances list (ENCS).

Korea. Korean Existing Chemicals Inventory (KECI)
This product contains substance(s) which are not in compliance with the Chemical Control Act (CCA) and may require additional review.

Philippines Inventory of Chemicals and Chemical Substances (PICCS)
All substances in this product comply with the Republic Act 6969 (RA 6969) and are listed on the Philippines Inventory of Chemicals & Chemical Substances (PICCS).

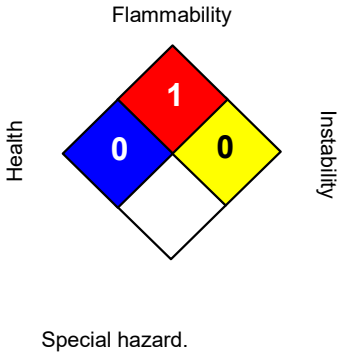
China Inventory of Existing Chemical Substances
All substances in this product comply with the Provisions on the Environmental Administration of New Chemical Substances and are listed on or exempt from the Inventory of Existing Chemical Substances China (IECSC).

New Zealand. Inventory of Chemicals (NZIoC), as published by ERMA New Zealand
All substances in this product comply with the Hazardous Substances and New Organisms (HSNO) Act 1996,and are listed on or are exempt from the New Zealand Inventory of Chemicals.

Taiwan Chemical Substance Inventory
All substances in this product comply with the Taiwan Existing Chemical Substances Inventory (ECSI).

Section: 16. OTHER INFORMATION

NFPA:



HMIS III:

HEALTH	0
FLAMMABILITY	1
PHYSICAL HAZARD	0

0 = not significant, 1 =Slight,
2 = Moderate, 3 = High
4 = Extreme, * = Chronic

Revision Date	:	03/06/2018
Version Number	:	1.2
Prepared By	:	Regulatory Affairs

REVISED INFORMATION: Significant changes to regulatory or health information for this revision is indicated by a bar in the left-hand margin of the SDS.

The information provided in this Safety Data Sheet is correct to the best of our knowledge, information and belief at the date of its publication. The information given is designed only as a guidance for safe handling, use, processing, storage, transportation, disposal and release and is not to be considered a warranty or quality specification. The information relates only to the specific material designated and may not be valid for such material used in combination with any other materials or in any process, unless specified in the text.
For additional copies of an SDS visit www.nalco.com and request access.

NALCO Water
An Ecolab Company

SAFETY DATA SHEET

ELIMIN-OX™

Section: 1. PRODUCT AND COMPANY IDENTIFICATION

Product name	:	ELIMIN-OX™
Other means of identification	:	Not applicable.
Recommended use	:	OXYGEN SCAVENGER
Restrictions on use	:	Refer to available product literature or ask your local Sales Representative for restrictions on use and dose limits.
Company	:	Nalco Company 1601 W. Diehl Road Naperville, Illinois 60563-1198 USA TEL: (630)305-1000
Emergency telephone number	:	(800) 424-9300 (24 Hours) CHEMTREC
Issuing date	:	07/27/2018

Section: 2. HAZARDS IDENTIFICATION

GHS Classification

Skin sensitization : Category 1

GHS Label element

Hazard pictograms :

Signal Word : Warning

Hazard Statements : May cause an allergic skin reaction.

Precautionary Statements : **Prevention:**
Avoid breathing dust/ fume/ gas/ mist/ vapours/ spray. Contaminated work clothing should not be allowed out of the workplace. Wear protective gloves/ eye protection/ face protection.
Response:
IF ON SKIN: Wash with plenty of soap and water. If skin irritation or rash occurs: Get medical advice/ attention. Wash contaminated clothing before reuse.
Disposal:
Dispose of contents/ container to an approved waste disposal plant.

Other hazards : None known.

Section: 3. COMPOSITION/INFORMATION ON INGREDIENTS

Pure substance/mixture : Mixture

Chemical Name	CAS-No.	Concentration: (%)
Modified amino compound	Proprietary	5 - 10

Section: 4. FIRST AID MEASURES

In case of eye contact	:	Rinse with plenty of water. Get medical attention if symptoms occur.
In case of skin contact	:	Wash off immediately with plenty of water for at least 15 minutes. Use a mild soap if available. Wash clothing before reuse. Thoroughly clean shoes before reuse. Get medical attention.
If swallowed	:	Rinse mouth. Get medical attention if symptoms occur.
If inhaled	:	Get medical attention if symptoms occur.
Protection of first-aiders	:	In event of emergency assess the danger before taking action. Do not put yourself at risk of injury. If in doubt, contact emergency responders. Use personal protective equipment as required.
Notes to physician	:	Treat symptomatically.
Most important symptoms and effects, both acute and delayed	:	See Section 11 for more detailed information on health effects and symptoms.

Section: 5. FIREFIGHTING MEASURES

Suitable extinguishing media	:	Use extinguishing measures that are appropriate to local circumstances and the surrounding environment.
Unsuitable extinguishing media	:	None known.
Specific hazards during firefighting	:	Not flammable or combustible.
Hazardous combustion products	:	Carbon oxides nitrogen oxides (NOx)
Special protective equipment for firefighters	:	Use personal protective equipment.
Specific extinguishing methods	:	Fire residues and contaminated fire extinguishing water must be disposed of in accordance with local regulations. In the event of fire and/or explosion do not breathe fumes.

Section: 6. ACCIDENTAL RELEASE MEASURES

Personal precautions, protective equipment and emergency procedures	:	Ensure clean-up is conducted by trained personnel only. Refer to protective measures listed in sections 7 and 8.
Environmental precautions	:	Do not allow contact with soil, surface or ground water.

Methods and materials for containment and cleaning up	:	Stop leak if safe to do so. Contain spillage, and then collect with non-combustible absorbent material, (e.g. sand, earth, diatomaceous earth, vermiculite) and place in container for disposal according to local / national regulations (see section 13). For large spills, dike spilled material or otherwise contain material to ensure runoff does not reach a waterway. Flush away traces with water.

Section: 7. HANDLING AND STORAGE

Advice on safe handling	:	Do not get in eyes, on skin, or on clothing. Wash hands thoroughly after handling. Use only with adequate ventilation.
Conditions for safe storage	:	Keep out of reach of children. Keep container tightly closed. Store in suitable labelled containers.
Suitable material	:	Keep in properly labelled containers.
Unsuitable material	:	The following compatibility data is suggested based on similar product data and/or industry experience: Shipping and long term storage compatibility with construction materials can vary; we therefore recommend that compatibility is tested prior to use.

Section: 8. EXPOSURE CONTROLS/PERSONAL PROTECTION

Components with workplace control parameters

Contains no substances with occupational exposure limit values.

Engineering measures	:	Effective exhaust ventilation system. Maintain air concentrations below occupational exposure standards.

Personal protective equipment

Eye protection	:	Safety glasses
Hand protection	:	Wear the following personal protective equipment: butyl-rubber Gloves should be discarded and replaced if there is any indication of degradation or chemical breakthrough.
Skin protection	:	Wear suitable protective clothing.
Respiratory protection	:	No personal respiratory protective equipment normally required. In the case of vapour formation use a respirator with an approved filter.
Hygiene measures	:	Handle in accordance with good industrial hygiene and safety practice. Remove and wash contaminated clothing before re-use. Wash face, hands and any exposed skin thoroughly after handling.

Section: 9. PHYSICAL AND CHEMICAL PROPERTIES

Appearance	:	Liquid
Colour	:	colourless

Odour	:	odourless
Flash point	:	Will not burn: inorganic or water-based product
pH	:	8.5 - 10,(1 %), Method: ASTM E 70
Odour Threshold	:	no data available
Melting point/freezing point	:	Freezing Point: -2 °C
Initial boiling point and boiling range	:	no data available
Evaporation rate	:	no data available
Flammability (solid, gas)	:	no data available
Upper explosion limit	:	no data available
Lower explosion limit	:	no data available
Vapour pressure	:	12 mm Hg, (20 °C),
Relative vapour density	:	no data available
Relative density	:	1.02, (20 °C),
Density	:	8.5 - 8.6 lb/gal
Water solubility	:	completely soluble
Solubility in other solvents	:	no data available
Partition coefficient: n-octanol/water	:	no data available
Auto-ignition temperature	:	no data available
Thermal decomposition	:	no data available
Viscosity, dynamic	:	2.9 mPa.s (15.6 °C)
Viscosity, kinematic	:	no data available
Molecular weight	:	no data available
VOC	:	no data available

Section: 10. STABILITY AND REACTIVITY

Chemical stability	:	Stable under normal conditions.
Possibility of hazardous reactions	:	No dangerous reaction known under conditions of normal use.
Conditions to avoid	:	At temperatures below 4 °C (40 °F), this product loses its stability and forms precipitates. Once formed, the precipitate cannot be resolubilized and loss of product activity will occur. Storage temperature must be above 58 °F (14 °C) and below 90 °F (32 °C) to prevent crystallization at low temperatures and instability at high temperatures.
Incompatible materials	:	None known.
Hazardous decomposition products	:	In case of fire, hazardous decomposition products may be produced such as: Carbon oxides

nitrogen oxides (NOx)

Section: 11. TOXICOLOGICAL INFORMATION

Information on likely routes of exposure : Inhalation, Eye contact, Skin contact

Potential Health Effects

Eyes : Health injuries are not known or expected under normal use.

Skin : May cause allergic skin reaction.

Ingestion : Health injuries are not known or expected under normal use.

Inhalation : Health injuries are not known or expected under normal use.

Chronic Exposure : Health injuries are not known or expected under normal use.

Experience with human exposure

Eye contact : No symptoms known or expected.

Skin contact : Redness, Irritation, Allergic reactions

Ingestion : No symptoms known or expected.

Inhalation : No symptoms known or expected.

Toxicity

Product

Acute oral toxicity : LD50 rat: > 5,000 mg/kg
Test substance: Product

Acute inhalation toxicity : no data available

Acute dermal toxicity : LD50 rabbit: > 2,000 mg/kg
Test substance: Product

Skin corrosion/irritation : Species: Rabbit
Result: 0.2
Method: Draize Test
Test substance: Product

Serious eye damage/eye irritation : Species: rabbit
Result: 0.3
Method: Draize Test
Test substance: Product

Respiratory or skin sensitization : no data available

Carcinogenicity : no data available

Reproductive effects : no data available

Germ cell mutagenicity : no data available

Teratogenicity	:	no data available
STOT - single exposure	:	no data available
STOT - repeated exposure	:	no data available
Aspiration toxicity	:	no data available

Section: 12. ECOLOGICAL INFORMATION

Ecotoxicity

Environmental Effects : This product has no known ecotoxicological effects.

Product

Toxicity to fish : LC50 Oncorhynchus mykiss (rainbow trout): 360 mg/l
Exposure time: 96 hrs
Test substance: Product

LC50 Lepomis macrochirus (Bluegill sunfish): 190 mg/l
Exposure time: 96 hrs
Test substance: Product

LC50 Pimephales promelas (fathead minnow): 400 mg/l
Exposure time: 96 hrs
Test substance: Product

NOEC Pimephales promelas (fathead minnow): 100 mg/l
Exposure time: 96 hrs
Test substance: Product

Toxicity to daphnia and other aquatic invertebrates : LC50 Daphnia magna (Water flea): 96 mg/l
Exposure time: 48 hrs
Test substance: Product

NOEC Daphnia magna (Water flea): 20 mg/l
Exposure time: 48 hrs
Test substance: Product

Toxicity to algae : EC50 Skeletonema costatum (marine diatom): 4.4 mg/l
Exposure time: 72 hrs
Test substance: Active Substance

Components

Toxicity to bacteria : Modified amino compound
230 mg/l

Components

Toxicity to daphnia and other aquatic invertebrates (Chronic toxicity) : Modified amino compound
NOEC: 0.98 mg/l
Exposure time: 7 d

Persistence and degradability

The organic portion of this preparation is expected to be readily biodegradable.

Chemical Oxygen Demand (COD): 24,000 mg/l

Mobility

The environmental fate was estimated using a level III fugacity model embedded in the EPI (estimation program interface) Suite TM, provided by the US EPA. The model assumes a steady state condition between the total input and output. The level III model does not require equilibrium between the defined media. The information provided is intended to give the user a general estimate of the environmental fate of this product under the defined conditions of the models.
If released into the environment this material is expected to distribute to the air, water and soil/sediment in the approximate respective percentages;

Air	:	<5%
Water	:	30 - 50%
Soil	:	50 - 70%

The portion in water is expected to be soluble or dispersible.

Bioaccumulative potential

This preparation or material is not expected to bioaccumulate.

Other information

no data available

Section: 13. DISPOSAL CONSIDERATIONS

If this product becomes a waste, it is not a hazardous waste as defined by the Resource Conservation and Recovery Act (RCRA) 40 CFR 261, since it does not have the characteristics of Subpart C, nor is it listed under Subpart D.

Disposal methods	:	Where possible recycling is preferred to disposal or incineration. If recycling is not practicable, dispose of in compliance with local regulations. Dispose of wastes in an approved waste disposal facility.
Disposal considerations	:	Dispose of as unused product. Empty containers should be taken to an approved waste handling site for recycling or disposal. Do not re-use empty containers.

Section: 14. TRANSPORT INFORMATION

The shipper/consignor/sender is responsible to ensure that the packaging, labeling, and markings are in compliance with the selected mode of transport.

The presence of an RQ component (Reportable Quantity for U.S. DOT) in this product causes it to be regulated with an additional description of RQ for road, or as Environmentally hazardous for road and air, ONLY when the net weight in the package exceeds the calculated RQ for the product.

Land transport (DOT)

Proper shipping name	:	ENVIRONMENTALLY HAZARDOUS SUBSTANCE, LIQUID, N.O.S.
Technical name(s)	:	Hydrazine
UN/ID No.	:	UN 3082

Transport hazard class(es)	:	9
Packing group	:	III
Reportable Quantity (per package)	:	10,000 lbs
RQ Component	:	Hydrazine

Air transport (IATA)

Proper shipping name	:	PRODUCT IS NOT REGULATED DURING TRANSPORTATION

Sea transport (IMDG/IMO)

Proper shipping name	:	PRODUCT IS NOT REGULATED DURING TRANSPORTATION

Section: 15. REGULATORY INFORMATION

TSCA list	:	No substances are subject to a Significant New Use Rule. No substances are subject to TSCA 12(b) export notification requirements.
SARA 311/312 Hazards	:	Acute Health Hazard
SARA 302	:	No chemicals in this material are subject to the reporting requirements of SARA Title III, Section 302.
SARA 313	:	This material does not contain any chemical components with known CAS numbers that exceed the threshold (De Minimis) reporting levels established by SARA Title III, Section 313.

California Prop 65
This product does not contain any chemicals known to State of California to cause cancer, birth defects, or any other reproductive harm.

INTERNATIONAL CHEMICAL CONTROL LAWS :

United States TSCA Inventory
The substances in this preparation are included on or exempted from the TSCA 8(b) Inventory (40 CFR 710)

Australia. Industrial Chemical (Notification and Assessment) Act
All substances in this product comply with the National Industrial Chemicals Notification & Assessment Scheme (NICNAS).

Canadian Domestic Substances List (DSL)
The substance(s) in this preparation are included in or exempted from the Domestic Substance List (DSL).

Japan. ENCS - Existing and New Chemical Substances Inventory
All substances in this product comply with the Law Regulating the Manufacture and Importation Of Chemical Substances and are listed on the Existing and New Chemical Substances list (ENCS).

Korea. Korean Existing Chemicals Inventory (KECI)
All substances in this product comply with the Chemical Control Act (CCA) and are listed on the Existing Chemicals List (ECL)

Philippines Inventory of Chemicals and Chemical Substances (PICCS)

All substances in this product comply with the Republic Act 6969 (RA 6969) and are listed on the Philippines Inventory of Chemicals & Chemical Substances (PICCS).

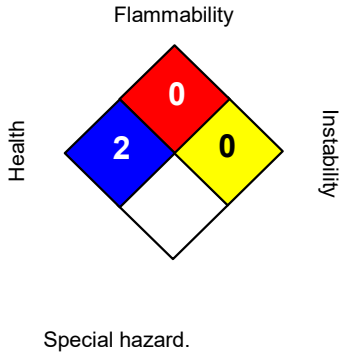
China Inventory of Existing Chemical Substances
All substances in this product comply with the Provisions on the Environmental Administration of New Chemical Substances and are listed on or exempt from the Inventory of Existing Chemical Substances China (IECSC).

New Zealand. Inventory of Chemicals (NZIoC), as published by ERMA New Zealand
All substances in this product comply with the Hazardous Substances and New Organisms (HSNO) Act 1996,and are listed on or are exempt from the New Zealand Inventory of Chemicals.

Taiwan Chemical Substance Inventory
All substances in this product comply with the Taiwan Existing Chemical Substances Inventory (ECSI).

Section: 16. OTHER INFORMATION

NFPA:



HMIS III:

HEALTH	2*
FLAMMABILITY	0
PHYSICAL HAZARD	0

0 = not significant, 1 =Slight,
2 = Moderate, 3 = High
4 = Extreme, * = Chronic

Revision Date	:	07/27/2018
Version Number	:	1.8
Prepared By	:	Regulatory Affairs

REVISED INFORMATION: Significant changes to regulatory or health information for this revision is indicated by a bar in the left-hand margin of the SDS.

The information provided in this Safety Data Sheet is correct to the best of our knowledge, information and belief at the date of its publication. The information given is designed only as a guidance for safe handling, use, processing, storage, transportation, disposal and release and is not to be considered a warranty or quality specification. The information relates only to the specific material designated and may not be valid for such material used in combination with any other materials or in any process, unless specified in the text.
For additional copies of an SDS visit www.nalco.com and request access.

NALCO Water
An Ecolab Company

SAFETY DATA SHEET

Tri-ACT™ 1800

Section: 1. PRODUCT AND COMPANY IDENTIFICATION

Product name	:	Tri-ACT™ 1800
Other means of identification	:	Not applicable.
Recommended use	:	CORROSION INHIBITOR
Restrictions on use	:	Refer to available product literature or ask your local Sales Representative for restrictions on use and dose limits.
Company	:	Nalco Company 1601 W. Diehl Road Naperville, Illinois 60563-1198 USA TEL: (630)305-1000
Emergency telephone number	:	(800) 424-9300 (24 Hours) CHEMTREC
Issuing date	:	11/10/2017

Section: 2. HAZARDS IDENTIFICATION

GHS Classification

Flammable liquids	:	Category 3
Acute toxicity (Oral)	:	Category 4
Acute toxicity (Dermal)	:	Category 4
Skin corrosion	:	Category 1
Serious eye damage	:	Category 1
Skin sensitization	:	Category 1
Reproductive toxicity	:	Category 2
Specific target organ toxicity - single exposure	:	Category 3 (Respiratory system)

GHS Label element

Hazard pictograms :

Signal Word : Danger

Hazard Statements : Flammable liquid and vapour.
Harmful if swallowed or in contact with skin
Causes severe skin burns and eye damage.
May cause an allergic skin reaction.
May cause respiratory irritation.
Suspected of damaging fertility or the unborn child.

Precautionary Statements : **Prevention:**
Keep away from heat/sparks/open flames/hot surfaces. - No smoking.
Ground/bond container and receiving equipment. Take precautionary measures

against static discharge. Avoid breathing dust/ fume/ gas/ mist/ vapours/ spray. Wear protective gloves/ protective clothing/ eye protection/ face protection.
Response:
IF SWALLOWED: Call a POISON CENTER or doctor/ physician if you feel unwell. Rinse mouth.IF SWALLOWED: Rinse mouth. Do NOT induce vomiting.IF ON SKIN (or hair): Take off immediately all contaminated clothing. Rinse skin with water/shower.IF INHALED: Remove person to fresh air and keep comfortable for breathing. Immediately call a POISON CENTER/doctor.IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing. Immediately call a POISON CENTER or doctor/ physician.

Other hazards : None known.

Section: 3. COMPOSITION/INFORMATION ON INGREDIENTS

Chemical Name	CAS-No.	Concentration: (%)
Monoethanolamine	141-43-5	10 - 30
Methoxypropylamine	5332-73-0	10 - 30
Cyclohexylamine	108-91-8	5 - 10

Section: 4. FIRST AID MEASURES

In case of eye contact : Rinse immediately with plenty of water, also under the eyelids, for at least 15 minutes. Remove contact lenses, if present and easy to do. Continue rinsing. Get medical attention immediately.

In case of skin contact : Wash off immediately with plenty of water for at least 15 minutes. Use a mild soap if available. Wash clothing before reuse. Thoroughly clean shoes before reuse. Get medical attention immediately.

If swallowed : Rinse mouth with water. Do NOT induce vomiting. Never give anything by mouth to an unconscious person. Get medical attention immediately.

If inhaled : Remove to fresh air. Treat symptomatically. Get medical attention if symptoms occur.

Protection of first-aiders : In event of emergency assess the danger before taking action. Do not put yourself at risk of injury. If in doubt, contact emergency responders. Use personal protective equipment as required.

Notes to physician : Treat symptomatically.

Most important symptoms and effects, both acute and delayed : See Section 11 for more detailed information on health effects and symptoms.

Section: 5. FIREFIGHTING MEASURES

Suitable extinguishing media : Foam
Carbon dioxide
Dry powder
Other extinguishing agent suitable for Class B fires

		For large fires, use water spray or fog, thoroughly drenching the burning material.
Unsuitable extinguishing media	:	None known.
Specific hazards during firefighting	:	Fire Hazard Keep away from heat and sources of ignition. Flash back possible over considerable distance. Beware of vapours accumulating to form explosive concentrations. Vapours can accumulate in low areas.
Hazardous combustion products	:	Decomposition products may include the following materials: Carbon oxides nitrogen oxides (NOx)
Special protective equipment for firefighters	:	Use personal protective equipment.
Specific extinguishing methods	:	Use water spray to cool unopened containers. Fire residues and contaminated fire extinguishing water must be disposed of in accordance with local regulations. In the event of fire and/or explosion do not breathe fumes.

Section: 6. ACCIDENTAL RELEASE MEASURES

Personal precautions, protective equipment and emergency procedures	:	Ensure adequate ventilation. Remove all sources of ignition. Keep people away from and upwind of spill/leak. Avoid inhalation, ingestion and contact with skin and eyes. When workers are facing concentrations above the exposure limit they must use appropriate certified respirators. Ensure clean-up is conducted by trained personnel only. Refer to protective measures listed in sections 7 and 8.
Environmental precautions	:	Do not allow contact with soil, surface or ground water.
Methods and materials for containment and cleaning up	:	Eliminate all ignition sources if safe to do so. Stop leak if safe to do so. Contain spillage, and then collect with non-combustible absorbent material, (e.g. sand, earth, diatomaceous earth, vermiculite) and place in container for disposal according to local / national regulations (see section 13). For large spills, dike spilled material or otherwise contain material to ensure runoff does not reach a waterway. Flush away traces with water.

Section: 7. HANDLING AND STORAGE

Advice on safe handling	:	Take necessary action to avoid static electricity discharge (which might cause ignition of organic vapours). Do not ingest. Keep away from fire, sparks and heated surfaces. Do not breathe dust/fume/gas/mist/vapours/spray. Do not get in eyes, on skin, or on clothing. Wash hands thoroughly after handling. Use only with adequate ventilation.
Conditions for safe storage	:	Keep away from heat and sources of ignition. Keep in a cool, well-ventilated place. Do not store near acids. Keep away from oxidizing agents. Keep out of reach of children. Keep container tightly closed. Store in suitable labelled containers.

Suitable material : The following compatibility data is suggested based on similar product data and/or industry experience: HDPE (high density polyethylene), Polypropylene (rigid), Stainless Steel 304, Surface-modified HDPE (high density polyethylene), Perfluoroelastomer, Fluoroelastomer, Compatibility with Plastic Materials can vary; we therefore recommend that compatibility is tested prior to use.

Unsuitable material : The following compatibility data is suggested based on similar product data and/or industry experience: Carbon Steel C1018, Epoxyresin coating

Section: 8. EXPOSURE CONTROLS/PERSONAL PROTECTION

Components with workplace control parameters

Components	CAS-No.	Form of exposure	Permissible concentration	Basis
Monoethanolamine	141-43-5	TWA	3 ppm	ACGIH
		STEL	6 ppm	ACGIH
		TWA	3 ppm 8 mg/m3	NIOSH REL
		STEL	6 ppm 15 mg/m3	NIOSH REL
		TWA	3 ppm 6 mg/m3	OSHA Z1
Methoxypropylamine	5332-73-0	TWA	5 ppm	AIHA WEEL
		STEL	15 ppm	AIHA WEEL
Cyclohexylamine	108-91-8	TWA	10 ppm	ACGIH
		TWA	10 ppm 40 mg/m3	NIOSH REL

Engineering measures : Effective exhaust ventilation system. Maintain air concentrations below occupational exposure standards.

Personal protective equipment

Eye protection : Safety goggles
Face-shield

Hand protection : Wear protective gloves.
Gloves should be discarded and replaced if there is any indication of degradation or chemical breakthrough.

Skin protection : Personal protective equipment comprising: suitable protective gloves, safety goggles and protective clothing

Respiratory protection : When workers are facing concentrations above the exposure limit they must use appropriate certified respirators.

Hygiene measures : Handle in accordance with good industrial hygiene and safety practice. Remove and wash contaminated clothing before re-use. Wash face, hands and any exposed skin thoroughly after handling. Provide suitable facilities for quick drenching or flushing of the eyes and body in case of contact or splash hazard.

Section: 9. PHYSICAL AND CHEMICAL PROPERTIES

Appearance	:	Liquid
Colour	:	colourless
Odour	:	amine-like
Flash point	:	57 °C, Method: ASTM D 93, Pensky-Martens closed cup
pH	:	12.4 - 13.4,(100 %), Method: ASTM E 70
Odour Threshold	:	no data available
Melting point/freezing point	:	FREEZING POINT: -13.3 °C, ASTM D-1177
Initial boiling point and boiling range	:	no data available
Evaporation rate	:	no data available
Flammability (solid, gas)	:	no data available
Upper explosion limit	:	no data available
Lower explosion limit	:	no data available
Vapour pressure	:	28 mm Hg, (37.7 °C), 11 mm Hg, (68 °C),
Relative vapour density	:	no data available
Relative density	:	0.99 - 1.0, (25 °C), ASTM D-1298
Density	:	8.2 - 8.3 lb/gal
Water solubility	:	completely soluble
Solubility in other solvents	:	no data available
Partition coefficient: n-octanol/water	:	no data available
Auto-ignition temperature	:	no data available
Thermal decomposition	:	no data available
Viscosity, dynamic	:	5 mPa.s (25 °C), Method: ASTM D 2983
Viscosity, kinematic	:	no data available
Molecular weight	:	no data available
VOC	:	no data available

Section: 10. STABILITY AND REACTIVITY

Chemical stability	:	Stable under normal conditions.
Possibility of hazardous reactions	:	No dangerous reaction known under conditions of normal use.
Conditions to avoid	:	Heat, flames and sparks.
Incompatible materials	:	Strong oxidizing agents Strong acids

Hazardous decomposition products	:	Decomposition products may include the following materials: Carbon oxides nitrogen oxides (NOx)

Section: 11. TOXICOLOGICAL INFORMATION

Information on likely routes of exposure	:	Inhalation, Eye contact, Skin contact

Potential Health Effects

Eyes	:	Causes serious eye damage.
Skin	:	Harmful in contact with skin. Causes severe skin burns. May cause allergic skin reaction.
Ingestion	:	Harmful if swallowed. Causes digestive tract burns.
Inhalation	:	May cause respiratory tract irritation. May cause nose, throat, and lung irritation.
Chronic Exposure	:	Suspected of damaging fertility or the unborn child.

Experience with human exposure

Eye contact	:	Redness, Pain, Corrosion
Skin contact	:	Redness, Pain, Irritation, Corrosion, Allergic reactions
Ingestion	:	Corrosion, Abdominal pain
Inhalation	:	Respiratory irritation, Cough

Toxicity

Product

Acute oral toxicity	:	no data available
Acute inhalation toxicity	:	Acute toxicity estimate: 10 mg/l Exposure time: 4 h Test atmosphere: dust/mist
Acute dermal toxicity	:	rabbit: > 2,000 mg/kg Test substance: Product Acute toxicity estimate: 1,723 mg/kg
Skin corrosion/irritation	:	no data available
Serious eye damage/eye irritation	:	no data available
Respiratory or skin sensitization	:	no data available
Carcinogenicity	:	no data available
Reproductive effects	:	Prolonged exposure to cyclohexylamine in the diet has produced reproductive effects in rats. The relevance to humans is unknown.

Germ cell mutagenicity	:	no data available
Teratogenicity	:	no data available
STOT - single exposure	:	no data available
STOT - repeated exposure	:	no data available
Aspiration toxicity	:	no data available

Components

Acute oral toxicity : Monoethanolamine
LD50 rat: 1,089 mg/kg

Methoxypropylamine
LD50 rat: 688 mg/kg

Cyclohexylamine
LD50 rat: 432 mg/kg

Section: 12. ECOLOGICAL INFORMATION

Ecotoxicity

Environmental Effects : This product has no known ecotoxicological effects.

Product

Toxicity to fish : LC50 Pimephales promelas (fathead minnow): 194 mg/l
Exposure time: 96 hrs
Test substance: Product

LC50 Oncorhynchus mykiss (rainbow trout): 200 mg/l
Exposure time: 96 hrs
Test substance: Product

LC50 Inland Silverside: 1,464.3 mg/l
Exposure time: 96 hrs
Test substance: Product

NOEC Pimephales promelas (fathead minnow): 150 mg/l
Exposure time: 96 hrs
Test substance: Product

NOEC Oncorhynchus mykiss (rainbow trout): 150 mg/l
Exposure time: 96 hrs
Test substance: Product

Toxicity to daphnia and other aquatic invertebrates : LC50 Daphnia magna (Water flea): 326 mg/l
Exposure time: 48 hrs
Test substance: Product

LC50 Mysid Shrimp (Mysidopsis bahia): 614.0 mg/l
Exposure time: 96 hrs
Test substance: Product

EC50 Daphnia magna (Water flea): 250 - 400 mg/l
Exposure time: 48 hrs

Test substance: Product

NOEC Daphnia magna (Water flea): 250 mg/l
Exposure time: 48 hrs
Test substance: Product

NOEC Mysid Shrimp (Mysidopsis bahia): 250 mg/l
Exposure time: 96 hrs
Test substance: Product

Components

Toxicity to algae : Methoxypropylamine
EC50 : 31 mg/l
Exposure time: 72 h

Persistence and degradability

The organic portion of this preparation is expected to be readily biodegradable.

Chemical Oxygen Demand (COD): 524,000 mg/l

Mobility

The environmental fate was estimated using a level III fugacity model embedded in the EPI (estimation program interface) Suite TM, provided by the US EPA. The model assumes a steady state condition between the total input and output. The level III model does not require equilibrium between the defined media. The information provided is intended to give the user a general estimate of the environmental fate of this product under the defined conditions of the models.
If released into the environment this material is expected to distribute to the air, water and soil/sediment in the approximate respective percentages;

Air	:	<5%
Water	:	30 - 50%
Soil	:	50 - 70%

The portion in water is expected to be soluble or dispersible.

Bioaccumulative potential

This preparation or material is not expected to bioaccumulate.

Other information

no data available

Section: 13. DISPOSAL CONSIDERATIONS

If this product becomes a waste, it could meet the criteria of a hazardous waste as defined by the Resource Conservation and Recovery Act (RCRA) 40 CFR 261. Before disposal, it should be determined if the waste meets the criteria of a hazardous waste.

Hazardous Waste: : D001, D002

Disposal methods : Where possible recycling is preferred to disposal or

incineration. If recycling is not practicable, dispose of in compliance with local regulations. Dispose of wastes in an approved waste disposal facility.

Disposal considerations : Dispose of as unused product. Empty containers should be taken to an approved waste handling site for recycling or disposal. Do not re-use empty containers.

Section: 14. TRANSPORT INFORMATION

The shipper/consignor/sender is responsible to ensure that the packaging, labeling, and markings are in compliance with the selected mode of transport.

Land transport (DOT)

Proper shipping name : AMINES, LIQUID, CORROSIVE, FLAMMABLE, N.O.S.
Technical name(s) : METHOXYPROPYLAMINE, CYCLOHEXYLAMINE
UN/ID No. : UN 2734
Transport hazard class(es) : 8, 3
Packing group : II

Air transport (IATA)

Proper shipping name : AMINES, LIQUID, CORROSIVE, FLAMMABLE, N.O.S.
Technical name(s) : METHOXYPROPYLAMINE, CYCLOHEXYLAMINE
UN/ID No. : UN 2734
Transport hazard class(es) : 8, 3
Packing group : II

Sea transport (IMDG/IMO)

Proper shipping name : AMINES, LIQUID, CORROSIVE, FLAMMABLE, N.O.S.
Technical name(s) : METHOXYPROPYLAMINE, CYCLOHEXYLAMINE
UN/ID No. : UN 2734
Transport hazard class(es) : 8, 3
Packing group : II

Section: 15. REGULATORY INFORMATION

EPCRA - Emergency Planning and Community Right-to-Know Act

CERCLA Reportable Quantity

This material does not contain any components with a CERCLA RQ.

SARA 304 Extremely Hazardous Substances Reportable Quantity

Components	CAS-No.	Component RQ (lbs)	Calculated product RQ (lbs)
Cyclohexylamine	108-91-8	10000	100503

SARA 311/312 Hazards : Fire Hazard
Acute Health Hazard
Chronic Health Hazard

SARA 302 : The following components are subject to reporting levels established by SARA Title III, Section 302:
Cyclohexylamine 108-91-8

SARA 313 : This material does not contain any chemical components with known CAS numbers that exceed the threshold (De Minimis) reporting levels established by SARA Title III, Section 313.

California Prop 65
This product does not contain any chemicals known to State of California to cause cancer, birth defects, or any other reproductive harm.

INTERNATIONAL CHEMICAL CONTROL LAWS :

United States TSCA Inventory
The substances in this preparation are included on or exempted from the TSCA 8(b) Inventory (40 CFR 710)

Australia. Industrial Chemical (Notification and Assessment) Act
All substances in this product comply with the National Industrial Chemicals Notification & Assessment Scheme (NICNAS).

Canadian Domestic Substances List (DSL)
The substance(s) in this preparation are included in or exempted from the Domestic Substance List (DSL).

Japan. ENCS - Existing and New Chemical Substances Inventory
All substances in this product comply with the Law Regulating the Manufacture and Importation Of Chemical Substances and are listed on the Existing and New Chemical Substances list (ENCS).

Korea. Korean Existing Chemicals Inventory (KECI)
All substances in this product comply with the Chemical Control Act (CCA) and are listed on the Existing Chemicals List (ECL)

Philippines Inventory of Chemicals and Chemical Substances (PICCS)
All substances in this product comply with the Republic Act 6969 (RA 6969) and are listed on the Philippines Inventory of Chemicals & Chemical Substances (PICCS).

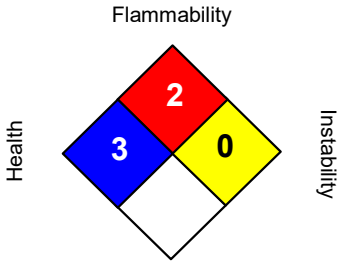
China Inventory of Existing Chemical Substances
All substances in this product comply with the Provisions on the Environmental Administration of New Chemical Substances and are listed on or exempt from the Inventory of Existing Chemical Substances China (IECSC).

New Zealand. Inventory of Chemicals (NZIoC), as published by ERMA New Zealand
All substances in this product comply with the Hazardous Substances and New Organisms (HSNO) Act 1996,and are listed on or are exempt from the New Zealand Inventory of Chemicals.

Taiwan Chemical Substance Inventory
All substances in this product comply with the Taiwan Existing Chemical Substances Inventory (ECSI).

Section: 16. OTHER INFORMATION

NFPA:



Special hazard.

HMIS III:

HEALTH	3*
FLAMMABILITY	2
PHYSICAL HAZARD	0

0 = not significant, 1 =Slight,
2 = Moderate, 3 = High
4 = Extreme, * = Chronic

Revision Date	:	11/10/2017
Version Number	:	1.4
Prepared By	:	Regulatory Affairs

REVISED INFORMATION: Significant changes to regulatory or health information for this revision is indicated by a bar in the left-hand margin of the SDS.

The information provided in this Safety Data Sheet is correct to the best of our knowledge, information and belief at the date of its publication. The information given is designed only as a guidance for safe handling, use, processing, storage, transportation, disposal and release and is not to be considered a warranty or quality specification. The information relates only to the specific material designated and may not be valid for such material used in combination with any other materials or in any process, unless specified in the text.
For additional copies of an SDS visit www.nalco.com and request access.

NALCO Water
An Ecolab Company

SAFETY DATA SHEET

PERMATREAT™ PC-191T

Section: 1. PRODUCT AND COMPANY IDENTIFICATION

Product name	:	PERMATREAT™ PC-191T
Other means of identification	:	Not applicable.
Recommended use	:	REVERSE OSMOSIS ANTISCALANT
Restrictions on use	:	Refer to available product literature or ask your local Sales Representative for restrictions on use and dose limits.
Company	:	Nalco Company 1601 W. Diehl Road Naperville, Illinois 60563-1198 USA TEL: (630)305-1000
Emergency telephone number	:	(800) 424-9300 (24 Hours) CHEMTREC
Issuing date	:	03/19/2018

Section: 2. HAZARDS IDENTIFICATION

GHS Classification

Not a hazardous substance or mixture.

GHS Label element

Precautionary Statements : **Prevention:**
Wash hands thoroughly after handling.
Response:
Get medical advice/ attention if you feel unwell.
Storage:
Store in accordance with local regulations.

Other hazards : None known.

Section: 3. COMPOSITION/INFORMATION ON INGREDIENTS

Pure substance/mixture : Mixture

No hazardous ingredients

Section: 4. FIRST AID MEASURES

In case of eye contact	:	Rinse with plenty of water. Get medical attention if symptoms occur.
In case of skin contact	:	Wash off with soap and plenty of water. Get medical attention if symptoms occur.
If swallowed	:	Rinse mouth. Get medical attention if symptoms occur.
If inhaled	:	Get medical attention if symptoms occur.

Protection of first-aiders	:	In event of emergency assess the danger before taking action. Do not put yourself at risk of injury. If in doubt, contact emergency responders. Use personal protective equipment as required.
Notes to physician	:	Treat symptomatically.
Most important symptoms and effects, both acute and delayed	:	See Section 11 for more detailed information on health effects and symptoms.

Section: 5. FIREFIGHTING MEASURES

Suitable extinguishing media	:	Use extinguishing measures that are appropriate to local circumstances and the surrounding environment.
Unsuitable extinguishing media	:	None known.
Specific hazards during firefighting	:	Not flammable or combustible.
Hazardous combustion products	:	Carbon oxides nitrogen oxides (NOx) Sulphur oxides Oxides of phosphorus
Special protective equipment for firefighters	:	Use personal protective equipment.
Specific extinguishing methods	:	Fire residues and contaminated fire extinguishing water must be disposed of in accordance with local regulations.

Section: 6. ACCIDENTAL RELEASE MEASURES

Personal precautions, protective equipment and emergency procedures	:	Refer to protective measures listed in sections 7 and 8.
Environmental precautions	:	No special environmental precautions required.
Methods and materials for containment and cleaning up	:	Stop leak if safe to do so. Contain spillage, and then collect with non-combustible absorbent material, (e.g. sand, earth, diatomaceous earth, vermiculite) and place in container for disposal according to local / national regulations (see section 13). For large spills, dike spilled material or otherwise contain material to ensure runoff does not reach a waterway. Flush away traces with water.

Section: 7. HANDLING AND STORAGE

Advice on safe handling	:	For personal protection see section 8. Wash hands after handling.
Conditions for safe storage	:	Keep out of reach of children. Keep container tightly closed. Store in suitable labelled containers.

Suitable material	:	The following compatibility data is suggested based on similar product data and/or industry experience: HDPE (high density polyethylene), Stainless Steel 304, Polyethylene (rigid), Polypropylene (rigid), CPVC (rigid), 100% phenolic resin liner, Epoxy phenolic resin, coated steel
Unsuitable material	:	The following compatibility data is suggested based on similar product data and/or industry experience: Brass, Buna-N, EPDM, Neoprene, Polyurethane, Fluoroelastomer, Chlorosulfonated polyethylene rubber, Shipping and long term storage compatibility with construction materials can vary; we therefore recommend that compatibility is tested prior to use.

Section: 8. EXPOSURE CONTROLS/PERSONAL PROTECTION

Components with workplace control parameters

Contains no substances with occupational exposure limit values.

Engineering measures	:	Good general ventilation should be sufficient to control worker exposure to airborne contaminants.

Personal protective equipment

Eye protection	:	Safety glasses
Hand protection	:	Wear protective gloves. Gloves should be discarded and replaced if there is any indication of degradation or chemical breakthrough.
Skin protection	:	Wear suitable protective clothing.
Respiratory protection	:	No personal respiratory protective equipment normally required.
Hygiene measures	:	Wash hands before breaks and immediately after handling the product.

Section: 9. PHYSICAL AND CHEMICAL PROPERTIES

Appearance	:	Liquid
Colour	:	clear amber - yellow green
Odour	:	Ammoniacal
Flash point	:	> 93.3 °C
pH	:	10.0 - 11.5,(1 %), (25 °C)
Odour Threshold	:	no data available
Melting point/freezing point	:	no data available
Initial boiling point and boiling range	:	no data available
Evaporation rate	:	no data available
Flammability (solid, gas)	:	no data available
Upper explosion limit	:	no data available
Lower explosion limit	:	no data available

Vapour pressure	:	no data available
Relative vapour density	:	no data available
Relative density	:	1.335 - 1.362, (15.6 °C),
Density	:	1.127 g/cm3 , 11.3 lb/gal
Water solubility	:	completely soluble
Solubility in other solvents	:	no data available
Partition coefficient: n-octanol/water	:	Pow: 3.5, log Pow: 0.544
Auto-ignition temperature	:	no data available
Thermal decomposition	:	no data available
Viscosity, dynamic	:	no data available
Viscosity, kinematic	:	no data available
Molecular weight	:	no data available
VOC	:	0 %, Calculation method

Section: 10. STABILITY AND REACTIVITY

Chemical stability	:	Stable under normal conditions.
Possibility of hazardous reactions	:	No dangerous reaction known under conditions of normal use.
Conditions to avoid	:	Freezing temperatures.
Incompatible materials	:	None known.
Hazardous decomposition products	:	In case of fire, hazardous decomposition products may be produced such as: Carbon oxides nitrogen oxides (NOx) Sulphur oxides Oxides of phosphorus

Section: 11. TOXICOLOGICAL INFORMATION

Information on likely routes of exposure	:	Inhalation, Eye contact, Skin contact

Potential Health Effects

Eyes	:	Health injuries are not known or expected under normal use.
Skin	:	Health injuries are not known or expected under normal use.
Ingestion	:	Health injuries are not known or expected under normal use.
Inhalation	:	Health injuries are not known or expected under normal use.

Chronic Exposure	:	Health injuries are not known or expected under normal use.

Experience with human exposure

Eye contact	:	No symptoms known or expected.
Skin contact	:	No symptoms known or expected.
Ingestion	:	No symptoms known or expected.
Inhalation	:	No symptoms known or expected.

Toxicity

Product

Acute oral toxicity	:	LD50 rat: > 17,800 mg/kg Test substance: Similar Product
Acute inhalation toxicity	:	no data available
Acute dermal toxicity	:	LD50 rabbit: > 15,800 mg/kg Test substance: Similar Product
Skin corrosion/irritation	:	Species: Rabbit Exposure time: 24 hrs Result: 0.3 Method: Draize Test Test substance: Similar Product
Serious eye damage/eye irritation	:	Species: rabbit Exposure time: 24 hrs Result: 3.7 Method: Draize Test Test substance: Similar Product
Respiratory or skin sensitization	:	no data available
Carcinogenicity	:	no data available
Reproductive effects	:	no data available
Germ cell mutagenicity	:	no data available
Teratogenicity	:	no data available
STOT - single exposure	:	no data available
STOT - repeated exposure	:	no data available
Aspiration toxicity	:	no data available

Section: 12. ECOLOGICAL INFORMATION

Ecotoxicity

Environmental Effects	:	This product has no known ecotoxicological effects.

Product

Toxicity to fish	:	LC50 Oncorhynchus mykiss (rainbow trout): > 330 mg/l

Exposure time: 96 hrs
Test substance: Similar Product

LC50 Cyprinodon variegatus (sheepshead minnow): 8,132 mg/l
Exposure time: 96 hrs
Test substance: Similar Product

LC50 Lepomis macrochirus (Bluegill sunfish): > 330 mg/l
Exposure time: 96 hrs
Test substance: Similar Product

LC50 Ictalurus punctatus (channel catfish): 1,212 mg/l
Exposure time: 96 hrs
Test substance: Similar Product

LC50 Oncorhynchus mykiss (rainbow trout): 4,530 mg/l
Exposure time: 96 hrs
Test substance: Product
Test Type: Static

NOEC Oncorhynchus mykiss (rainbow trout): 3,600 mg/l
Exposure time: 96 hrs
Test substance: Product
Test Type: Static

LC50 Inland Silverside: > 10,000 mg/l
Exposure time: 96 h
Test substance: Product

NOEC Inland Silverside: 10,000 mg/l
Exposure time: 96 h
Test substance: Product

Toxicity to daphnia and other aquatic invertebrates : LC50 Grass Shrimp: 4,575 mg/l
Exposure time: 96 hrs
Test substance: Similar Product

LC50 Daphnia magna (Water flea): 1,673 mg/l
Exposure time: 48 hrs
Test substance: Product
Test Type: Static

EC50 Daphnia magna (Water flea): 297 mg/l
Exposure time: 48 hrs
Test substance: Similar Product

NOEC Daphnia magna (Water flea): 1,296 mg/l
Exposure time: 48 hrs
Test substance: Product
Test Type: Static

LC50 Mysid Shrimp (Mysidopsis bahia): 8,263 mg/l
Exposure time: 96 h
Test substance: Product

NOEC Mysid Shrimp (Mysidopsis bahia): 6,000 mg/l
Exposure time: 96 h
Test substance: Product

Toxicity to algae : LC50 Green Algae (Pseudokirchneriella subcapitata, previously Selenastrum capricornutum): 20 mg/l
Exposure time: 96 hrs
Test substance: Similar Product

Toxicity to fish (Chronic toxicity) : LOEC: 47.6 mg/l
Exposure time: 60 Days
Species: Oncorhynchus mykiss (rainbow trout)
Test substance: Similar Product

NOEC: 23 mg/l
Exposure time: 60 Days
Species: Oncorhynchus mykiss (rainbow trout)
Test substance: Similar Product

Toxicity to daphnia and other aquatic invertebrates (Chronic toxicity) : LOEC: 50 mg/l
Exposure time: 28 Days
Species: Daphnia magna
Test substance: Similar Product
Test Type: 3 Brood

NOEC: 25 mg/l
Exposure time: 28 Days
Species: Daphnia magna
Test substance: Similar Product
Test Type: 3 Brood

Toxicity to terrestrial organisms : LC50 Bobwhite Quail: > 2,510 mg/kg
Exposure time: 14 Days
Test substance: Similar Product

LC50 Mallard Duck: > 2,510 mg/kg
Exposure time: 14 Days
Test substance: Similar Product

Persistence and degradability

Total Organic Carbon (TOC) : 65,000 mg/l

Mobility

The environmental fate was estimated using a level III fugacity model embedded in the EPI (estimation program interface) Suite TM, provided by the US EPA. The model assumes a steady state condition between the total input and output. The level III model does not require equilibrium between the defined media. The information provided is intended to give the user a general estimate of the environmental fate of this product under the defined conditions of the models.
If released into the environment this material is expected to distribute to the air, water and soil/sediment in the approximate respective percentages;

Air	:	<5%
Water	:	30 - 50%
Soil	:	50 - 70%

The portion in water is expected to be soluble or dispersible.

Bioaccumulative potential

no data available

Other information

no data available

Section: 13. DISPOSAL CONSIDERATIONS

If this product becomes a waste, it is not a hazardous waste as defined by the Resource Conservation and Recovery Act (RCRA) 40 CFR 261, since it does not have the characteristics of Subpart C, nor is it listed under Subpart D.

Disposal methods	:	Where possible recycling is preferred to disposal or incineration. If recycling is not practicable, dispose of in compliance with local regulations. Dispose of wastes in an approved waste disposal facility.
Disposal considerations	:	Dispose of as unused product. Empty containers should be taken to an approved waste handling site for recycling or disposal. Do not re-use empty containers.

Section: 14. TRANSPORT INFORMATION

The shipper/consignor/sender is responsible to ensure that the packaging, labeling, and markings are in compliance with the selected mode of transport.

Land transport (DOT)

Proper shipping name : PRODUCT IS NOT REGULATED DURING TRANSPORTATION

Air transport (IATA)

Proper shipping name : PRODUCT IS NOT REGULATED DURING TRANSPORTATION

Sea transport (IMDG/IMO)

Proper shipping name : PRODUCT IS NOT REGULATED DURING TRANSPORTATION

Section: 15. REGULATORY INFORMATION

TSCA list : Not relevant

EPCRA - Emergency Planning and Community Right-to-Know Act

CERCLA Reportable Quantity

This material does not contain any components with a CERCLA RQ.

SARA 304 Extremely Hazardous Substances Reportable Quantity

This material does not contain any components with a section 304 EHS RQ.

SARA 311/312 Hazards	:	No SARA Hazards
SARA 302	:	No chemicals in this material are subject to the reporting requirements of SARA Title III, Section 302.
SARA 313	:	This material does not contain any chemical components with known CAS numbers that exceed the threshold (De Minimis) reporting levels established by SARA Title III, Section 313.

California Prop 65
This product does not contain any chemicals known to State of California to cause cancer, birth defects, or any other reproductive harm.

INTERNATIONAL CHEMICAL CONTROL LAWS :

United States TSCA Inventory
The substances in this preparation are included on or exempted from the TSCA 8(b) Inventory (40 CFR 710)

Australia. Industrial Chemical (Notification and Assessment) Act
All substances in this product comply with the National Industrial Chemicals Notification & Assessment Scheme (NICNAS).

Canadian Domestic Substances List (DSL)
The substance(s) in this preparation are included in or exempted from the Domestic Substance List (DSL).

Japan. ENCS - Existing and New Chemical Substances Inventory
All substances in this product comply with the Law Regulating the Manufacture and Importation Of Chemical Substances and are listed on the Existing and New Chemical Substances list (ENCS).

Korea. Korean Existing Chemicals Inventory (KECI)
All substances in this product comply with the Chemical Control Act (CCA) and are listed on the Existing Chemicals List (ECL)

Philippines Inventory of Chemicals and Chemical Substances (PICCS)
All substances in this product comply with the Republic Act 6969 (RA 6969) and are listed on the Philippines Inventory of Chemicals & Chemical Substances (PICCS).

China Inventory of Existing Chemical Substances
All substances in this product comply with the Provisions on the Environmental Administration of New Chemical Substances and are listed on or exempt from the Inventory of Existing Chemical Substances China (IECSC).

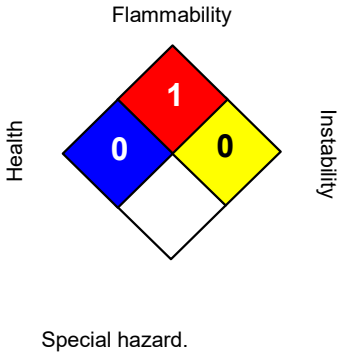
New Zealand. Inventory of Chemicals (NZIoC), as published by ERMA New Zealand
All substances in this product comply with the Hazardous Substances and New Organisms (HSNO) Act 1996,and are listed on or are exempt from the New Zealand Inventory of Chemicals.

Taiwan Chemical Substance Inventory
All substances in this product comply with the Taiwan Existing Chemical Substances Inventory (ECSI).

Section: 16. OTHER INFORMATION

PERMATREAT™ PC-191T

NFPA:



HMIS III:

HEALTH	0
FLAMMABILITY	1
PHYSICAL HAZARD	0

0 = not significant, 1 =Slight,
2 = Moderate, 3 = High
4 = Extreme, * = Chronic

Revision Date	:	03/19/2018
Version Number	:	1.2
Prepared By	:	Regulatory Affairs

REVISED INFORMATION: Significant changes to regulatory or health information for this revision is indicated by a bar in the left-hand margin of the SDS.

The information provided in this Safety Data Sheet is correct to the best of our knowledge, information and belief at the date of its publication. The information given is designed only as a guidance for safe handling, use, processing, storage, transportation, disposal and release and is not to be considered a warranty or quality specification. The information relates only to the specific material designated and may not be valid for such material used in combination with any other materials or in any process, unless specified in the text.
For additional copies of an SDS visit www.nalco.com and request access.

NALCO Water
An Ecolab Company

SAFETY DATA SHEET

NALCO® 7408

Section: 1. PRODUCT AND COMPANY IDENTIFICATION

Product name	:	NALCO® 7408
Other means of identification	:	Not applicable.
Recommended use	:	CHLORINE SCAVENGER
Restrictions on use	:	Refer to available product literature or ask your local Sales Representative for restrictions on use and dose limits.
Company	:	Nalco Company 1601 W. Diehl Road Naperville, Illinois 60563-1198 USA TEL: (630) 305-1000
Emergency telephone number	:	(800) 424-9300 (24 Hours) CHEMTREC
Issuing date	:	12/11/2019

Section: 2. HAZARDS IDENTIFICATION

GHS Classification

Corrosive to metals	:	Category 1
Acute toxicity (Oral)	:	Category 4

GHS Label element

Hazard pictograms :

Signal Word : Warning

Hazard Statements : May be corrosive to metals.
Harmful if swallowed.
Contact with acids liberates toxic gas.

Precautionary Statements : **Prevention:**
Keep only in original container. Wash skin thoroughly after handling. Do not eat, drink or smoke when using this product.
Response:
IF SWALLOWED: Call a POISON CENTER or doctor/ physician if you feel unwell. Rinse mouth.
Storage:
Store in corrosive resistant container with a resistant inner liner. Protect product from freezing.
Disposal:
Dispose of contents/ container to an approved waste disposal plant.

Other hazards : The head space of containers containing this product may accumulate Sulphur

Dioxide (SO2). SO2 is a toxic and irritating gas that can be hazardous if inhaled.

Section: 3. COMPOSITION/INFORMATION ON INGREDIENTS

Pure substance/mixture	:	Mixture

Chemical Name	CAS-No.	Concentration: (%)
Sodium Bisulfite	7631-90-5	30 - 60

Section: 4. FIRST AID MEASURES

In case of eye contact	:	Rinse with plenty of water. Get medical attention if symptoms occur.
In case of skin contact	:	Wash off with soap and plenty of water. Get medical attention if symptoms occur.
If swallowed	:	Rinse mouth. Get medical attention if symptoms occur.
If inhaled	:	Get medical attention if symptoms occur.
Protection of first-aiders	:	In event of emergency assess the danger before taking action. Do not put yourself at risk of injury. If in doubt, contact emergency responders. Use personal protective equipment as required.
Notes to physician	:	Treat symptomatically.
Most important symptoms and effects, both acute and delayed	:	See Section 11 for more detailed information on health effects and symptoms.

Section: 5. FIREFIGHTING MEASURES

Suitable extinguishing media	:	Use extinguishing measures that are appropriate to local circumstances and the surrounding environment.
Unsuitable extinguishing media	:	None known.
Specific hazards during firefighting	:	Heating or fire can release toxic gas. May evolve oxides of sulfur (SOx) under fire conditions.
Hazardous combustion products	:	Decomposition products may include the following materials: Sulphur oxides metal oxides
Special protective equipment for firefighters	:	Use personal protective equipment.
Specific extinguishing methods	:	Fire residues and contaminated fire extinguishing water must be disposed of in accordance with local regulations. In the event of fire and/or explosion do not breathe fumes.

Section: 6. ACCIDENTAL RELEASE MEASURES

Personal precautions,	:	Ensure clean-up is conducted by trained personnel only. Refer to protective

protective equipment and emergency procedures : measures listed in sections 7 and 8.

Environmental precautions : Do not allow contact with soil, surface or ground water.

Methods and materials for containment and cleaning up : Stop leak if safe to do so. Contain spillage, and then collect with non-combustible absorbent material, (e.g. sand, earth, diatomaceous earth, vermiculite) and place in container for disposal according to local / national regulations (see section 13). For large spills, dike spilled material or otherwise contain material to ensure runoff does not reach a waterway. Flush away traces with water.

Section: 7. HANDLING AND STORAGE

Advice on safe handling : Do not ingest. Wash hands thoroughly after handling. Use only with adequate ventilation. Containers should be opened cautiously and only in well ventilated areas.

Conditions for safe storage : Keep out of reach of children. Keep container tightly closed. Store in a well-ventilated place. Store in suitable labelled containers. Do not store at elevated temperature.

Suitable material : Keep in properly labelled containers.

Unsuitable material : not determined

Section: 8. EXPOSURE CONTROLS/PERSONAL PROTECTION

Components with workplace control parameters

Exposure limits are listed for sulfur dioxide (SO2) since this product evolves SO2 when open to the atmosphere.

Components	CAS-No.	Form of exposure	Permissible concentration	Basis
Sodium Bisulfite	7631-90-5	TWA	5 mg/m3	ACGIH
		TWA	5 mg/m3	NIOSH REL
Sulfur Dioxide	7446-09-5	STEL	0.25 ppm	ACGIH
		TWA	2 ppm 5 mg/m3	NIOSH REL
		STEL	5 ppm 13 mg/m3	NIOSH REL
		TWA	5 ppm 13 mg/m3	OSHA Z1

Engineering measures : Effective exhaust ventilation system. Maintain air concentrations below occupational exposure standards.

Personal protective equipment

Eye protection : Safety glasses

Hand protection : Wear protective gloves.
Gloves should be discarded and replaced if there is any indication of degradation or chemical breakthrough.

Skin protection	:	Wear suitable protective clothing.
Respiratory protection	:	When workers are facing concentrations above the exposure limit they must use appropriate certified respirators.
Hygiene measures	:	Handle in accordance with good industrial hygiene and safety practice. Remove and wash contaminated clothing before re-use. Wash face, hands and any exposed skin thoroughly after handling.

The Personal Protective Equipment (PPE) recommendations provided above have been made in good faith based on typical expected conditions of use. PPE selection should always be completed in conjunction with a proper risk assessment and in accordance with a PPE management program.

Section: 9. PHYSICAL AND CHEMICAL PROPERTIES

Appearance	:	Liquid
Colour	:	clear
Odour	:	Pungent
Flash point	:	does not flash
pH	:	4.1,(1 %), Method: ASTM E 70
Odour Threshold	:	no data available
Melting point/freezing point	:	Freezing Point: 1.1 °C
Initial boiling point and boiling range	:	104 °C
Evaporation rate	:	no data available
Flammability (solid, gas)	:	Not applicable.
Upper explosion limit	:	no data available
Lower explosion limit	:	no data available
Vapour pressure	:	32 mm Hg, (25 °C), ASTM D 323,
Relative vapour density	:	2.2(Air = 1)
Relative density	:	1.37, (25 °C), ASTM D-1298
Density	:	11.4 lb/gal
Water solubility	:	completely soluble
Solubility in other solvents	:	no data available
Partition coefficient: n-octanol/water	:	no data available
Auto-ignition temperature	:	no data available
Thermal decomposition	:	no data available
Viscosity, dynamic	:	2.8 mPa.s (25 °C)
Viscosity, kinematic	:	no data available
Molecular weight	:	no data available
VOC	:	no data available

Section: 10. STABILITY AND REACTIVITY

Reactivity	:	No dangerous reaction known under conditions of normal use.
Chemical stability	:	Evolves SO2 when open to atmosphere. The rate of SO2 evolution increases with temperature and/or transfer of product.
Possibility of hazardous reactions	:	No dangerous reaction known under conditions of normal use.
Conditions to avoid	:	Keep away from heat and sources of ignition.
Incompatible materials	:	Contact with strong oxidizers (e.g. chlorine, peroxides, chromates, nitric acid, perchlorate, concentrated oxygen, permanganate) may generate heat, fires, explosions and/or toxic vapors. Contact with strong acids (e.g. sulfuric, phosphoric, nitric, hydrochloric, chromic, sulfonic) may generate heat, splattering or boiling and toxic vapors. SO2 may react with vapors from neutralizing amines and may produce a visible cloud of amine salt particles. Mild steel Aluminium
Hazardous decomposition products	:	Decomposition products may include the following materials: Sulphur oxides metal oxides

Section: 11. TOXICOLOGICAL INFORMATION

Information on likely routes of exposure	:	Inhalation, Eye contact, Skin contact

Potential Health Effects

Eyes	:	Health injuries are not known or expected under normal use.
Skin	:	Health injuries are not known or expected under normal use.
Ingestion	:	Harmful if swallowed.
Inhalation	:	May release toxic, irritating and/or corrosive gases.
Chronic Exposure	:	Health injuries are not known or expected under normal use.

Experience with human exposure

Eye contact	:	No symptoms known or expected.
Skin contact	:	No symptoms known or expected.
Ingestion	:	No information available.
Inhalation	:	No symptoms known or expected.

Toxicity

Product

Acute oral toxicity	:	Acute toxicity estimate: 1,250 mg/kg
Acute inhalation toxicity	:	no data available
Acute dermal toxicity	:	no data available
Skin corrosion/irritation	:	no data available
Serious eye damage/eye irritation	:	no data available
Respiratory or skin sensitization	:	Result: Contains an ingredient that can cause asthmatic-like reactions in sulfite-sensitive individuals.
Carcinogenicity	:	no data available
Reproductive effects	:	no data available
Germ cell mutagenicity	:	no data available
Teratogenicity	:	no data available
STOT - single exposure	:	no data available
STOT - repeated exposure	:	no data available
Aspiration toxicity	:	no data available

Section: 12. ECOLOGICAL INFORMATION

Ecotoxicity

Environmental Effects : This product has no known ecotoxicological effects.

Product

Toxicity to fish :

LC50 Oncorhynchus mykiss (rainbow trout): > 100 mg/l
Exposure time: 96 hrs
Test substance: Product

LC50 Pimephales promelas (fathead minnow): 382 mg/l
Exposure time: 96 hrs
Test substance: Similar Product

LC50 Gambusia affinis (Mosquito fish): 240 mg/l
Exposure time: 96 hrs
Test substance: Active Substance

NOEC Pimephales promelas (fathead minnow): 250 mg/l
Exposure time: 96 hrs
Test substance: Similar Product

Toxicity to daphnia and other aquatic invertebrates :

LC50 Daphnia magna (Water flea): 728 mg/l
Exposure time: 48 hrs
Test substance: Similar Product

LC50 Daphnia magna (Water flea): 275 mg/l
Exposure time: 48 hrs
Test substance: Product (estimated)

LC50 Daphnia magna (Water flea): 119 mg/l
Exposure time: 48 hrs
Test substance: Active Substance

NOEC Daphnia magna (Water flea): 250 mg/l
Exposure time: 48 hrs
Test substance: Similar Product

Toxicity to fish (Chronic toxicity) : EC25 / IC25: 382 mg/l
Exposure time: 7 Days
Species: Fathead Minnow
Test substance: Product

LOEC: 500 mg/l
Exposure time: 7 Days
Species: Fathead Minnow
Test substance: Product

NOEC: 250 mg/l
Exposure time: 7 Days
Species: Fathead Minnow
Test substance: Product

Toxicity to daphnia and other aquatic invertebrates (Chronic toxicity) : LOEC: 500 mg/l
Exposure time: 7 Days
Species: Ceriodaphnia dubia
Test substance: Product
Test Type: 3 Brood

EC25 / IC25: 277 mg/l
Exposure time: 7 Days
Species: Ceriodaphnia dubia
Test substance: Product
Test Type: 3 Brood

NOEC: 250 mg/l
Exposure time: 7 Days
Species: Ceriodaphnia dubia
Test substance: Product
Test Type: 3 Brood

Persistence and degradability

Greater than 95% of this product consists of inorganic substances for which a biodegradation value is not applicable.

Chemical Oxygen Demand (COD): 85,000 mg/l

Mobility

The environmental fate was estimated using a level III fugacity model embedded in the EPI (estimation program interface) Suite TM, provided by the US EPA. The model assumes a steady state condition between the total input and output. The level III model does not require equilibrium between the defined media. The information provided is intended to give the user a general estimate of the environmental fate of this product under the defined conditions of the models.

If released into the environment this material is expected to distribute to the air, water and soil/sediment in the approximate respective percentages;

Air	:	<5%
Water	:	30 - 50%
Soil	:	50 - 70%

The portion in water is expected to be soluble or dispersible.

Bioaccumulative potential

This preparation or material is not expected to bioaccumulate.

Other information

no data available

Section: 13. DISPOSAL CONSIDERATIONS

If this product becomes a waste, it is not a hazardous waste as defined by the Resource Conservation and Recovery Act (RCRA) 40 CFR 261, since it does not have the characteristics of Subpart C, nor is it listed under Subpart D.

Disposal methods	:	Where possible recycling is preferred to disposal or incineration. If recycling is not practicable, dispose of in compliance with local regulations. Dispose of wastes in an approved waste disposal facility.
Disposal considerations	:	Dispose of as unused product. Empty containers should be taken to an approved waste handling site for recycling or disposal. Do not re-use empty containers.

Section: 14. TRANSPORT INFORMATION

The shipper/consignor/sender is responsible to ensure that the packaging, labeling, and markings are in compliance with the selected mode of transport.

The presence of an RQ component (Reportable Quantity for U.S. DOT) in this product causes it to be regulated with an additional description of RQ for road, or as Environmentally hazardous for road and air, ONLY when the net weight in the package exceeds the calculated RQ for the product.

Land transport (DOT)

Proper shipping name	:	BISULPHITES, AQUEOUS SOLUTION, N.O.S.
Technical name(s)	:	SODIUM BISULPHITE
UN/ID No.	:	UN 2693
Transport hazard class(es)	:	8
Packing group	:	III
Reportable Quantity (per package)	:	12,500 lbs
RQ Component	:	SODIUM BISULFITE

Air transport (IATA)

Proper shipping name	:	BISULPHITES, AQUEOUS SOLUTION, N.O.S.
Technical name(s)	:	SODIUM BISULFITE
UN/ID No.	:	UN 2693
Transport hazard class(es)	:	8

Packing group	:	III
Reportable Quantity (per package)	:	12,500 lbs
RQ Component	:	SODIUM BISULFITE

Sea transport (IMDG/IMO)

Proper shipping name	:	BISULPHITES, AQUEOUS SOLUTION, N.O.S.
Technical name(s)	:	SODIUM BISULPHITE
UN/ID No.	:	UN 2693
Transport hazard class(es)	:	8
Packing group	:	III

Section: 15. REGULATORY INFORMATION

TSCA list : No substances are subject to a Significant New Use Rule.

No substances are subject to TSCA 12(b) export notification requirements.

EPCRA - Emergency Planning and Community Right-to-Know Act

CERCLA Reportable Quantity

Components	CAS-No.	Component RQ (lbs)	Calculated product RQ (lbs)
Sodium Bisulfite	7631-90-5	5000	12500

SARA 304 Extremely Hazardous Substances Reportable Quantity

This material does not contain any components with a section 304 EHS RQ.

SARA 311/312 Hazards : Corrosive to metals
Acute toxicity (any route of exposure)

SARA 302 : This material does not contain any components with a section 302 EHS TPQ.

SARA 313 : This material does not contain any chemical components with known CAS numbers that exceed the threshold (De Minimis) reporting levels established by SARA Title III, Section 313.

California Prop. 65

This product does not contain any chemicals known to State of California to cause cancer, birth defects, or any other reproductive harm.

INTERNATIONAL CHEMICAL CONTROL LAWS :

United States TSCA Inventory

On the inventory, or in compliance with the inventory

Australia. Industrial Chemical (Notification and Assessment) Act

All substances in this product comply with the National Industrial Chemicals Notification & Assessment Scheme (NICNAS).

Canadian Domestic Substances List (DSL)
The substance(s) in this preparation are included in or exempted from the Domestic Substance List (DSL).

Japan. ENCS - Existing and New Chemical Substances Inventory
All substances in this product comply with the Law Regulating the Manufacture and Importation Of Chemical Substances and are listed on the Existing and New Chemical Substances list (ENCS).

Korea. Korean Existing Chemicals Inventory (KECI)
All substances in this product comply with the Chemical Control Act (CCA) and are listed on the Existing Chemicals List (ECL)

Philippines Inventory of Chemicals and Chemical Substances (PICCS)
All substances in this product comply with the Republic Act 6969 (RA 6969) and are listed on the Philippines Inventory of Chemicals & Chemical Substances (PICCS).

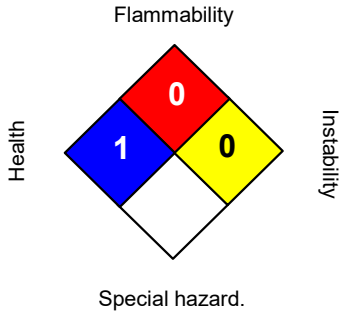
China Inventory of Existing Chemical Substances
All substances in this product comply with the Provisions on the Environmental Administration of New Chemical Substances and are listed on or exempt from the Inventory of Existing Chemical Substances China (IECSC).

New Zealand. Inventory of Chemicals (NZIoC), as published by ERMA New Zealand
All substances in this product comply with the Hazardous Substances and New Organisms (HSNO) Act 1996,and are listed on or are exempt from the New Zealand Inventory of Chemicals.

Taiwan Chemical Substance Inventory
All substances in this product comply with the Taiwan Existing Chemical Substances Inventory (ECSI).

Section: 16. OTHER INFORMATION

NFPA:



HMIS III:

HEALTH	1
FLAMMABILITY	0
PHYSICAL HAZARD	0

0 = not significant, 1 = Slight,
2 = Moderate, 3 = High
4 = Extreme, * = Chronic

Revision Date	:	12/11/2019
Version Number	:	2.3
Prepared By	:	Regulatory Affairs

REVISED INFORMATION: Significant changes to regulatory or health information for this revision is indicated by a bar in the left-hand margin of the SDS.

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processing, storage, transportation, disposal and release and is not to be considered a warranty or quality specification. The information relates only to the specific material designated and may not be valid for such material used in combination with any other materials or in any process, unless specified in the text.
For additional copies of an SDS visit www.nalco.com and request access.

NALCO Water
An Ecolab Company

SAFETY DATA SHEET

PermaClean™ PC-11

Section: 1. PRODUCT AND COMPANY IDENTIFICATION

Product name	:	PermaClean™ PC-11
Other means of identification	:	Not applicable.
Recommended use	:	BIOCIDE
Restrictions on use	:	Refer to available product literature or ask your local Sales Representative for restrictions on use and dose limits.
Company	:	Nalco Company 1601 W. Diehl Road Naperville, Illinois 60563-1198 USA TEL: (630) 305-1000
Emergency telephone number	:	(800) 424-9300 (24 Hours) CHEMTREC
Issuing date	:	11/26/2019

Section: 2. HAZARDS IDENTIFICATION

GHS Classification

Acute toxicity (Oral)	:	Category 3
Acute toxicity (Inhalation)	:	Category 3
Skin irritation (Dermal)	:	Category 2
Serious eye damage	:	Category 1
Skin sensitization	:	Category 1

GHS Label element

Hazard pictograms :

Signal Word : Danger

Hazard Statements : Causes serious eye damage.
May cause an allergic skin reaction.
Causes skin irritation.
Toxic if swallowed or if inhaled

Precautionary Statements : **Prevention:**
Avoid breathing dust/ fume/ gas/ mist/ vapours/ spray. Wash skin thoroughly after handling. Do not eat, drink or smoke when using this product. Use only outdoors or in a well-ventilated area. Contaminated work clothing should not be allowed out of the workplace. Wear protective gloves/ protective clothing/ eye protection/ face protection.
Response:
IF SWALLOWED: Immediately call a POISON CENTER or doctor/physician. IF SWALLOWED: Rinse mouth. Do NOT induce vomiting. IF ON SKIN (or hair):

Remove/ Take off immediately all contaminated clothing. Rinse skin with water/ shower. IF INHALED: Remove victim to fresh air and keep at rest in a position comfortable for breathing. IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing. Immediately call a POISON CENTER or doctor/ physician. If skin irritation or rash occurs: Get medical advice/ attention. Wash contaminated clothing before reuse.

Storage:

Store in a well-ventilated place. Keep container tightly closed. Store locked up.

Disposal:

Dispose of contents/ container to an approved waste disposal plant.

Other hazards : None known.

Section: 3. COMPOSITION/INFORMATION ON INGREDIENTS

Pure substance/mixture : Mixture

Mixture

Chemical Name	CAS-No.	Concentration: (%)
Polyethylene Glycol	25322-68-3	30 - 60
2,2-Dibromo-3-nitrilopropionamide	10222-01-2	10 - 30
Sodium Bromide	7647-15-6	1 - 5
Dibromoacetonitrile	3252-43-5	0.1 - 1

Section: 4. FIRST AID MEASURES

In case of eye contact : Rinse immediately with plenty of water, also under the eyelids, for at least 15 minutes. Remove contact lenses, if present and easy to do. Continue rinsing. Get medical attention immediately.

In case of skin contact : Wash off immediately with plenty of water for at least 15 minutes. Use a mild soap if available. Wash clothing before reuse. Thoroughly clean shoes before reuse. Get medical attention.

If swallowed : Rinse mouth with water. Do NOT induce vomiting. Never give anything by mouth to an unconscious person. Get medical attention immediately.

If inhaled : Remove to fresh air. Treat symptomatically. Get medical attention immediately.

Protection of first-aiders : In event of emergency assess the danger before taking action. Do not put yourself at risk of injury. If in doubt, contact emergency responders. Use personal protective equipment as required.

Notes to physician : Treat symptomatically.

Most important symptoms and effects, both acute and delayed : See Section 11 for more detailed information on health effects and symptoms.

Section: 5. FIREFIGHTING MEASURES

Suitable extinguishing media : Use extinguishing measures that are appropriate to local circumstances and the

surrounding environment.

Specific hazards during firefighting	:	Not flammable or combustible.
Hazardous combustion products	:	Decomposition products may include the following materials: Carbon oxides nitrogen oxides (NOx) metal oxides
Special protective equipment for firefighters	:	Use personal protective equipment.
Specific extinguishing methods	:	Fire residues and contaminated fire extinguishing water must be disposed of in accordance with local regulations. In the event of fire and/or explosion do not breathe fumes.

Section: 6. ACCIDENTAL RELEASE MEASURES

Personal precautions, protective equipment and emergency procedures	:	Ensure adequate ventilation. Keep people away from and upwind of spill/leak. Avoid inhalation, ingestion and contact with skin and eyes. When workers are facing concentrations above the exposure limit they must use appropriate certified respirators. Ensure clean-up is conducted by trained personnel only. Refer to protective measures listed in sections 7 and 8.
Environmental precautions	:	Do not allow contact with soil, surface or ground water.
Methods and materials for containment and cleaning up	:	Stop leak if safe to do so. Contain spillage, and then collect with non-combustible absorbent material, (e.g. sand, earth, diatomaceous earth, vermiculite) and place in container for disposal according to local / national regulations (see section 13). For large spills, dike spilled material or otherwise contain material to ensure runoff does not reach a waterway. Flush away traces with water.

Section: 7. HANDLING AND STORAGE

Advice on safe handling	:	Avoid contact with skin and eyes. Do not ingest. Do not breathe dust/fume/gas/mist/vapours/spray. Do not get in eyes, on skin, or on clothing. Wash hands thoroughly after handling. Use only with adequate ventilation.
Conditions for safe storage	:	Keep out of reach of children. Keep container tightly closed. Store in suitable labelled containers.
Suitable material	:	The following compatibility data is suggested based on similar product data and/or industry experience: PVC, Polypropylene, PTFE, Polyvinylidene difluoride, CPVC (rigid), HDPE (high density polyethylene), Nylon, Perfluoroelastomer, Plasite 4300 The following compatibility data is suggested based on similar product data and/or industry experience: PVC, Polypropylene, Polyethylene, Hastelloy C-276, HDPE (high density polyethylene), PTFE, Fluoroelastomer

Unsuitable material	:	The following compatibility data is suggested based on similar product data and/or industry experience: Brass, Mild steel, Neoprene, Stainless Steel 304, Stainless Steel 316L, Plexiglass, EPDM, Fluoroelastomer, Nitrile, Plasite 7122The following compatibility data is suggested based on similar product data and/or industry experience: Copper, Brass, Aluminum, Mild steel, Buna-N, Ethylene propylene, Neoprene, Polyurethane, Stainless Steel 304, Stainless Steel 316L, Carbon steel, Chlorosulfonated polyethylene rubber

Section: 8. EXPOSURE CONTROLS/PERSONAL PROTECTION

Components with workplace control parameters

Components	CAS-No.	Form of exposure	Permissible concentration	Basis
Polyethylene Glycol	25322-68-3	TWA (Aerosol.)	10 mg/m3	AIHA WEEL

Engineering measures	:	Effective exhaust ventilation system. Maintain air concentrations below occupational exposure standards.

Personal protective equipment

Eye protection	:	Safety goggles Face-shield
Hand protection	:	Wear the following personal protective equipment: Butyl rubber Viton® gloves Gloves should be discarded and replaced if there is any indication of degradation or chemical breakthrough.
Skin protection	:	Wear suitable protective clothing.
Respiratory protection	:	When workers are facing concentrations above the exposure limit they must use appropriate certified respirators. Combined particulates and organic vapour type
Hygiene measures	:	Handle in accordance with good industrial hygiene and safety practice. Remove and wash contaminated clothing before re-use. Wash face, hands and any exposed skin thoroughly after handling. Provide suitable facilities for quick drenching or flushing of the eyes and body in case of contact or splash hazard.

Section: 9. PHYSICAL AND CHEMICAL PROPERTIES

Appearance	:	liquid
Colour	:	colourless to amber
Odour	:	Mild
Flash point	:	> 100 °C, Method: ASTM D 92, Cleveland open cup
pH	:	1.5 - 5.0,(100 %), Method: ASTM E 70
Odour Threshold	:	no data available
Melting point/freezing point	:	POUR POINT: -45 °C, ASTM D-97

		Freezing Point: -50 °C
Initial boiling point and boiling range	:	> 70 °C, Decomposes on heating.
Evaporation rate	:	no data available
Flammability (solid, gas)	:	Not applicable.
Upper explosion limit	:	no data available
Lower explosion limit	:	no data available
Vapour pressure	:	< 0.1 mm Hg, (21 °C),
Relative vapour density	:	no data available
Relative density	:	1.20 - 1.30, (23 °C), ASTM D-1298
Density	:	10.0 - 10.8 lb/gal
Water solubility	:	completely soluble
Solubility in other solvents	:	no data available
Partition coefficient: n-octanol/water	:	no data available
Auto-ignition temperature	:	no data available
Thermal decomposition	:	no data available
Viscosity, dynamic	:	138 mPa.s (20 °C)
Viscosity, kinematic	:	no data available
Molecular weight	:	no data available
VOC	:	9.85 %, 125.82 g/l, EPA Method 24

Section: 10. STABILITY AND REACTIVITY

Reactivity	:	No dangerous reaction known under conditions of normal use.
Chemical stability	:	Stable under normal conditions.
Possibility of hazardous reactions	:	No dangerous reaction known under conditions of normal use.
Conditions to avoid	:	Heat Extremes of temperature
Incompatible materials	:	Contact with strong alkalies (e.g. ammonia and its solutions, carbonates, sodium hydroxide (caustic), potassium hydroxide, calcium hydroxide (lime), cyanide, sulfide, hypochlorites, chlorites) may generate heat, splattering or boiling and toxic vapors. Oxidizing agents Aluminum
Hazardous decomposition products	:	In case of fire, hazardous decomposition products may be produced such as: Carbon oxides nitrogen oxides (NOx) metal oxides

Section: 11. TOXICOLOGICAL INFORMATION

Information on likely routes of exposure : Inhalation, Eye contact, Skin contact

Potential Health Effects

Eyes : Causes serious eye damage.

Skin : Causes skin irritation. May cause allergic skin reaction.

Ingestion : Toxic if swallowed.

Inhalation : Toxic if inhaled.

Chronic Exposure : Health injuries are not known or expected under normal use.

Experience with human exposure

Eye contact : Redness, Pain, Corrosion

Skin contact : Redness, Irritation, Allergic reactions

Ingestion : No information available.

Inhalation : Respiratory irritation, Cough

Toxicity

Product

Acute oral toxicity : LD50 rat: 178 - 235 mg/kg
Test substance: Active Substance

LD50 guinea pig: 118 mg/kg
Test substance: Active Substance

rabbit: 118 mg/kg
Test substance: Active Substance

Acute inhalation toxicity : LC50 rat: 1.4 mg/l
Exposure time: 4 hrs
Test atmosphere: vapour
Test substance: Product

rat: 1.25 mg/l
Exposure time: 4 hrs
Test atmosphere: vapour
Test substance: Product

Acute dermal toxicity : no data available

Skin corrosion/irritation : no data available

Serious eye damage/eye irritation : no data available

Respiratory or skin : no data available

sensitization

Carcinogenicity

IARC **Group 2B: Possibly carcinogenic to humans** Active ingredient did not cause cancer in laboratory animals. There is evidence that dibromoacetonitrile (DBAN), a possible by-product of 2,2-dibromo-3-nitrilopropionamide (DBNPA), can produce cancer in laboratory animals. However, the relevance of this to humans is unknown.
Dibromoacetonitrile 3252-43-5

Group 2B: Possibly carcinogenic to humans

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 No component of this product present at levels greater than or equal to 0.1% is identified as a known or anticipated carcinogen by NTP.

Reproductive effects : no data available

Germ cell mutagenicity : no data available

Teratogenicity : no data available

STOT - single exposure : no data available

STOT - repeated exposure : no data available

Aspiration toxicity : no data available

Components

Acute dermal toxicity : Polyethylene Glycol
LD50 rabbit: 20,000 mg/kg

Sodium Bromide
LD50 rabbit: > 2,000 mg/kg

Section: 12. ECOLOGICAL INFORMATION

Ecotoxicity

Environmental Effects : Toxic to aquatic life.

Product

Toxicity to fish : LC50 Lepomis macrochirus (Bluegill sunfish): 8.9 mg/l
Exposure time: 96 hrs
Test substance: Product

LC50 Oncorhynchus mykiss (rainbow trout): 3.6 mg/l
Exposure time: 96 hrs
Test substance: Product

LC50 Cyprinodon variegatus (sheepshead minnow): 7.5 mg/l
Exposure time: 96 hrs
Test substance: Product

LC50 Leuciscus idus (Golden orfe): 4.7 mg/l

Exposure time: 96 hrs
Test substance: Product

NOEC Lepomis macrochirus (Bluegill sunfish): 6.5 mg/l
Exposure time: 96 hrs
Test substance: Product

NOEC Oncorhynchus mykiss (rainbow trout): 2.8 mg/l
Exposure time: 96 hrs
Test substance: Product

NOEC Cyprinodon variegatus (sheepshead minnow): 3.2 mg/l
Exposure time: 96 hrs
Test substance: Product

Toxicity to daphnia and other aquatic invertebrates : LC50 Mysid Shrimp (Mysidopsis bahia): 4.2 mg/l
Exposure time: 96 hrs
Test substance: Product

LC50 Daphnia magna (Water flea): 4.3 mg/l
Exposure time: 48 hrs
Test substance: Product

LC50 Acartia tonsa: 1.78 mg/l
Exposure time: 48 hrs
Test substance: Product

LC50 Ceriodaphnia dubia: 6.67 mg/l
Exposure time: 48 hrs
Test substance: Product

EC50 Mysid Shrimp (Mysidopsis bahia): 3.2 mg/l
Exposure time: 96 hrs
Test substance: Product

EC50 Daphnia magna (Water flea): 2.5 mg/l
Exposure time: 48 hrs
Test substance: Product

NOEC Daphnia magna (Water flea): 3.6 mg/l
Exposure time: 48 hrs
Test substance: Product

NOEC Ceriodaphnia dubia: 5.0 mg/l
Exposure time: 48 hrs
Test substance: Product

Toxicity to algae : LC50 Marine Algae (Skeletonema costatum): 1.5 mg/l
Exposure time: 72 hrs
Test substance: Product

Toxicity to bacteria : LC50 Pseudomonas putida: > 2.0 mg/l
Test substance: Product

Components

Toxicity to daphnia and other aquatic invertebrates (Chronic toxicity)	:	2,2-Dibromo-3-nitrilopropionamide NOEC: 0.25 mg/l Exposure time: 21 d Species: Daphnia magna (Water flea)

Persistence and degradability

Total Organic Carbon (TOC) : 280,000 mg/l

Chemical Oxygen Demand (COD): 1,110,000 mg/l

Biochemical Oxygen Demand (BOD):

Incubation Period	Value	Test Descriptor
5 d	1,100 mg/l	Product

Mobility

The environmental fate was estimated using a level III fugacity model embedded in the EPI (estimation program interface) Suite TM, provided by the US EPA. The model assumes a steady state condition between the total input and output. The level III model does not require equilibrium between the defined media. The information provided is intended to give the user a general estimate of the environmental fate of this product under the defined conditions of the models.
If released into the environment this material is expected to distribute to the air, water and soil/sediment in the approximate respective percentages;

Air	:	<5%
Water	:	10 - 30%
Soil	:	70 - 90%

The portion in water is expected to be soluble or dispersible.

Bioaccumulative potential

no data available

Other information

no data available

Section: 13. DISPOSAL CONSIDERATIONS

If this product becomes a waste, it could meet the criteria of a hazardous waste as defined by the Resource Conservation and Recovery Act (RCRA) 40 CFR 261. Before disposal, it should be determined if the waste meets the criteria of a hazardous waste.

Hazardous Waste:	:	D002
Disposal methods	:	The product should not be allowed to enter drains, water courses or the soil. Where possible recycling is preferred to disposal or incineration. If recycling is not practicable, dispose of in compliance with local regulations. Dispose of wastes in an approved waste disposal facility.
Disposal considerations	:	Dispose of as unused product. Empty containers should be

taken to an approved waste handling site for recycling or disposal. Do not re-use empty containers.

Section: 14. TRANSPORT INFORMATION

The shipper/consignor/sender is responsible to ensure that the packaging, labeling, and markings are in compliance with the selected mode of transport.

Land transport (DOT)

Proper shipping name	:	CORROSIVE LIQUID, ACIDIC, ORGANIC, N.O.S.
Technical name(s)	:	2,2-DIBROMO-3-NITRILOPROPIONAMIDE
UN/ID No.	:	UN 3265
Transport hazard class(es)	:	8
Packing group	:	III

Air transport (IATA)

Proper shipping name	:	CORROSIVE LIQUID, ACIDIC, ORGANIC, N.O.S.
Technical name(s)	:	2,2-DIBROMO-3-NITRILOPROPIONAMIDE
UN/ID No.	:	UN 3265
Transport hazard class(es)	:	8
Packing group	:	III

Sea transport (IMDG/IMO)

Proper shipping name	:	CORROSIVE LIQUID, ACIDIC, ORGANIC, N.O.S.
Technical name(s)	:	2,2-DIBROMO-3-NITRILOPROPIONAMIDE
UN/ID No.	:	UN 3265
Transport hazard class(es)	:	8
Packing group	:	III
*Marine pollutant	:	2,2-Dibromo-3-nitrilopropionamide

* Note: This product is regulated as a Marine Pollutant when shipped by Rail or Highway (in bulk quantities), and when shipped by water in all quantities.

Section: 15. REGULATORY INFORMATION

TSCA list : Not relevant

EPA Reg. No. : 1706-138

EPCRA - Emergency Planning and Community Right-to-Know Act

CERCLA Reportable Quantity

This product does not contain a RQ substance, or this product contains a substance with a RQ, however the calculated RQ exceeds the reasonably attainable upper limit.

SARA 304 Extremely Hazardous Substances Reportable Quantity

This material does not contain any components with a section 304 EHS RQ.

SARA 311/312 Hazards : Acute toxicity (any route of exposure)
Serious eye damage or eye irritation
Respiratory or skin sensitisation
Skin corrosion or irritation

SARA 302 : No chemicals in this material are subject to the reporting requirements of SARA Title III, Section 302.

SARA 313 : The following components are subject to reporting levels established by SARA Title III, Section 313:

2,2-Dibromo-3-nitrilopropionamide	10222-01-2	20 %

California Prop. 65

⚠ **WARNING:** Cancer - www.P65Warnings.ca.gov

Dibromoacetonitrile	3252-43-5

INTERNATIONAL CHEMICAL CONTROL LAWS :

United States TSCA Inventory
This product is exempted under TSCA and regulated under FIFRA. The inerts are on the Inventory List.

Australia. Industrial Chemical (Notification and Assessment) Act
All substances in this product comply with the National Industrial Chemicals Notification & Assessment Scheme (NICNAS).

Canadian Domestic Substances List (DSL)
Substances regulated under the Pest Control Products Act are exempt from CEPA New Substance Notification requirements.

Japan. ENCS - Existing and New Chemical Substances Inventory
All substances in this product comply with the Law Regulating the Manufacture and Importation Of Chemical Substances and are listed on the Existing and New Chemical Substances list (ENCS).

Korea. Korean Existing Chemicals Inventory (KECI)
All substances in this product comply with the Chemical Control Act (CCA) and are listed on the Existing Chemicals List (ECL)

Philippines Inventory of Chemicals and Chemical Substances (PICCS)
All substances in this product comply with the Republic Act 6969 (RA 6969) and are listed on the Philippines Inventory of Chemicals & Chemical Substances (PICCS).

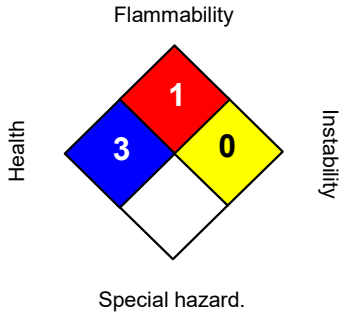
China Inventory of Existing Chemical Substances
All substances in this product comply with the Provisions on the Environmental Administration of New Chemical Substances and are listed on or exempt from the Inventory of Existing Chemical Substances China (IECSC).

New Zealand. Inventory of Chemicals (NZIoC), as published by ERMA New Zealand
All substances in this product comply with the Hazardous Substances and New Organisms (HSNO) Act 1996,and are listed on or are exempt from the New Zealand Inventory of Chemicals.

Taiwan Chemical Substance Inventory
All substances in this product comply with the Taiwan Existing Chemical Substances Inventory (ECSI).

Section: 16. OTHER INFORMATION

NFPA:



HMIS III:

HEALTH	3*
FLAMMABILITY	1
PHYSICAL HAZARD	0

0 = not significant, 1 = Slight,
2 = Moderate, 3 = High
4 = Extreme, * = Chronic

Revision Date	:	11/26/2019
Version Number	:	2.1
Prepared By	:	Regulatory Affairs

REVISED INFORMATION: Significant changes to regulatory or health information for this revision is indicated by a bar in the left-hand margin of the SDS.

The information provided in this Safety Data Sheet is correct to the best of our knowledge, information and belief at the date of its publication. The information given is designed only as a guidance for safe handling, use, processing, storage, transportation, disposal and release and is not to be considered a warranty or quality specification. The information relates only to the specific material designated and may not be valid for such material used in combination with any other materials or in any process, unless specified in the text.
For additional copies of an SDS visit www.nalco.com and request access.

NALCO
An Ecolab Company

SAFETY DATA SHEET

H-550

Section: 1. PRODUCT AND COMPANY IDENTIFICATION

Product name	:	H-550
Other means of identification	:	Not applicable.
Recommended use	:	MICROBIOCIDE
Restrictions on use	:	Refer to available product literature or ask your local Sales Representative for restrictions on use and dose limits.
Company	:	Nalco Company 1601 W. Diehl Road Naperville, Illinois 60563-1198 USA TEL: (630)305-1000
Emergency telephone number	:	(800) 424-9300 (24 Hours) CHEMTREC
Issuing date	:	04/21/2016

Section: 2. HAZARDS IDENTIFICATION

GHS Classification

Acute toxicity (Oral)	:	Category 3
Acute toxicity (Inhalation)	:	Category 4
Acute toxicity (Dermal)	:	Category 4
Skin corrosion	:	Category 1B
Serious eye damage	:	Category 1
Respiratory sensitization	:	Category 1
Skin sensitization	:	Category 1
Specific target organ toxicity - single exposure	:	Category 3 (Respiratory system)

GHS Label element

Hazard pictograms :

Signal Word : Danger

Hazard Statements : Toxic if swallowed.
Harmful in contact with skin or if inhaled
Causes severe skin burns and eye damage.
May cause an allergic skin reaction.
Causes serious eye damage.
May cause allergy or asthma symptoms or breathing difficulties if inhaled.
May cause respiratory irritation.

Precautionary Statements : **Prevention:**
Avoid breathing dust/ fume/ gas/ mist/ vapours/ spray. Use only outdoors or in a

well-ventilated area. Wear protective gloves/ protective clothing/ eye protection/ face protection. In case of inadequate ventilation wear respiratory protection.
Response:
IF SWALLOWED: Immediately call a POISON CENTER/doctor. Rinse mouth. IF SWALLOWED: Rinse mouth. Do NOT induce vomiting. Immediately call a POISON CENTER or doctor/ physician. IF ON SKIN (or hair): Take off immediately all contaminated clothing. Rinse skin with water/shower. IF INHALED: Remove person to fresh air and keep comfortable for breathing. Immediately call a POISON CENTER/doctor. IF INHALED: If breathing is difficult, remove victim to fresh air and keep at rest in a position comfortable for breathing. IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.

Other hazards : None known.

Section: 3. COMPOSITION/INFORMATION ON INGREDIENTS

Pure substance/mixture : Mixture

Chemical Name	CAS-No.	Concentration: (%)
Glutaraldehyde	111-30-8	50
Methanol	67-56-1	0.1 - 1

Section: 4. FIRST AID MEASURES

In case of eye contact : Rinse immediately with plenty of water, also under the eyelids, for at least 15 minutes. Remove contact lenses, if present and easy to do. Continue rinsing. Get medical attention immediately.

In case of skin contact : Wash off immediately with plenty of water for at least 15 minutes. Use a mild soap if available. Wash clothing before reuse. Thoroughly clean shoes before reuse. Get medical attention immediately.

If swallowed : Rinse mouth with water. Do NOT induce vomiting. Never give anything by mouth to an unconscious person. Get medical attention immediately.

If inhaled : Remove to fresh air. Treat symptomatically. Get medical attention.

Protection of first-aiders : In event of emergency assess the danger before taking action. Do not put yourself at risk of injury. If in doubt, contact emergency responders. Use personal protective equipment as required.

Notes to physician : Treat symptomatically.

Most important symptoms and effects, both acute and delayed : See Section 11 for more detailed information on health effects and symptoms.

Section: 5. FIREFIGHTING MEASURES

Suitable extinguishing media : Use extinguishing measures that are appropriate to local circumstances and the surrounding environment.

Unsuitable extinguishing : None known.

media

Specific hazards during firefighting	:	Not flammable or combustible.
Hazardous combustion products	:	Decomposition products may include the following materials: Carbon oxides nitrogen oxides (NOx) Sulphur oxides Oxides of phosphorus
Special protective equipment for firefighters	:	Use personal protective equipment.
Specific extinguishing methods	:	Fire residues and contaminated fire extinguishing water must be disposed of in accordance with local regulations. In the event of fire and/or explosion do not breathe fumes.

Section: 6. ACCIDENTAL RELEASE MEASURES

Personal precautions, protective equipment and emergency procedures	:	Restrict access to area as appropriate until clean-up operations are complete. Ensure clean-up is conducted by trained personnel only. Ventilate spill area if possible. Do not touch spilled material. Stop or reduce any leaks if it is safe to do so. Use personal protective equipment. Notify appropriate government, occupational health and safety and environmental authorities.
Environmental precautions	:	This pesticide is toxic to fish. Do not discharge effluent containing this product into lakes, streams, ponds, estuaries, oceans or other waters, unless in accordance with the requirements of a National Pollutant Discharge Elimination System (NPDES) permit and the permitting authority has been notified in writing prior to discharge. Do not discharge effluent containing this product to sewer systems without previously notifying the local sewage treatment plant authority. For guidance contact your State Water Board or Regional Office of the EPA.
Methods and materials for containment and cleaning up	:	Stop leak if safe to do so. Contain spillage, and then collect with non-combustible absorbent material, (e.g. sand, earth, diatomaceous earth, vermiculite) and place in container for disposal according to local / national regulations (see section 13). Flush away traces with water. For large spills, dike spilled material or otherwise contain material to ensure runoff does not reach a waterway.

Section: 7. HANDLING AND STORAGE

Advice on safe handling	:	Do not ingest. Do not breathe dust/fume/gas/mist/vapours/spray. Do not get in eyes, on skin, or on clothing. Wash hands thoroughly after handling. Use only with adequate ventilation.
Conditions for safe storage	:	Keep out of reach of children. Keep container tightly closed. Store in suitable labeled containers.
Suitable material	:	The following compatibility data is suggested based on similar product data and/or industry experience: Compatibility with Plastic Materials can vary; we therefore recommend that compatibility is tested prior to use.
Unsuitable material	:	not determined

Section: 8. EXPOSURE CONTROLS/PERSONAL PROTECTION

Components with workplace control parameters

Components	CAS-No.	Form of exposure	Permissible concentration	Basis
Glutaraldehyde	111-30-8	Ceiling	0.2 ppm 0.8 mg/m3	NIOSH REL
		Ceiling	0.05 ppm	ACGIH

Engineering measures : Effective exhaust ventilation system. Maintain air concentrations below occupational exposure standards.

Personal protective equipment

Eye protection : Safety goggles
Face-shield

Hand protection : Wear the following personal protective equipment:
Standard glove type.
Gloves should be discarded and replaced if there is any indication of degradation or chemical breakthrough.

Skin protection : Personal protective equipment comprising: suitable protective gloves, safety goggles and protective clothing

Respiratory protection : When workers are facing concentrations above the exposure limit they must use appropriate certified respirators.

Hygiene measures : Handle in accordance with good industrial hygiene and safety practice. Remove and wash contaminated clothing before re-use. Wash face, hands and any exposed skin thoroughly after handling. Provide suitable facilities for quick drenching or flushing of the eyes and body in case of contact or splash hazard.

Section: 9. PHYSICAL AND CHEMICAL PROPERTIES

Appearance : Liquid

Colour : colourless

Odour : Aldehyde

Flash point : , Method: ASTM D 56, does not flash

pH : 3.1 - 4.5, 100 %, (25 °C)

Odour Threshold : no data available

Melting point/freezing point : FREEZING POINT: -21 °C, ASTM D-1177

Initial boiling point and boiling range : 100.5 °C, (760 mm Hg), Method: ASTM D 86

Evaporation rate : no data available

Flammability (solid, gas) : no data available

Upper explosion limit : no data available

Lower explosion limit : no data available

Vapour pressure	:	16 mm Hg, (20 °C), ASTM D 323,
Relative vapour density	:	1.1
Relative density	:	1.11 - 1.13, (25 °C), ASTM D-1298
Density	:	9.4 lb/gal
Water solubility	:	completely soluble
Solubility in other solvents	:	no data available
Partition coefficient: n-octanol/water	:	no data available
Auto-ignition temperature	:	no data available
Thermal decomposition temperature	:	no data available
Viscosity, dynamic	:	21 mPa.s (20 °C)
Viscosity, kinematic	:	no data available
Molecular weight	:	no data available
VOC	:	54 %, 605.12 g/l, EPA Method 24

Section: 10. STABILITY AND REACTIVITY

Chemical stability	:	Stable under normal conditions.
Possibility of hazardous reactions	:	No dangerous reaction known under conditions of normal use.
Conditions to avoid	:	Extremes of temperature
Incompatible materials	:	Contact with strong oxidizers (e.g. chlorine, peroxides, chromates, nitric acid, perchlorate, concentrated oxygen, permanganate) may generate heat, fires, explosions and/or toxic vapors. Amines Strong Bases Strong acids
Hazardous decomposition products	:	Decomposition products may include the following materials: Carbon oxides nitrogen oxides (NOx) Sulphur oxides Oxides of phosphorus

Section: 11. TOXICOLOGICAL INFORMATION

Information on likely routes of exposure	:	Inhalation, Eye contact, Skin contact

Potential Health Effects

Eyes	:	Causes serious eye damage.
Skin	:	Harmful in contact with skin. Causes severe skin burns. May cause allergic skin

reaction.

Ingestion	:	Toxic if swallowed. Causes digestive tract burns.
Inhalation	:	May cause allergic respiratory reaction. May cause respiratory tract irritation. Harmful if inhaled. May cause nose, throat, and lung irritation.
Chronic Exposure	:	Health injuries are not known or expected under normal use.

Experience with human exposure

Eye contact	:	Redness, Pain, Corrosion
Skin contact	:	Redness, Pain, Irritation, Corrosion, Allergic reactions
Ingestion	:	Corrosion, Abdominal pain
Inhalation	:	Respiratory irritation, Cough, May cause allergy or asthma symptoms or breathing difficulties if inhaled.

Toxicity

Product

Acute oral toxicity	:	LD50 rat: 200 mg/kg Test substance: Product
Acute inhalation toxicity	:	LC50 rat: > 27 ppm Exposure time: 4 hrs Test substance: Product LC50 rat: 15 mg/l Exposure time: 4 hrs Test substance: Product
Acute dermal toxicity	:	LD50 rabbit: 1,749 mg/kg Test substance: Product
Skin corrosion/irritation	:	no data available
Serious eye damage/eye irritation	:	no data available
Respiratory or skin sensitization	:	no data available
Carcinogenicity	:	no data available
Reproductive effects	:	no data available
Germ cell mutagenicity	:	no data available
Teratogenicity	:	no data available
STOT - single exposure	:	no data available
STOT - repeated exposure	:	no data available
Aspiration toxicity	:	no data available

Section: 12. ECOLOGICAL INFORMATION

Ecotoxicity

Environmental Effects : Harmful to aquatic life.

Product

Toxicity to fish : LC50 Lepomis macrochirus (Bluegill sunfish): 22.4 mg/l
Exposure time: 96 hrs
Test substance: Product
Test Type: Static

LC50 Pimephales promelas (fathead minnow): 10.8 mg/l
Exposure time: 96 hrs
Test substance: Product

LC50 Cyprinodon variegatus (sheepshead minnow): 32 mg/l
Exposure time: 96 hrs
Test substance: Active Substance

LC50 Oncorhynchus mykiss (rainbow trout): 12 mg/l
Exposure time: 96 hrs
Test substance: Active Substance

NOEC Lepomis macrochirus (Bluegill sunfish): 10 mg/l
Exposure time: 96 hrs
Test substance: Product
Test Type: Static

NOEC Cyprinodon variegatus (sheepshead minnow): 24 mg/l
Exposure time: 96 hrs
Test substance: Active Substance

NOEC Oncorhynchus mykiss (rainbow trout): 9 mg/l
Exposure time: 96 hrs
Test substance: Active Substance

Toxicity to daphnia and other aquatic invertebrates : LC50 Daphnia magna (Water flea): 0.69 mg/l
Exposure time: 48 hrs
Test substance: Product
Test Type: Static

LC50 Shore Crab: 465 mg/l
Exposure time: 96 hrs
Test substance: Active Substance
Test Type: Static

LC50 Grass Shrimp: 41 mg/l
Exposure time: 96 hrs
Test substance: Active Substance
Test Type: Static

LC50 Mysid Shrimp (Mysidopsis bahia): 7.1 mg/l
Exposure time: 96 hrs
Test substance: Active Substance
Test Type: Flow-through

LC50 Acartia tonsa: 0.11 mg/l
Exposure time: 48 hrs
Test substance: Active Substance
Test Type: Static

EC50 American Oyster: 0.78 mg/l
Exposure time: 96 hrs
Test substance: Active Substance
Test Type: Flow-through

NOEC Mysid Shrimp (Mysidopsis bahia): 0.78 mg/l
Exposure time: 96 hrs
Test substance: Active Substance
Test Type: Flow-through

NOEC American Oyster: 0.16 mg/l
Exposure time: 96 hrs
Test substance: Active Substance
Test Type: Flow-through

NOEC Acartia tonsa: 0.029 mg/l
Exposure time: 48 hrs
Test substance: Active Substance
Test Type: Static

Toxicity to algae : LC50 Marine Algae (Skeletonema costatum): 0.61 mg/l
Exposure time: 72 hrs
Test substance: Active Substance

LC50 Algae (Scenedesmus subspicatus): 0.97 mg/l
Exposure time: 96 hrs
Test substance: Active Substance

LC50 Green Algae (Pseudokirchneriella subcapitata, previously Selenastrum capricornutum): 2.64 mg/l
Exposure time: 72 hrs
Test substance: Product

NOEC Marine Algae (Skeletonema costatum): 0.33 mg/l
Exposure time: 72 hrs
Test substance: Active Substance

NOEC Algae (Scenedesmus subspicatus): 0.33 mg/l
Exposure time: 96 hrs
Test substance: Active Substance

Toxicity to bacteria : LC50 Sewage Microorganisms: > 50 mg/l
Exposure time: 96 hrs
Test substance: Active Substance

: LC50 Bacteria: 17 - 25 mg/l
Exposure time: 16 hrs
Test substance: Active Substance

Toxicity to fish (Chronic : LOEC: 2.9 mg/l

toxicity)		Exposure time: 28 Days Species: Fathead Minnow Test substance: Active Substance NOEC: 1.4 mg/l Exposure time: 28 Days Species: Fathead Minnow Test substance: Active Substance
Toxicity to daphnia and other aquatic invertebrates (Chronic toxicity)	:	NOEC: 4.25 mg/l Exposure time: 21 Days Species: Daphnia magna Test substance: Active Substance Test Type: 3 Brood
Toxicity to terrestrial organisms	:	LC50 Bobwhite Quail: Exposure time: 8 Days Test substance: Active Substance LC50 Mallard Duck: Exposure time: 8 Days Test substance: Active Substance LC50 Mallard Duck: 933 mg/kg Test substance: 50% Active Ingredient

Persistence and degradability

The organic portion of this preparation is expected to be readily biodegradable.

Chemical Oxygen Demand (COD): 900,000 mg/l

Biochemical Oxygen Demand (BOD):

Incubation Period	Value	Test Descriptor
	0 mg/l	

Mobility

The environmental fate was estimated using a level III fugacity model embedded in the EPI (estimation program interface) Suite TM, provided by the US EPA. The model assumes a steady state condition between the total input and output. The level III model does not require equilibrium between the defined media. The information provided is intended to give the user a general estimate of the environmental fate of this product under the defined conditions of the models.
If released into the environment this material is expected to distribute to the air, water and soil/sediment in the approximate respective percentages;

Air	:	<5%
Water	:	30 - 50%
Soil	:	50 - 70%

The portion in water is expected to be soluble or dispersible.

Bioaccumulative potential

This preparation or material is not expected to bioaccumulate.

Other information

no data available

Section: 13. DISPOSAL CONSIDERATIONS

If this product becomes a waste, it could meet the criteria of a hazardous waste as defined by the Resource Conservation and Recovery Act (RCRA) 40 CFR 261. Before disposal, it should be determined if the waste meets the criteria of a hazardous waste.

Disposal methods	:	The product should not be allowed to enter drains, water courses or the soil. Where possible recycling is preferred to disposal or incineration. If recycling is not practicable, dispose of in compliance with local regulations. Dispose of wastes in an approved waste disposal facility.
Disposal considerations	:	Dispose of as unused product. Empty containers should be taken to an approved waste handling site for recycling or disposal. Do not re-use empty containers.

Section: 14. TRANSPORT INFORMATION

The shipper/consignor/sender is responsible to ensure that the packaging, labeling, and markings are in compliance with the selected mode of transport.

Land transport (DOT)

Proper shipping name	:	CORROSIVE LIQUID, TOXIC, N.O.S
Technical name(s)	:	GLUTARALDEHYDE
UN/ID No.	:	UN 2922
Transport hazard class(es)	:	8, 6.1
Packing group	:	II

Air transport (IATA)

Proper shipping name	:	CORROSIVE LIQUID, TOXIC, N.O.S
Technical name(s)	:	GLUTARALDEHYDE
UN/ID No.	:	UN 2922
Transport hazard class(es)	:	8, 6.1
Packing group	:	II

Sea transport (IMDG/IMO)

Proper shipping name	:	CORROSIVE LIQUID, TOXIC, N.O.S
Technical name(s)	:	GLUTARALDEHYDE
UN/ID No.	:	UN 2922
Transport hazard class(es)	:	8, 6.1
Packing group	:	II
*Marine pollutant	:	GLUTARALDEHYDE

*Note: This product is regulated as a Marine Pollutant when shipped by Rail, Highway (in bulk quantities), or Air (if no other hazard class applies), and when shipped by water in all quantities.

Section: 15. REGULATORY INFORMATION

EPA Reg. No. : 464-704-1706

EPCRA - Emergency Planning and Community Right-to-Know Act

CERCLA Reportable Quantity

This material does not contain any components with a CERCLA RQ.

SARA 304 Extremely Hazardous Substances Reportable Quantity

This material does not contain any components with a section 304 EHS RQ.

SARA 311/312 Hazards : Acute Health Hazard

SARA 302 : No chemicals in this material are subject to the reporting requirements of SARA Title III, Section 302.

SARA 313 : This material does not contain any chemical components with known CAS numbers that exceed the threshold (De Minimis) reporting levels established by SARA Title III, Section 313.

California Prop 65

WARNING: This product contains a chemical known to the State of California to cause birth defects or other reproductive harm.

Methanol	67-56-1

INTERNATIONAL CHEMICAL CONTROL LAWS :

TOXIC SUBSTANCES CONTROL ACT (TSCA)
This product is exempted under TSCA and regulated under FIFRA. The inerts are on the Inventory List.

CANADIAN ENVIRONMENTAL PROTECTION ACT (CEPA)
Substances regulated under the Pest Control Products Act are exempt from CEPA New Substance Notification requirements.

AUSTRALIA
All substances in this product comply with the National Industrial Chemicals Notification & Assessment Scheme (NICNAS).

CHINA
All substances in this product comply with the Provisions on the Environmental Administration of New Chemical Substances and are listed on or exempt from the Inventory of Existing Chemical Substances China (IECSC).

JAPAN
All substances in this product comply with the Law Regulating the Manufacture and Importation Of Chemical Substances and are listed on the Existing and New Chemical Substances list (ENCS).

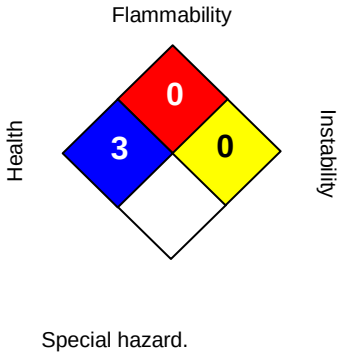
KOREA
All substances in this product comply with the Toxic Chemical Control Law (TCCL) and are listed on the Existing Chemicals List (ECL)

NEW ZEALAND
All substances in this product comply with the Hazardous Substances and New Organisms (HSNO) Act 1996,and are listed on or are exempt from the New Zealand Inventory of Chemicals.

PHILIPPINES
All substances in this product comply with the Republic Act 6969 (RA 6969) and are listed on the Philippines Inventory of Chemicals & Chemical Substances (PICCS).

Section: 16. OTHER INFORMATION

NFPA:



HMIS III:

HEALTH	**3***
FLAMMABILITY	**0**
PHYSICAL HAZARD	**0**

0 = not significant, 1 =Slight,
2 = Moderate, 3 = High
4 = Extreme, * = Chronic

Revision Date	:	04/21/2016
Version Number	:	1.4
Prepared By	:	Regulatory Affairs

REVISED INFORMATION: Significant changes to regulatory or health information for this revision is indicated by a bar in the left-hand margin of the SDS.

The information provided in this Safety Data Sheet is correct to the best of our knowledge, information and belief at the date of its publication. The information given is designed only as a guidance for safe handling, use, processing, storage, transportation, disposal and release and is not to be considered a warranty or quality specification. The information relates only to the specific material designated and may not be valid for such material used in combination with any other materials or in any process, unless specified in the text.
For additional copies of an SDS visit www.nalco.com and request access.

NALCO Water
An Ecolab Company

SAFETY DATA SHEET

3D TRASAR™ 3DT337

Section: 1. PRODUCT AND COMPANY IDENTIFICATION

Product name	:	3D TRASAR™ 3DT337
Other means of identification	:	Not applicable.
Recommended use	:	COOLING TREATMENT
Restrictions on use	:	Refer to available product literature or ask your local Sales Representative for restrictions on use and dose limits.
Company	:	Nalco Company 1601 W. Diehl Road Naperville, Illinois 60563-1198 USA TEL: (630) 305-1000
Emergency telephone number	:	(800) 424-9300 (24 Hours) CHEMTREC
Issuing date	:	10/17/2019

Section: 2. HAZARDS IDENTIFICATION

GHS Classification

Skin corrosion	:	Category 1
Serious eye damage	:	Category 1
Skin sensitization	:	Category 1

GHS Label element

Hazard pictograms :

Signal Word : Danger

Hazard Statements : Causes severe skin burns and eye damage.
May cause an allergic skin reaction.

Precautionary Statements :

Prevention:
Avoid breathing dust/ fume/ gas/ mist/ vapours/ spray. Wear protective gloves/ protective clothing/ eye protection/ face protection.
Response:
IF SWALLOWED: Rinse mouth. Do NOT induce vomiting. IF ON SKIN (or hair): Take off immediately all contaminated clothing. Rinse skin with water/shower. IF INHALED: Remove person to fresh air and keep comfortable for breathing. Immediately call a POISON CENTER/doctor. IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing. Immediately call a POISON CENTER or doctor/ physician.
Disposal:
Dispose of contents/ container to an approved waste disposal plant.

Other hazards : Do not mix with bleach or other chlorinated products – will cause chlorine gas.

Section: 3. COMPOSITION/INFORMATION ON INGREDIENTS

Chemical Name	CAS-No.	Concentration: (%)
Polycarboxylic acid polymer	Proprietary	30 - 60
Benzotriazole	95-14-7	1 - 5
Carboxylic acid	Proprietary	1 - 5

Section: 4. FIRST AID MEASURES

In case of eye contact : Rinse immediately with plenty of water, also under the eyelids, for at least 15 minutes. Remove contact lenses, if present and easy to do. Continue rinsing. Get medical attention immediately.

In case of skin contact : Wash off immediately with plenty of water for at least 15 minutes. Use a mild soap if available. Wash clothing before reuse. Thoroughly clean shoes before reuse. Get medical attention immediately.

If swallowed : Rinse mouth with water. Do NOT induce vomiting. Never give anything by mouth to an unconscious person. Get medical attention immediately.

If inhaled : Remove to fresh air. Treat symptomatically. Get medical attention if symptoms occur.

Protection of first-aiders : In event of emergency assess the danger before taking action. Do not put yourself at risk of injury. If in doubt, contact emergency responders. Use personal protective equipment as required.

Notes to physician : Treat symptomatically.

Most important symptoms and effects, both acute and delayed : See Section 11 for more detailed information on health effects and symptoms.

Section: 5. FIREFIGHTING MEASURES

Suitable extinguishing media : Use extinguishing measures that are appropriate to local circumstances and the surrounding environment.

Unsuitable extinguishing media : None known.

Specific hazards during firefighting : Not flammable or combustible.

Hazardous combustion products : Decomposition products may include the following materials: Carbon oxides nitrogen oxides (NOx) Sulphur oxides

Special protective equipment for firefighters : Use personal protective equipment.

Specific extinguishing methods : Fire residues and contaminated fire extinguishing water must be disposed of in accordance with local regulations. In the event of fire and/or explosion do not

breathe fumes.

Section: 6. ACCIDENTAL RELEASE MEASURES

Personal precautions, protective equipment and emergency procedures	:	Ensure adequate ventilation. Keep people away from and upwind of spill/leak. Avoid inhalation, ingestion and contact with skin and eyes. When workers are facing concentrations above the exposure limit they must use appropriate certified respirators. Ensure clean-up is conducted by trained personnel only. Refer to protective measures listed in sections 7 and 8.
Environmental precautions	:	Do not allow contact with soil, surface or ground water.
Methods and materials for containment and cleaning up	:	Stop leak if safe to do so. Contain spillage, and then collect with non-combustible absorbent material, (e.g. sand, earth, diatomaceous earth, vermiculite) and place in container for disposal according to local / national regulations (see section 13). For large spills, dike spilled material or otherwise contain material to ensure runoff does not reach a waterway. Flush away traces with water.

Section: 7. HANDLING AND STORAGE

Advice on safe handling	:	Avoid contact with skin and eyes. Do not ingest. Do not breathe dust/fume/gas/mist/vapours/spray. Do not get in eyes, on skin, or on clothing. Wash hands thoroughly after handling. Use only with adequate ventilation. Do not mix with bleach or other chlorinated products – will cause chlorine gas.
Conditions for safe storage	:	Keep away from strong bases. Keep out of reach of children. Keep container tightly closed. Store in suitable labelled containers.
Suitable material	:	Keep in properly labelled containers.
Unsuitable material	:	not determined

Section: 8. EXPOSURE CONTROLS/PERSONAL PROTECTION

Components with workplace control parameters

Contains no substances with occupational exposure limit values.

Engineering measures	:	Effective exhaust ventilation system. Maintain air concentrations below occupational exposure standards.

Personal protective equipment

Eye protection	:	Safety goggles Face-shield
Hand protection	:	Wear the following personal protective equipment: Standard glove type. Gloves should be discarded and replaced if there is any indication of degradation or chemical breakthrough.
Skin protection	:	Personal protective equipment comprising: suitable protective gloves, safety goggles and protective clothing

Respiratory protection	:	When workers are facing concentrations above the exposure limit they must use appropriate certified respirators.
Hygiene measures	:	Handle in accordance with good industrial hygiene and safety practice. Remove and wash contaminated clothing before re-use. Wash face, hands and any exposed skin thoroughly after handling. Provide suitable facilities for quick drenching or flushing of the eyes and body in case of contact or splash hazard.

Section: 9. PHYSICAL AND CHEMICAL PROPERTIES

Appearance	:	Liquid
Colour	:	Clear Amber
Odour	:	Mild
Flash point	:	100 °C
pH	:	<= 2, (25 °C)
Odour Threshold	:	no data available
Melting point/freezing point	:	no data available
Initial boiling point and boiling range	:	100 °C
Evaporation rate	:	no data available
Flammability (solid, gas)	:	Not applicable.
Upper explosion limit	:	no data available
Lower explosion limit	:	no data available
Vapour pressure	:	no data available
Relative vapour density	:	no data available
Relative density	:	1.230, (25 °C),
Density	:	no data available
Water solubility	:	Complete
Solubility in other solvents	:	no data available
Partition coefficient: n-octanol/water	:	no data available
Auto-ignition temperature	:	no data available
Thermal decomposition	:	no data available
Viscosity, dynamic	:	30 mPa.s (25 °C)
Viscosity, kinematic	:	no data available
Molecular weight	:	no data available
VOC	:	0 g/l, EPA Method 24

Section: 10. STABILITY AND REACTIVITY

Reactivity	:	No dangerous reaction known under conditions of normal use.

Chemical stability	:	Stable under normal conditions.
Possibility of hazardous reactions	:	Do not mix with bleach or other chlorinated products – will cause chlorine gas.
Conditions to avoid	:	None known.
Incompatible materials	:	Strong bases
Hazardous decomposition products	:	In case of fire, hazardous decomposition products may be produced such as: Carbon oxides nitrogen oxides (NOx) Sulphur oxides

Section: 11. TOXICOLOGICAL INFORMATION

Information on likely routes of exposure	:	Inhalation, Eye contact, Skin contact

Potential Health Effects

Eyes	:	Causes serious eye damage.
Skin	:	Causes severe skin burns. May cause allergic skin reaction.
Ingestion	:	Causes digestive tract burns.
Inhalation	:	May cause nose, throat, and lung irritation.
Chronic Exposure	:	Health injuries are not known or expected under normal use.

Experience with human exposure

Eye contact	:	Redness, Pain, Corrosion, Irritation
Skin contact	:	Redness, Pain, Irritation, Corrosion, Allergic reactions
Ingestion	:	Corrosion, Abdominal pain
Inhalation	:	Respiratory irritation, Cough

Toxicity

Product

Acute oral toxicity	:	Acute toxicity estimate: > 5,000 mg/kg
Acute inhalation toxicity	:	no data available
Acute dermal toxicity	:	Acute toxicity estimate: > 5,000 mg/kg
Skin corrosion/irritation	:	no data available
Serious eye damage/eye irritation	:	no data available

Respiratory or skin sensitization	:	no data available
Carcinogenicity	:	no data available
Reproductive effects	:	no data available
Germ cell mutagenicity	:	no data available
Teratogenicity	:	no data available
STOT - single exposure	:	no data available
STOT - repeated exposure	:	no data available
Aspiration toxicity	:	no data available

Section: 12. ECOLOGICAL INFORMATION

Ecotoxicity

Environmental Effects : Harmful to aquatic life with long lasting effects.

Product

Toxicity to fish : LC50 Fathead Minnow: 1,847 mg/l
Exposure time: 96 hrs
Test substance: Product

NOEC Fathead Minnow: 1,080 mg/l
Exposure time: 96 hrs
Test substance: Product

Toxicity to daphnia and other aquatic invertebrates : LC50 Ceriodaphnia dubia: 1,677 mg/l
Exposure time: 48 hrs
Test substance: Product

EC50 Ceriodaphnia dubia: 1,394 mg/l
Exposure time: 48 hrs
Test substance: Product

NOEC Ceriodaphnia dubia: 1,080 mg/l
Exposure time: 48 hrs
Test substance: Product

Components

Toxicity to algae : Benzotriazole
EC50 algae: 15.4 mg/l
Exposure time: 72 h

Components

Toxicity to daphnia and other aquatic invertebrates (Chronic toxicity) : Benzotriazole
NOEC: 0.97 mg/l
Exposure time: 21 d

Persistence and degradability

no data available

Mobility

no data available

Bioaccumulative potential

no data available

Other information

no data available

Section: 13. DISPOSAL CONSIDERATIONS

Disposal methods	:	The product should not be allowed to enter drains, water courses or the soil. Where possible recycling is preferred to disposal or incineration. If recycling is not practicable, dispose of in compliance with local regulations. Dispose of wastes in an approved waste disposal facility.
Disposal considerations	:	Dispose of as unused product. Empty containers should be taken to an approved waste handling site for recycling or disposal. Do not re-use empty containers.

Section: 14. TRANSPORT INFORMATION

The shipper/consignor/sender is responsible to ensure that the packaging, labeling, and markings are in compliance with the selected mode of transport.

Land transport (DOT)

Proper shipping name : PRODUCT IS NOT REGULATED DURING TRANSPORTATION

Air transport (IATA)

Proper shipping name : PRODUCT IS NOT REGULATED DURING TRANSPORTATION

Sea transport (IMDG/IMO)

Proper shipping name : PRODUCT IS NOT REGULATED DURING TRANSPORTATION

Section: 15. REGULATORY INFORMATION

TSCA list : No substances are subject to a Significant New Use Rule.

No substances are subject to TSCA 12(b) export notification requirements.

EPCRA - Emergency Planning and Community Right-to-Know Act

CERCLA Reportable Quantity

This product does not contain a RQ substance, or this product contains a substance with a RQ, however the calculated RQ exceeds the reasonably attainable upper limit.

SARA 304 Extremely Hazardous Substances Reportable Quantity
This material does not contain any components with a section 304 EHS RQ.

SARA 311/312 Hazards : Skin corrosion or irritation
Serious eye damage or eye irritation
Respiratory or skin sensitisation

SARA 302 : This material does not contain any components with a section 302 EHS TPQ.

SARA 313 : This material does not contain any chemical components with known CAS numbers that exceed the threshold (De Minimis) reporting levels established by SARA Title III, Section 313.

California Prop. 65
This product does not contain any chemicals known to State of California to cause cancer, birth defects, or any other reproductive harm.

INTERNATIONAL CHEMICAL CONTROL LAWS :

United States TSCA Inventory
On or in compliance with the active portion of the TSCA inventory

Australia. Industrial Chemical (Notification and Assessment) Act
On the inventory, or in compliance with the inventory

Japan. ENCS - Existing and New Chemical Substances Inventory
On the inventory, or in compliance with the inventory

China Inventory of Existing Chemical Substances
All substances in this product comply with the Provisions on the Environmental Administration of New Chemical Substances and are listed on or exempt from the Inventory of Existing Chemical Substances China (IECSC).

Korea. Korean Existing Chemicals Inventory (KECI)
All substances in this product comply with the Chemical Control Act (CCA) and are listed on the Existing Chemicals List (ECL)

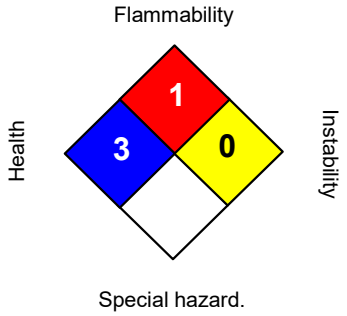
Philippines Inventory of Chemicals and Chemical Substances (PICCS)
On the inventory, or in compliance with the inventory

Taiwan Chemical Substance Inventory
not determined

Canadian Domestic Substances List (DSL)
The substance(s) in this preparation are included in or exempted from the Domestic Substance List (DSL).

Section: 16. OTHER INFORMATION

NFPA:



HMIS III:

HEALTH	3*
FLAMMABILITY	1
PHYSICAL HAZARD	0

0 = not significant, 1 = Slight,
2 = Moderate, 3 = High
4 = Extreme, * = Chronic

Revision Date	:	10/17/2019
Version Number	:	1.4
Prepared By	:	Regulatory Affairs

REVISED INFORMATION: Significant changes to regulatory or health information for this revision is indicated by a bar in the left-hand margin of the SDS.

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NALCO Water
An Ecolab Company

SAFETY DATA SHEET

3D TRASAR™ 3DT397

Section: 1. PRODUCT AND COMPANY IDENTIFICATION

Product name	:	3D TRASAR™ 3DT397
Other means of identification	:	Not applicable.
Recommended use	:	COOLING WATER CORROSION INHIBITOR - INORGANIC COMPOUNDS
Restrictions on use	:	Refer to available product literature or ask your local Sales Representative for restrictions on use and dose limits.
Company	:	Nalco Company 1601 W. Diehl Road Naperville, Illinois 60563-1198 USA TEL: (630) 305-1000
Emergency telephone number	:	(800) 424-9300 (24 Hours) CHEMTREC
Issuing date	:	04/17/2020

Section: 2. HAZARDS IDENTIFICATION

GHS Classification

Skin corrosion	:	Category 1
Serious eye damage	:	Category 1
Reproductive toxicity	:	Category 1B
Specific target organ toxicity - single exposure	:	Category 3 (Respiratory system)

GHS Label element

Hazard pictograms :

Signal Word : Danger

Hazard Statements : Causes severe skin burns and eye damage.
May cause respiratory irritation.
May damage fertility or the unborn child.

Precautionary Statements : **Prevention:**
Avoid breathing dust/ fume/ gas/ mist/ vapours/ spray. Wear protective gloves/ protective clothing/ eye protection/ face protection.
Response:
IF SWALLOWED: Rinse mouth. Do NOT induce vomiting. IF ON SKIN (or hair): Take off immediately all contaminated clothing. Rinse skin with water/shower. IF INHALED: Remove person to fresh air and keep comfortable for breathing. Immediately call a POISON CENTER/doctor. IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing. Immediately call a POISON CENTER or doctor/ physician.

Storage:
Store in a well-ventilated place. Keep container tightly closed.
Disposal:
Dispose of contents/ container to an approved waste disposal plant.

Other hazards : Do not mix with bleach or other chlorinated products – will cause chlorine gas.

Section: 3. COMPOSITION/INFORMATION ON INGREDIENTS

Chemical Name	CAS-No.	Concentration: (%)
Modified benzimidazole salt	Proprietary	10 - 30
Organic Sulfonic Acid	Proprietary	10 - 30
Acetic Acid	64-19-7	1 - 5
alkano sulfoxide	Proprietary	1 - 5

Section: 4. FIRST AID MEASURES

In case of eye contact : Rinse immediately with plenty of water, also under the eyelids, for at least 15 minutes. Remove contact lenses, if present and easy to do. Continue rinsing. Get medical attention immediately.

In case of skin contact : Wash off immediately with plenty of water for at least 15 minutes. Use a mild soap if available. Wash clothing before reuse. Thoroughly clean shoes before reuse. Get medical attention immediately.

If swallowed : Rinse mouth with water. Do NOT induce vomiting. Never give anything by mouth to an unconscious person. Get medical attention immediately.

If inhaled : Remove to fresh air. Treat symptomatically. Get medical attention if symptoms occur.

Protection of first-aiders : In event of emergency assess the danger before taking action. Do not put yourself at risk of injury. If in doubt, contact emergency responders. Use personal protective equipment as required.

Notes to physician : Treat symptomatically.

Most important symptoms and effects, both acute and delayed : See Section 11 for more detailed information on health effects and symptoms.

Section: 5. FIREFIGHTING MEASURES

Suitable extinguishing media : Use extinguishing measures that are appropriate to local circumstances and the surrounding environment.

Unsuitable extinguishing media : None known.

Specific hazards during firefighting : Not flammable or combustible.

Hazardous combustion : Decomposition products may include the following materials: Carbon oxides

products		nitrogen oxides (NOx) Sulphur oxides Oxides of phosphorus
Special protective equipment for firefighters	:	Use personal protective equipment.
Specific extinguishing methods	:	Fire residues and contaminated fire extinguishing water must be disposed of in accordance with local regulations. In the event of fire and/or explosion do not breathe fumes.

Section: 6. ACCIDENTAL RELEASE MEASURES

Personal precautions, protective equipment and emergency procedures	:	Ensure adequate ventilation. Keep people away from and upwind of spill/leak. Avoid inhalation, ingestion and contact with skin and eyes. When workers are facing concentrations above the exposure limit they must use appropriate certified respirators. Ensure clean-up is conducted by trained personnel only. Refer to protective measures listed in sections 7 and 8.
Environmental precautions	:	Do not allow contact with soil, surface or ground water.
Methods and materials for containment and cleaning up	:	Stop leak if safe to do so. Contain spillage, and then collect with non-combustible absorbent material, (e.g. sand, earth, diatomaceous earth, vermiculite) and place in container for disposal according to local / national regulations (see section 13). For large spills, dike spilled material or otherwise contain material to ensure runoff does not reach a waterway. Flush away traces with water.

Section: 7. HANDLING AND STORAGE

Advice on safe handling	:	Do not ingest. Do not breathe dust/fume/gas/mist/vapours/spray. Do not get in eyes, on skin, or on clothing. Wash hands thoroughly after handling. Use only with adequate ventilation. Do not mix with bleach or other chlorinated products – will cause chlorine gas.
Conditions for safe storage	:	Keep out of reach of children. Keep container tightly closed. Store in suitable labelled containers.
Suitable material	:	Keep in properly labelled containers.
Unsuitable material	:	not determined

Section: 8. EXPOSURE CONTROLS/PERSONAL PROTECTION

Components with workplace control parameters

Components	CAS-No.	Form of exposure	Permissible concentration	Basis
Acetic Acid	64-19-7	TWA	10 ppm	ACGIH
		STEL	15 ppm	ACGIH
		STEL	15 ppm 37 mg/m3	NIOSH REL
		TWA	10 ppm 25 mg/m3	NIOSH REL
		TWA	10 ppm	OSHA Z1

			25 mg/m3	

Engineering measures : Effective exhaust ventilation system. Maintain air concentrations below occupational exposure standards.

Personal protective equipment

Eye protection : Safety goggles
Face-shield

Hand protection : Wear protective gloves.
Impervious gloves, resistant to chemicals.
Nitrile rubber
Neoprene
Gloves should be discarded and replaced if there is any indication of degradation or chemical breakthrough.

Skin protection : Personal protective equipment comprising: suitable protective gloves, safety goggles and protective clothing

Respiratory protection : When workers are facing concentrations above the exposure limit they must use appropriate certified respirators.

Hygiene measures : Handle in accordance with good industrial hygiene and safety practice. Remove and wash contaminated clothing before re-use. Wash face, hands and any exposed skin thoroughly after handling. Provide suitable facilities for quick drenching or flushing of the eyes and body in case of contact or splash hazard.

The Personal Protective Equipment (PPE) recommendations provided above have been made in good faith based on typical expected conditions of use. PPE selection should always be completed in conjunction with a proper risk assessment and in accordance with a PPE management program.

Section: 9. PHYSICAL AND CHEMICAL PROPERTIES

Appearance : Aqueous solution

Colour : Dark brown

Odour : vinegar-like

Flash point : > 101 °C, Does not sustain combustion.

pH : < 1.5, (25 °C)

Odour Threshold : no data available

Melting point/freezing point : -5 °C

Initial boiling point and boiling range : 98.5 °C

Evaporation rate : no data available

Flammability (solid, gas) : Not applicable.

Upper explosion limit : no data available

Lower explosion limit : no data available

Vapour pressure : no data available

Relative vapour density	:	no data available
Relative density	:	1.08 - 1.13, (25 °C),
Density	:	no data available
Water solubility	:	Complete
Solubility in other solvents	:	no data available
Partition coefficient: n-octanol/water	:	no data available
Auto-ignition temperature	:	no data available
Thermal decomposition	:	no data available
Viscosity, dynamic	:	no data available
Viscosity, kinematic	:	2.66 mm2/s (25 °C)
Molecular weight	:	no data available
VOC	:	no data available

Section: 10. STABILITY AND REACTIVITY

Reactivity	:	No dangerous reaction known under conditions of normal use.
Chemical stability	:	Stable under normal conditions.
Possibility of hazardous reactions	:	Do not mix with bleach or other chlorinated products – will cause chlorine gas.
Conditions to avoid	:	None known.
Incompatible materials	:	None known.
Hazardous decomposition products	:	In case of fire, hazardous decomposition products may be produced such as: Carbon oxides nitrogen oxides (NOx) Sulphur oxides Oxides of phosphorus

Section: 11. TOXICOLOGICAL INFORMATION

Information on likely routes of exposure	:	Inhalation, Eye contact, Skin contact

Potential Health Effects

Eyes	:	Causes serious eye damage.
Skin	:	Causes severe skin burns.
Ingestion	:	Causes digestive tract burns.
Inhalation	:	May cause respiratory tract irritation. May cause nose, throat, and lung irritation.
Chronic Exposure	:	Suspected of damaging fertility or the unborn child.

Experience with human exposure

Eye contact	:	Redness, Pain, Corrosion
Skin contact	:	Redness, Pain, Corrosion
Ingestion	:	Corrosion, Abdominal pain
Inhalation	:	Respiratory irritation, Cough

Toxicity

Product

Acute oral toxicity	:	Acute toxicity estimate: 4,622 mg/kg
Acute inhalation toxicity	:	no data available
Acute dermal toxicity	:	Acute toxicity estimate: > 5,000 mg/kg
Skin corrosion/irritation	:	no data available
Serious eye damage/eye irritation	:	no data available
Respiratory or skin sensitization	:	no data available
Carcinogenicity	:	no data available
Reproductive effects	:	no data available
Germ cell mutagenicity	:	no data available
Teratogenicity	:	no data available
STOT - single exposure	:	Causes damage to organs if inhaled.
STOT - repeated exposure	:	no data available
Aspiration toxicity	:	no data available

Section: 12. ECOLOGICAL INFORMATION

Ecotoxicity

Environmental Effects	:	This product has no known ecotoxicological effects.

Product

Toxicity to fish	:	LC50 Fathead Minnow: 502 mg/l Exposure time: 96 hrs Test substance: Product NOEC Fathead Minnow: 360 mg/l Exposure time: 96 hrs Test substance: Product LC50 Rainbow Trout: 480 mg/l Exposure time: 96 hrs Test substance: Product

NOEC Rainbow Trout: 360 mg/l
Exposure time: 96 hrs
Test substance: Product

Toxicity to daphnia and other aquatic invertebrates : EC50 Ceriodaphnia dubia: 301 mg/l
Exposure time: 48 hrs
Test substance: Product

LC50 Ceriodaphnia dubia: 369 mg/l
Exposure time: 48 hrs
Test substance: Product

NOEC Ceriodaphnia dubia: 216 mg/l
Exposure time: 48 hrs
Test substance: Product

Toxicity to algae : NOEC Macrocystis pyrifera (brown algae): 25 mg/l
Exposure time: 48 hrs
Test substance: Product
Test Type: Reproduction

EC25 / IC25 Macrocystis pyrifera (brown algae): 74.5 mg/l
Exposure time: 48 hrs
Test substance: Product
Test Type: Reproduction

EC25 / IC25 Macrocystis pyrifera (brown algae): 67.6 mg/l
Exposure time: 48 hrs
Test substance: Product
Test Type: Growth

EC50 Macrocystis pyrifera (brown algae): 104 mg/l
Exposure time: 48 hrs
Test substance: Product
Test Type: Reproduction

EC50 Macrocystis pyrifera (brown algae): 119 mg/l
Exposure time: 48 hrs
Test substance: Product
Test Type: Growth

NOEC Macrocystis pyrifera (brown algae): 25 mg/l
Exposure time: 48 hrs
Test substance: Product
Test Type: Growth

Toxicity to daphnia and other aquatic invertebrates (Chronic toxicity) : EC25 / IC25: 66 mg/l
Exposure time: 7 d
Species: Ceriodaphnia dubia
Test substance: Product
Test Type: Reproduction

LOEC: 90 mg/l
Exposure time: 7 d

Species: Ceriodaphnia dubia
Test substance: Product
Test Type: Reproduction

NOEC: 45 mg/l
Exposure time: 7 d
Species: Ceriodaphnia dubia
Test substance: Product
Test Type: Reproduction

Components

Toxicity to fish (Chronic toxicity) : Modified benzimidazole salt
NOEC: 60 mg/l
Exposure time: 96 h
Species: Oncorhynchus mykiss (rainbow trout)

Persistence and degradability

no data available

Mobility

no data available

Bioaccumulative potential

no data available

Other information

no data available

Section: 13. DISPOSAL CONSIDERATIONS

Disposal methods : Where possible recycling is preferred to disposal or incineration. If recycling is not practicable, dispose of in compliance with local regulations. Dispose of wastes in an approved waste disposal facility.

Disposal considerations : Dispose of as unused product. Empty containers should be taken to an approved waste handling site for recycling or disposal. Do not re-use empty containers.

Section: 14. TRANSPORT INFORMATION

The shipper/consignor/sender is responsible to ensure that the packaging, labeling, and markings are in compliance with the selected mode of transport.

Land transport (DOT)

Proper shipping name : CORROSIVE LIQUID, N.O.S.
Technical name(s) : Organic Sulfonic Acid, Acetic Acid
UN/ID No. : UN 1760
Transport hazard class(es) : 8
Packing group : III

Reportable Quantity (per package)	:	102,040 lbs
RQ Component	:	Acetic Acid

Air transport (IATA)

Proper shipping name	:	CORROSIVE LIQUID, N.O.S.
Technical name(s)	:	Organic Sulfonic Acid, Acetic Acid
UN/ID No.	:	UN 1760
Transport hazard class(es)	:	8
Packing group	:	III
Reportable Quantity (per package)	:	102,040 lbs
RQ Component	:	Acetic Acid

Sea transport (IMDG/IMO)

Proper shipping name	:	CORROSIVE LIQUID, N.O.S.
Technical name(s)	:	Organic Sulfonic Acid, Acetic Acid
UN/ID No.	:	UN 1760
Transport hazard class(es)	:	8
Packing group	:	III

Section: 15. REGULATORY INFORMATION

TSCA list : The following substance(s) is/are subject to a Significant New Use Rule: Modified benzimidazole salt

The following substance(s) is/are subject to TSCA 12(b) export notification requirements: Modified benzimidazole salt

EPCRA - Emergency Planning and Community Right-to-Know Act

CERCLA Reportable Quantity

Components	CAS-No.	Component RQ (lbs)	Calculated product RQ (lbs)
Acetic Acid	64-19-7	5000	102040

SARA 304 Extremely Hazardous Substances Reportable Quantity

This material does not contain any components with a section 304 EHS RQ.

SARA 311/312 Hazards : Skin corrosion or irritation
Serious eye damage or eye irritation
Reproductive toxicity
Specific target organ toxicity (single or repeated exposure)

SARA 302 : This material does not contain any components with a section 302 EHS TPQ.

SARA 313 : This material does not contain any chemical components with known CAS numbers that exceed the threshold (De Minimis) reporting levels established by SARA Title III, Section 313.

California Prop. 65
This product does not contain any chemicals known to State of California to cause cancer, birth defects, or any other reproductive harm.

INTERNATIONAL CHEMICAL CONTROL LAWS :

United States TSCA Inventory
This product is subject under TSCA 5(a) to Significant New Use Restrictions (SNUR).

Australia. Industrial Chemical (Notification and Assessment) Act
not determined

New Zealand. Inventory of Chemicals (NZIoC), as published by ERMA New Zealand
All substances in this product comply with the Hazardous Substances and New Organisms (HSNO) Act 1996,and are listed on or are exempt from the New Zealand Inventory of Chemicals.

Japan. ENCS - Existing and New Chemical Substances Inventory
not determined

Korea. Korean Existing Chemicals Inventory (KECI)
not determined

Philippines Inventory of Chemicals and Chemical Substances (PICCS)
not determined

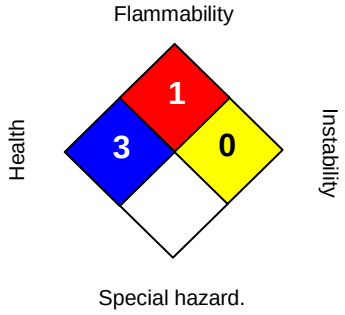
China Inventory of Existing Chemical Substances
All substances in this product comply with the Provisions on the Environmental Administration of New Chemical Substances and are listed on or exempt from the Inventory of Existing Chemical Substances China (IECSC).

Taiwan Chemical Substance Inventory
not determined

Canadian Domestic Substances List (DSL)
This product contains substance(s) which are not listed on the Domestic Substances List (DSL) or the Non-Domestic Substances List (NDSL).

Section: 16. OTHER INFORMATION

NFPA:



HMIS III:

HEALTH	3*
FLAMMABILITY	1
PHYSICAL HAZARD	0

0 = not significant, 1 = Slight,
2 = Moderate, 3 = High
4 = Extreme, * = Chronic

Revision Date : 04/17/2020

Version Number	:	1.9
Prepared By	:	Regulatory Affairs

REVISED INFORMATION: Significant changes to regulatory or health information for this revision is indicated by a bar in the left-hand margin of the SDS.

The information provided in this Safety Data Sheet is correct to the best of our knowledge, information and belief at the date of its publication. The information given is designed only as a guidance for safe handling, use, processing, storage, transportation, disposal and release and is not to be considered a warranty or quality specification. The information relates only to the specific material designated and may not be valid for such material used in combination with any other materials or in any process, unless specified in the text.
For additional copies of an SDS visit www.nalco.com and request access.

SAFETY DATA SHEET

NALCO® 7396

Section: 1. PRODUCT AND COMPANY IDENTIFICATION

Product name	:	NALCO® 7396
Other means of identification	:	Not applicable.
Recommended use	:	WATER STABILIZATION
Restrictions on use	:	Refer to available product literature or ask your local Sales Representative for restrictions on use and dose limits.
Company	:	Nalco Company 1601 W. Diehl Road Naperville, Illinois 60563-1198 USA TEL: (630)305-1000
Emergency telephone number	:	(800) 424-9300 (24 Hours) CHEMTREC
Issuing date	:	09/17/2018

Section: 2. HAZARDS IDENTIFICATION

GHS Classification

Eye irritation : Category 2A

GHS Label element

Hazard pictograms :

Signal Word : Warning

Hazard Statements : Causes serious eye irritation.

Precautionary Statements : **Prevention:**
Wash skin thoroughly after handling. Wear eye protection/face protection.
Response:
IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.

Other hazards : None known.

Section: 3. COMPOSITION/INFORMATION ON INGREDIENTS

Chemical Name	CAS-No.	Concentration: (%)
Tetrapotassium Pyrophosphate	7320-34-5	60 - 100

Section: 4. FIRST AID MEASURES

In case of eye contact : Rinse immediately with plenty of water, also under the eyelids, for at least 15

		minutes. Remove contact lenses, if present and easy to do. Continue rinsing. Get medical attention.
In case of skin contact	:	Wash off with soap and plenty of water. Get medical attention if symptoms occur.
If swallowed	:	Rinse mouth. Get medical attention if symptoms occur.
If inhaled	:	Get medical attention if symptoms occur.
Protection of first-aiders	:	In event of emergency assess the danger before taking action. Do not put yourself at risk of injury. If in doubt, contact emergency responders. Use personal protective equipment as required.
Notes to physician	:	Treat symptomatically.
Most important symptoms and effects, both acute and delayed	:	See Section 11 for more detailed information on health effects and symptoms.

Section: 5. FIREFIGHTING MEASURES

Suitable extinguishing media	:	Use extinguishing measures that are appropriate to local circumstances and the surrounding environment.
Unsuitable extinguishing media	:	None known.
Specific hazards during firefighting	:	Not flammable or combustible.
Hazardous combustion products	:	Decomposition products may include the following materials: Carbon oxides nitrogen oxides (NOx) Sulphur oxides Oxides of phosphorus
Special protective equipment for firefighters	:	Use personal protective equipment.
Specific extinguishing methods	:	Fire residues and contaminated fire extinguishing water must be disposed of in accordance with local regulations. In the event of fire and/or explosion do not breathe fumes.

Section: 6. ACCIDENTAL RELEASE MEASURES

Personal precautions, protective equipment and emergency procedures	:	Ensure clean-up is conducted by trained personnel only. Refer to protective measures listed in sections 7 and 8.
Environmental precautions	:	Do not allow contact with soil, surface or ground water.
Methods and materials for containment and cleaning up	:	Stop leak if safe to do so. Contain spillage, and then collect with non-combustible absorbent material, (e.g. sand, earth, diatomaceous earth, vermiculite) and place in container for disposal according to local / national regulations (see section 13). For large spills, dike spilled material or otherwise contain material to ensure runoff does not reach a waterway. Flush away traces with water.

Section: 7. HANDLING AND STORAGE

Advice on safe handling	:	Avoid contact with skin and eyes. Wash hands thoroughly after handling. Use only with adequate ventilation.
Conditions for safe storage	:	Keep out of reach of children. Keep container tightly closed. Store in suitable labelled containers.
Suitable material	:	The following compatibility data is suggested based on similar product data and/or industry experience: Buna-N, Neoprene, Viton, Hypalon, Polyurethane, EPDM, PVC, Polypropylene, Polyethylene
Unsuitable material	:	not determined

Section: 8. EXPOSURE CONTROLS/PERSONAL PROTECTION

Components with workplace control parameters

Engineering measures	:	Good general ventilation should be sufficient to control worker exposure to airborne contaminants.

Personal protective equipment

Eye protection	:	Safety glasses with side-shields
Hand protection	:	Wear protective gloves. Gloves should be discarded and replaced if there is any indication of degradation or chemical breakthrough.
Skin protection	:	Wear suitable protective clothing.
Respiratory protection	:	In the case of vapour formation use a respirator with an approved filter. No personal respiratory protective equipment normally required.
Hygiene measures	:	Handle in accordance with good industrial hygiene and safety practice. Remove and wash contaminated clothing before re-use. Wash face, hands and any exposed skin thoroughly after handling.

Section: 9. PHYSICAL AND CHEMICAL PROPERTIES

Appearance	:	Liquid
Colour	:	Colorless
Odour	:	None
Flash point	:	does not flash
pH	:	9.5 - 10.8,(1 %), (25 °C)
Odour Threshold	:	no data available
Melting point/freezing point	:	Freezing Point: -28.9 °C

Initial boiling point and boiling range	:	112.8 °C, (760 mm Hg)
Evaporation rate	:	no data available
Flammability (solid, gas)	:	no data available
Upper explosion limit	:	no data available
Lower explosion limit	:	no data available
Vapour pressure	:	similar to water
Relative vapour density	:	no data available
Relative density	:	1.74, (15 °C), ASTM D-1298
Density	:	1.74 g/cm3 , 14.5 lb/gal
Water solubility	:	completely soluble
Solubility in other solvents	:	no data available
Partition coefficient: n-octanol/water	:	no data available
Auto-ignition temperature	:	no data available
Thermal decomposition	:	no data available
Viscosity, dynamic	:	no data available
Viscosity, kinematic	:	no data available
Molecular weight	:	no data available
VOC	:	0 %, Calculation method

Section: 10. STABILITY AND REACTIVITY

Chemical stability	:	Stable under normal conditions.
Possibility of hazardous reactions	:	No dangerous reaction known under conditions of normal use.
Conditions to avoid	:	Extremes of temperature
Incompatible materials	:	None known
Hazardous decomposition products	:	In case of fire, hazardous decomposition products may be produced such as: Carbon oxides nitrogen oxides (NOx) Sulphur oxides Oxides of phosphorus

Section: 11. TOXICOLOGICAL INFORMATION

Information on likely routes of exposure	:	Inhalation, Eye contact, Skin contact

Potential Health Effects

Eyes	:	Causes serious eye irritation.
Skin	:	Health injuries are not known or expected under normal use.
Ingestion	:	Health injuries are not known or expected under normal use.
Inhalation	:	Health injuries are not known or expected under normal use.
Chronic Exposure	:	Health injuries are not known or expected under normal use.

Experience with human exposure

Eye contact	:	Redness, Pain, Irritation
Skin contact	:	No symptoms known or expected.
Ingestion	:	No symptoms known or expected.
Inhalation	:	No symptoms known or expected.
		No symptoms known or expected.

Toxicity

Product

Acute oral toxicity	:	no data available
Acute inhalation toxicity	:	no data available
Acute dermal toxicity	:	no data available
Skin corrosion/irritation	:	no data available
Serious eye damage/eye irritation	:	no data available
Respiratory or skin sensitization	:	no data available
Carcinogenicity	:	no data available
Reproductive effects	:	no data available
Germ cell mutagenicity	:	no data available
Teratogenicity	:	no data available
STOT - single exposure	:	no data available
STOT - repeated exposure	:	no data available
Aspiration toxicity	:	no data available

Components

Acute oral toxicity	:	Tetrapotassium Pyrophosphate LD50 rat: > 2,000 mg/kg

Section: 12. ECOLOGICAL INFORMATION

Ecotoxicity

Environmental Effects : This product has no known ecotoxicological effects.

Product

Toxicity to fish : LC50 Bluegill Sunfish: 420 mg/l
Exposure time: 96 hrs
Test substance: Product

LC50 Rainbow Trout: 450 mg/l
Exposure time: 96 hrs
Test substance: Product

LC50 Fathead Minnow: 425 mg/l
Exposure time: 96 hrs
Test substance: Product

NOEC Fathead Minnow: 250 mg/l
Exposure time: 96 hrs
Test substance: Product

Toxicity to daphnia and other aquatic invertebrates : LC50 Ceriodaphnia dubia: 406 mg/l
Exposure time: 48 hrs
Test substance: Product

NOEC Ceriodaphnia dubia: 250 mg/l
Exposure time: 48 hrs
Test substance: Product

Persistence and degradability

Greater than 95% of this product consists of inorganic substances for which a biodegradation value is not applicable.

Chemical Oxygen Demand (COD): < 100 mg/l

Biochemical Oxygen Demand (BOD):

Incubation Period	Value	Test Descriptor
	0 mg/l	

Mobility

The environmental fate was estimated using a level III fugacity model embedded in the EPI (estimation program interface) Suite TM, provided by the US EPA. The model assumes a steady state condition between the total input and output. The level III model does not require equilibrium between the defined media. The information provided is intended to give the user a general estimate of the environmental fate of this product under the defined conditions of the models.
If released into the environment this material is expected to distribute to the air, water and soil/sediment in the approximate respective percentages;

Air : <5%
Water : 30 - 50%
Soil : 50 - 70%

The portion in water is expected to be soluble or dispersible.

Bioaccumulative potential

This preparation or material is not expected to bioaccumulate.

Other information

no data available

Section: 13. DISPOSAL CONSIDERATIONS

If this product becomes a waste, it is not a hazardous waste as defined by the Resource Conservation and Recovery Act (RCRA) 40 CFR 261, since it does not have the characteristics of Subpart C, nor is it listed under Subpart D.

Disposal methods	:	Where possible recycling is preferred to disposal or incineration. If recycling is not practicable, dispose of in compliance with local regulations. Dispose of wastes in an approved waste disposal facility.
Disposal considerations	:	Dispose of as unused product. Empty containers should be taken to an approved waste handling site for recycling or disposal. Do not re-use empty containers.

Section: 14. TRANSPORT INFORMATION

The shipper/consignor/sender is responsible to ensure that the packaging, labeling, and markings are in compliance with the selected mode of transport.

Land transport (DOT)

Proper shipping name	:	CORROSIVE LIQUID, BASIC, INORGANIC, N.O.S.
Technical name(s)	:	TETRAPOTASSIUM PYROPHOSPHATE
UN/ID No.	:	UN 3266
Transport hazard class(es)	:	8
Packing group	:	III

Air transport (IATA)

Proper shipping name	:	CORROSIVE LIQUID, BASIC, INORGANIC, N.O.S.
Technical name(s)	:	TETRAPOTASSIUM PYROPHOSPHATE
UN/ID No.	:	UN 3266
Transport hazard class(es)	:	8
Packing group	:	III

Sea transport (IMDG/IMO)

Proper shipping name	:	CORROSIVE LIQUID, BASIC, INORGANIC, N.O.S.
Technical name(s)	:	TETRAPOTASSIUM PYROPHOSPHATE
UN/ID No.	:	UN 3266
Transport hazard class(es)	:	8
Packing group	:	III

Section: 15. REGULATORY INFORMATION

TSCA list	:	No substances are subject to a Significant New Use Rule. No substances are subject to TSCA 12(b) export notification requirements.

EPCRA - Emergency Planning and Community Right-to-Know Act

CERCLA Reportable Quantity

This product does not contain a RQ substance, or this product contains a substance with a RQ, however the calculated RQ exceeds the reasonably attainable upper limit.

SARA 304 Extremely Hazardous Substances Reportable Quantity

This material does not contain any components with a section 304 EHS RQ.

SARA 311/312 Hazards	:	Serious eye damage or eye irritation
SARA 302	:	This material does not contain any components with a section 302 EHS TPQ.
SARA 313	:	This material does not contain any chemical components with known CAS numbers that exceed the threshold (De Minimis) reporting levels established by SARA Title III, Section 313.

California Prop. 65

This product does not contain any chemicals known to State of California to cause cancer, birth defects, or any other reproductive harm.

INTERNATIONAL CHEMICAL CONTROL LAWS :

United States TSCA Inventory

The substances in this preparation are included on or exempted from the TSCA 8(b) Inventory (40 CFR 710)

Australia. Industrial Chemical (Notification and Assessment) Act

All substances in this product comply with the National Industrial Chemicals Notification & Assessment Scheme (NICNAS).

Canadian Domestic Substances List (DSL)

The substance(s) in this preparation are included in or exempted from the Domestic Substance List (DSL).

Japan. ENCS - Existing and New Chemical Substances Inventory

All substances in this product comply with the Law Regulating the Manufacture and Importation Of Chemical Substances and are listed on the Existing and New Chemical Substances list (ENCS).

Korea. Korean Existing Chemicals Inventory (KECI)

All substances in this product comply with the Chemical Control Act (CCA) and are listed on the Existing Chemicals List (ECL)

Philippines Inventory of Chemicals and Chemical Substances (PICCS)

All substances in this product comply with the Republic Act 6969 (RA 6969) and are listed on the Philippines Inventory of Chemicals & Chemical Substances (PICCS).

China Inventory of Existing Chemical Substances

All substances in this product comply with the Provisions on the Environmental Administration of New Chemical Substances and are listed on or exempt from the Inventory of Existing Chemical Substances China (IECSC).

New Zealand. Inventory of Chemicals (NZIoC), as published by ERMA New Zealand

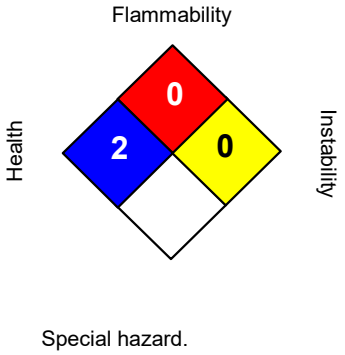
All substances in this product comply with the Hazardous Substances and New Organisms (HSNO) Act 1996,and are listed on or are exempt from the New Zealand Inventory of Chemicals.

Taiwan Chemical Substance Inventory

All substances in this product comply with the Taiwan Existing Chemical Substances Inventory (ECSI).

Section: 16. OTHER INFORMATION

NFPA:



HMIS III:

HEALTH	2
FLAMMABILITY	0
PHYSICAL HAZARD	0

0 = not significant, 1 =Slight,
2 = Moderate, 3 = High
4 = Extreme, * = Chronic

Revision Date	:	09/17/2018
Version Number	:	1.2
Prepared By	:	Regulatory Affairs

REVISED INFORMATION: Significant changes to regulatory or health information for this revision is indicated by a bar in the left-hand margin of the SDS.

The information provided in this Safety Data Sheet is correct to the best of our knowledge, information and belief at the date of its publication. The information given is designed only as a guidance for safe handling, use, processing, storage, transportation, disposal and release and is not to be considered a warranty or quality specification. The information relates only to the specific material designated and may not be valid for such material used in combination with any other materials or in any process, unless specified in the text.
For additional copies of an SDS visit www.nalco.com and request access.

NALCO Water
An Ecolab Company

SAFETY DATA SHEET

ACTI-BROM™ 1318

Section: 1. PRODUCT AND COMPANY IDENTIFICATION

Product name	:	ACTI-BROM™ 1318
Other means of identification	:	Not applicable.
Recommended use	:	BIOCIDE
Restrictions on use	:	Refer to available product literature or ask your local Sales Representative for restrictions on use and dose limits.
Company	:	Nalco Company 1601 W. Diehl Road Naperville, Illinois 60563-1198 USA TEL: (630)305-1000
Emergency telephone number	:	(800) 424-9300 (24 Hours) CHEMTREC
Issuing date	:	02/27/2017

Section: 2. HAZARDS IDENTIFICATION

GHS Classification

Eye irritation	:	Category 2B

GHS Label element

Signal Word	:	Warning
Hazard Statements	:	Causes eye irritation.
Precautionary Statements	:	**Prevention:** Wash skin thoroughly after handling. **Response:** IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.
Other hazards	:	None known.

Section: 3. COMPOSITION/INFORMATION ON INGREDIENTS

Chemical Name	CAS-No.	Concentration: (%)
Sodium Bromide	7647-15-6	43

Section: 4. FIRST AID MEASURES

In case of eye contact	:	Rinse with plenty of water. Get medical attention if symptoms occur.
In case of skin contact	:	Wash off with soap and plenty of water. Get medical attention if symptoms occur.
If swallowed	:	Rinse mouth. Get medical attention if symptoms occur.

If inhaled	:	Get medical attention if symptoms occur.
Protection of first-aiders	:	In event of emergency assess the danger before taking action. Do not put yourself at risk of injury. If in doubt, contact emergency responders. Use personal protective equipment as required.
Notes to physician	:	Treat symptomatically.
Most important symptoms and effects, both acute and delayed	:	See Section 11 for more detailed information on health effects and symptoms.

Section: 5. FIREFIGHTING MEASURES

Suitable extinguishing media	:	Use extinguishing measures that are appropriate to local circumstances and the surrounding environment.
Unsuitable extinguishing media	:	None known.
Specific hazards during firefighting	:	May evolve hydrogen bromide and bromine under fire conditions.
Hazardous combustion products	:	Decomposition products may include the following materials: Carbon oxides
Special protective equipment for firefighters	:	In case of fire, wear a full face positive-pressure self contained breathing apparatus and protective suit.
Specific extinguishing methods	:	Fire residues and contaminated fire extinguishing water must be disposed of in accordance with local regulations. In the event of fire and/or explosion do not breathe fumes.

Section: 6. ACCIDENTAL RELEASE MEASURES

Personal precautions, protective equipment and emergency procedures	:	Restrict access to area as appropriate until clean-up operations are complete. Use personal protective equipment recommended in Section 8 (Exposure Controls/Personal Protection). Stop or reduce any leaks if it is safe to do so. Keep people away from and upwind of spill/leak. Ventilate spill area if possible. Ensure clean-up is conducted by trained personnel only. Do not touch spilled material. Have emergency equipment (for fires, spills, leaks, etc.) readily available. Notify appropriate government, occupational health and safety and environmental authorities.
Environmental precautions	:	This pesticide is toxic to fish and aquatic organisms. Do not discharge effluent containing this product into lakes, streams, ponds, estuaries, oceans or other waters, unless in accordance with the requirements of a National Pollutant Discharge Elimination System (NPDES) permit and the permitting authority has been notified in writing prior to discharge. Do not discharge effluent containing this product to sewer systems without previously notifying the local sewage treatment plant authority. For guidance contact your State Water Board or Regional Office of the EPA.
Methods and materials for	:	Stop leak if safe to do so. Contain spillage, and then collect with non-

containment and cleaning up	combustible absorbent material, (e.g. sand, earth, diatomaceous earth, vermiculite) and place in container for disposal according to local / national regulations (see section 13). For large spills, dike spilled material or otherwise contain material to ensure runoff does not reach a waterway. Flush away traces with water.

Section: 7. HANDLING AND STORAGE

Advice on safe handling	:	Do not get in eyes, on skin, on clothing. Do not take internally. Use with adequate ventilation. Do not breathe vapors/gases/dust. Keep the containers closed when not in use. Have emergency equipment (for fires, spills, leaks, etc.) readily available. Ensure all containers are labeled.
Conditions for safe storage	:	Store the containers tightly closed. Store in suitable labeled containers.
Suitable material	:	Shipping and long term storage compatibility with construction materials can vary; we therefore recommend that compatibility is tested prior to use.Keep in properly labelled containers.

Section: 8. EXPOSURE CONTROLS/PERSONAL PROTECTION

Components with workplace control parameters

Contains no substances with occupational exposure limit values.

Engineering measures	:	Good general ventilation should be sufficient to control worker exposure to airborne contaminants.

Personal protective equipment

Eye protection	:	Safety glasses
Hand protection	:	Wear protective gloves. Gloves should be discarded and replaced if there is any indication of degradation or chemical breakthrough.
Skin protection	:	Wear suitable protective clothing.
Respiratory protection	:	No personal respiratory protective equipment normally required.
Hygiene measures	:	Handle in accordance with good industrial hygiene and safety practice. Remove and wash contaminated clothing before re-use. Wash face, hands and any exposed skin thoroughly after handling.

Section: 9. PHYSICAL AND CHEMICAL PROPERTIES

Appearance	:	Liquid
Colour	:	colourless
Odour	:	odourless
Flash point	:	does not flash
pH	:	7.9, 100 %, Method: ASTM E 70

Odour Threshold	:	no data available
Melting point/freezing point	:	FREEZING POINT: -14 °C, ASTM D-1177
Initial boiling point and boiling range	:	103.5 °C, Method: ASTM D 86
Evaporation rate	:	no data available
Flammability (solid, gas)	:	no data available
Upper explosion limit	:	no data available
Lower explosion limit	:	no data available
Vapour pressure	:	5.6 mm Hg, (20 °C), ASTM D 323,
Relative vapour density	:	no data available
Relative density	:	1.45, (25 °C), ASTM D-1298
Density	:	12.1 lb/gal
Water solubility	:	completely soluble
Solubility in other solvents	:	no data available
Partition coefficient: n-octanol/water	:	no data available
Auto-ignition temperature	:	no data available
Thermal decomposition temperature	:	no data available
Viscosity, dynamic	:	5 mPa.s (20 °C)
Viscosity, kinematic	:	no data available
Molecular weight	:	no data available
VOC	:	0 %, EPA Method 24

Section: 10. STABILITY AND REACTIVITY

Chemical stability	:	Stable under normal conditions.
Possibility of hazardous reactions	:	No dangerous reaction known under conditions of normal use.
Conditions to avoid	:	Freezing temperatures.
Incompatible materials	:	Contact with strong oxidizers (e.g. chlorine, peroxides, chromates, nitric acid, perchlorate, concentrated oxygen, permanganate) may generate heat, fires, explosions and/or toxic vapors.
Hazardous decomposition products	:	Decomposition products may include the following materials: None known

Section: 11. TOXICOLOGICAL INFORMATION

Information on likely routes of exposure	:	Inhalation, Eye contact, Skin contact

Potential Health Effects

Eyes	:	Causes eye irritation.
Skin	:	Health injuries are not known or expected under normal use.
Ingestion	:	Health injuries are not known or expected under normal use.
Inhalation	:	Health injuries are not known or expected under normal use.
Chronic Exposure	:	Health injuries are not known or expected under normal use.

Experience with human exposure

Eye contact	:	Redness, Irritation
Skin contact	:	No symptoms known or expected.
Ingestion	:	No symptoms known or expected.
Inhalation	:	No symptoms known or expected.

Toxicity

Product

Acute oral toxicity	:	no data available
Acute inhalation toxicity	:	no data available
Acute dermal toxicity	:	no data available
Skin corrosion/irritation	:	Species: Rabbit Result: 0.0 Method: Draize Test Test substance: Similar Product
Serious eye damage/eye irritation	:	Species: rabbit Result: 16.0 Method: Draize Test Test substance: Similar Product
Respiratory or skin sensitization	:	no data available
Carcinogenicity	:	no data available
Reproductive effects	:	no data available
Germ cell mutagenicity	:	no data available
Teratogenicity	:	no data available
STOT - single exposure	:	no data available
STOT - repeated exposure	:	no data available
Aspiration toxicity	:	no data available

Components

Acute oral toxicity : Sodium Bromide
LD50 rat: 4,200 mg/kg

Components

Acute dermal toxicity : Sodium Bromide
LD50 rabbit: > 2,000 mg/kg

Section: 12. ECOLOGICAL INFORMATION

Ecotoxicity

Environmental Effects : This product has no known ecotoxicological effects.

Product

Toxicity to fish : LC50 Lepomis macrochirus (Bluegill sunfish): > 1,000 mg/l
Exposure time: 96 hrs
Test substance: Similar Product

LC50 Oncorhynchus mykiss (rainbow trout): > 1,000 mg/l
Exposure time: 96 hrs
Test substance: Similar Product

LC50 Pimephales promelas (fathead minnow): > 5,000 mg/l
Exposure time: 96 hrs
Test substance: Product

NOEC Pimephales promelas (fathead minnow): 5,000 mg/l
Exposure time: 96 hrs
Test substance: Product

Toxicity to daphnia and other aquatic invertebrates : LC50 Ceriodaphnia dubia: > 5,000 mg/l
Exposure time: 48 hrs
Test substance: Product

NOEC Ceriodaphnia dubia: 5,000 mg/l
Exposure time: 48 hrs
Test substance: Product

Persistence and degradability

Greater than 95% of this product consists of inorganic substances for which a biodegradation value is not applicable.

Biochemical Oxygen Demand (BOD):This material is an oxidizing biocide and is not expected to persist in the environment.

Mobility

The environmental fate was estimated using a level III fugacity model embedded in the EPI (estimation program interface) Suite TM, provided by the US EPA. The model assumes a steady state condition between the total input and output. The level III model does not require equilibrium between the defined media. The information provided is intended to give the user a general estimate of the environmental fate of this product under the defined conditions of the models.
If released into the environment this material is expected to distribute to the air, water and soil/sediment in the approximate respective percentages;

Air	:	<5%
Water	:	30 - 50%
Soil	:	50 - 70%

The portion in water is expected to be soluble or dispersible.

Bioaccumulative potential

This preparation or material is not expected to bioaccumulate.

Other information

no data available

Section: 13. DISPOSAL CONSIDERATIONS

If this product becomes a waste, it is not a hazardous waste as defined by the Resource Conservation and Recovery Act (RCRA) 40 CFR 261, since it does not have the characteristics of Subpart C, nor is it listed under Subpart D.

Disposal methods	:	As a non-hazardous waste, it is not subject to federal regulation. Consult state or local regulation for any additional handling, treatment or disposal requirements. For disposal, contact a properly licensed waste treatment, storage, disposal or recycling facility. Where possible recycling is preferred to disposal or incineration. If recycling is not practicable, dispose of in compliance with local regulations. Dispose of wastes in an approved waste disposal facility.
Disposal considerations	:	DO NOT REUSE EMPTY CONTAINER. Triple rinse the container (or equivalent). Then offer for recycling or reconditioning, or puncture and dispose of in a sanitary landfill, or incinerate. Burn only if allowed by state and local authorities. If burned, stay out of smoke. Dispose of as unused product. Empty containers should be taken to an approved waste handling site for recycling or disposal. Do not re-use empty containers.

Section: 14. TRANSPORT INFORMATION

The shipper/consignor/sender is responsible to ensure that the packaging, labeling, and markings are in compliance with the selected mode of transport.

Land transport (DOT)

Proper shipping name : PRODUCT IS NOT REGULATED DURING TRANSPORTATION

Air transport (IATA)

Proper shipping name : PRODUCT IS NOT REGULATED DURING TRANSPORTATION

Sea transport (IMDG/IMO)

Proper shipping name : PRODUCT IS NOT REGULATED DURING TRANSPORTATION

Section: 15. REGULATORY INFORMATION

TSCA list : No substances are subject to a Significant New Use Rule.
No substances are subject to TSCA 12(b) export notification requirements.

EPA Reg. No. : 83451-18-1706

EPCRA - Emergency Planning and Community Right-to-Know Act

CERCLA Reportable Quantity

This material does not contain any components with a CERCLA RQ.

SARA 304 Extremely Hazardous Substances Reportable Quantity

This material does not contain any components with a section 304 EHS RQ.

SARA 311/312 Hazards : Acute Health Hazard

SARA 302 : No chemicals in this material are subject to the reporting requirements of SARA Title III, Section 302.

SARA 313 : This material does not contain any chemical components with known CAS numbers that exceed the threshold (De Minimis) reporting levels established by SARA Title III, Section 313.

California Prop 65

This product does not contain any chemicals known to State of California to cause cancer, birth defects, or any other reproductive harm.

INTERNATIONAL CHEMICAL CONTROL LAWS :

United States TSCA Inventory

This product is exempted under TSCA and regulated under FIFRA. The inerts are on the Inventory List.

Australia. Industrial Chemical (Notification and Assessment) Act

All substances in this product comply with the National Industrial Chemicals Notification & Assessment Scheme (NICNAS).

Canadian Domestic Substances List (DSL)

The substance(s) in this preparation are included in or exempted from the Domestic Substance List (DSL).

Japan. ENCS - Existing and New Chemical Substances Inventory

All substances in this product comply with the Law Regulating the Manufacture and Importation Of Chemical Substances and are listed on the Existing and New Chemical Substances list (ENCS).

Korea. Korean Existing Chemicals Inventory (KECI)

All substances in this product comply with the Chemical Control Act (CCA) and are listed on the Existing Chemicals List (ECL)

New Zealand. Inventory of Chemicals (NZIoC), as published by ERMA New Zealand

not determined

Philippines Inventory of Chemicals and Chemical Substances (PICCS)

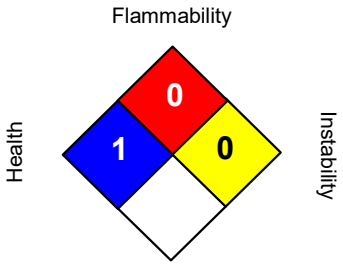
All substances in this product comply with the Republic Act 6969 (RA 6969) and are listed on the Philippines Inventory of Chemicals & Chemical Substances (PICCS).

China Inventory of Existing Chemical Substances
All substances in this product comply with the Provisions on the Environmental Administration of New Chemical Substances and are listed on or exempt from the Inventory of Existing Chemical Substances China (IECSC).

Taiwan Chemical Substance Inventory
On the inventory, or in compliance with the inventory

Section: 16. OTHER INFORMATION

NFPA:



Special hazard.

HMIS III:

HEALTH	1
FLAMMABILITY	0
PHYSICAL HAZARD	0

0 = not significant, 1 =Slight,
2 = Moderate, 3 = High
4 = Extreme, * = Chronic

Revision Date	:	02/27/2017
Version Number	:	1.1
Prepared By	:	Regulatory Affairs

REVISED INFORMATION: Significant changes to regulatory or health information for this revision is indicated by a bar in the left-hand margin of the SDS.

The information provided in this Safety Data Sheet is correct to the best of our knowledge, information and belief at the date of its publication. The information given is designed only as a guidance for safe handling, use, processing, storage, transportation, disposal and release and is not to be considered a warranty or quality specification. The information relates only to the specific material designated and may not be valid for such material used in combination with any other materials or in any process, unless specified in the text.
For additional copies of an SDS visit www.nalco.com and request access.

NALCO Water
An Ecolab Company

SAFETY DATA SHEET

PURATE

Section: 1. PRODUCT AND COMPANY IDENTIFICATION

Product name	:	PURATE
Other means of identification	:	Not applicable.
Recommended use	:	BIOCIDE PRECURSOR
Restrictions on use	:	Refer to available product literature or ask your local Sales Representative for restrictions on use and dose limits.
Company	:	Nalco Company 1601 W. Diehl Road Naperville, Illinois 60563-1198 USA TEL: (630)305-1000
Emergency telephone number	:	(800) 424-9300 (24 Hours) CHEMTREC
Issuing date	:	06/04/2019

Section: 2. HAZARDS IDENTIFICATION

GHS Classification

Oxidizing liquids	:	Category 1
Acute toxicity (Inhalation)	:	Category 4
Acute toxicity (Dermal)	:	Category 4
Serious eye damage	:	Category 1

GHS Label element

Hazard pictograms :

Signal Word : Danger

Hazard Statements : May cause fire or explosion; strong oxidiser.
Harmful in contact with skin or if inhaled
Causes serious eye damage.

Precautionary Statements : **Prevention:**
Keep away from heat. Keep/Store away from clothing and other combustible materials. Take any precaution to avoid mixing with combustibles. Avoid breathing dust/ fume/ gas/ mist/ vapours/ spray. Wear protective gloves/ eye protection/ face protection. Wear fire/ flame resistant/ retardant clothing.
Response:
IF ON SKIN: Wash with plenty of soap and water. Call a POISON CENTER or doctor/ physician if you feel unwell.
IF INHALED: Remove person to fresh air and keep comfortable for breathing. Call a POISON CENTER or doctor/ physician if you feel unwell.IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if

present and easy to do. Continue rinsing. Immediately call a POISON CENTER or doctor/ physician.IF ON CLOTHING: rinse immediately contaminated clothing and skin with plenty of water before removing clothes.

Other hazards : None known.

Section: 3. COMPOSITION/INFORMATION ON INGREDIENTS

Pure substance/mixture : Mixture

Chemical Name	CAS-No.	Concentration: (%)
Sodium Chlorate	7775-09-9	30 - 60
Hydrogen Peroxide	7722-84-1	5 - 10

Section: 4. FIRST AID MEASURES

In case of eye contact : Rinse immediately with plenty of water, also under the eyelids, for at least 15 minutes. Remove contact lenses, if present and easy to do. Continue rinsing. Get medical attention immediately.

In case of skin contact : Wash off immediately with plenty of water for at least 15 minutes. Use a mild soap if available. Wash clothing before reuse. Thoroughly clean shoes before reuse. Get medical attention if irritation develops and persists.

If swallowed : Rinse mouth. Get medical attention if symptoms occur.

If inhaled : Remove to fresh air. Treat symptomatically. Get medical attention.

Protection of first-aiders : In event of emergency assess the danger before taking action. Do not put yourself at risk of injury. If in doubt, contact emergency responders. Use personal protective equipment as required.

Notes to physician : Treat symptomatically.

Most important symptoms and effects, both acute and delayed : See Section 11 for more detailed information on health effects and symptoms.

Section: 5. FIREFIGHTING MEASURES

Suitable extinguishing media : Use extinguishing measures that are appropriate to local circumstances and the surrounding environment.

Unsuitable extinguishing media : None known.

Specific hazards during firefighting : Oxidizer. Contact with other material may cause fire.

Hazardous combustion products : Decomposition products may include the following materials: Carbon oxides nitrogen oxides (NOx) Sulphur oxides Oxides of phosphorus

Special protective equipment for firefighters : Use personal protective equipment.

Specific extinguishing methods	:	Fire residues and contaminated fire extinguishing water must be disposed of in accordance with local regulations. In the event of fire and/or explosion do not breathe fumes.

Section: 6. ACCIDENTAL RELEASE MEASURES

Personal precautions, protective equipment and emergency procedures	:	Ensure adequate ventilation. Keep people away from and upwind of spill/leak. Avoid inhalation, ingestion and contact with skin and eyes. When workers are facing concentrations above the exposure limit they must use appropriate certified respirators. Ensure clean-up is conducted by trained personnel only. Refer to protective measures listed in sections 7 and 8.
Environmental precautions	:	Do not allow contact with soil, surface or ground water.
Methods and materials for containment and cleaning up	:	Stop leak if safe to do so. Contain spillage, and then collect with non-combustible absorbent material, (e.g. sand, earth, diatomaceous earth, vermiculite) and place in container for disposal according to local / national regulations (see section 13). For large spills, dike spilled material or otherwise contain material to ensure runoff does not reach a waterway. Flush away traces with water.

Section: 7. HANDLING AND STORAGE

Advice on safe handling	:	Do not breathe dust/fume/gas/mist/vapours/spray. Do not get in eyes, on skin, or on clothing. Wash hands thoroughly after handling. Use only with adequate ventilation.
Conditions for safe storage	:	Keep in a cool, well-ventilated place. Keep away from reducing agents. Keep away from combustible material. Keep out of reach of children. Keep container tightly closed. Store in suitable labelled containers.
Suitable material	:	The following compatibility data is suggested based on similar product data and/or industry experience: Compatibility with Plastic Materials can vary; we therefore recommend that compatibility is tested prior to use.
Unsuitable material	:	not determined

Section: 8. EXPOSURE CONTROLS/PERSONAL PROTECTION

Components with workplace control parameters

Components	CAS-No.	Form of exposure	Permissible concentration	Basis
Hydrogen Peroxide	7722-84-1	TWA	1 ppm	ACGIH
		TWA	1 ppm 1.4 mg/m3	NIOSH REL
		TWA	1 ppm 1.4 mg/m3	OSHA Z1

Engineering measures	:	Effective exhaust ventilation system. Maintain air concentrations below occupational exposure standards.

Personal protective equipment

Eye protection	:	Safety goggles Face-shield
Hand protection	:	Wear the following personal protective equipment: Standard glove type. Gloves should be discarded and replaced if there is any indication of degradation or chemical breakthrough.
Skin protection	:	Wear suitable protective clothing.
Respiratory protection	:	When workers are facing concentrations above the exposure limit they must use appropriate certified respirators.
Hygiene measures	:	Handle in accordance with good industrial hygiene and safety practice. Remove and wash contaminated clothing before re-use. Wash face, hands and any exposed skin thoroughly after handling. Provide suitable facilities for quick drenching or flushing of the eyes and body in case of contact or splash hazard.

Section: 9. PHYSICAL AND CHEMICAL PROPERTIES

Appearance	:	Liquid
Colour	:	colourless
Odour	:	Slight, Pungent
Flash point	:	does not flash
pH	:	2 - 6
Odour Threshold	:	no data available
Melting point/freezing point	:	no data available
Initial boiling point and boiling range	:	104.0 °C
Evaporation rate	:	> 1
Flammability (solid, gas)	:	The product is not flammable.
Upper explosion limit	:	no data available
Lower explosion limit	:	no data available
Vapour pressure	:	6.7 kPa, (40 °C),
Relative vapour density	:	no data available
Relative density	:	1.3400 - 1.3900, (25 °C),
Density	:	11.4 lb/gal
Water solubility	:	completely soluble
Solubility in other solvents	:	no data available
Partition coefficient: n-octanol/water	:	no data available
Auto-ignition temperature	:	no data available
Thermal decomposition	:	no data available

Viscosity, dynamic	:	1.8 mPa.s (20 °C)
Viscosity, kinematic	:	no data available
Oxidizing properties	:	The substance or mixture is classified as oxidizing with the category 2.
Molecular weight	:	no data available
VOC	:	0 %, Calculation method

Section: 10. STABILITY AND REACTIVITY

Reactivity	:	No dangerous reaction known under conditions of normal use.
Chemical stability	:	Stable under normal conditions.
Possibility of hazardous reactions	:	No dangerous reaction known under conditions of normal use.
Conditions to avoid	:	None known.
Incompatible materials	:	Mineral Acids Organic materials Flammable materials Powdered metals Zinc(Zn)
Hazardous decomposition products	:	Decomposition products may include the following materials: Carbon oxides nitrogen oxides (NOx) Sulphur oxides Oxides of phosphorus

Section: 11. TOXICOLOGICAL INFORMATION

Information on likely routes of exposure	:	Inhalation, Eye contact, Skin contact

Potential Health Effects

Eyes	:	Causes serious eye damage.
Skin	:	Harmful in contact with skin.
Ingestion	:	Health injuries are not known or expected under normal use.
Inhalation	:	Harmful if inhaled.
Chronic Exposure	:	Health injuries are not known or expected under normal use.

Experience with human exposure

Eye contact	:	Redness, Pain, Corrosion
Skin contact	:	No symptoms known or expected.

Ingestion	:	No symptoms known or expected.
Inhalation	:	No symptoms known or expected.

Toxicity

Product

Acute oral toxicity	:	Acute toxicity estimate: > 5,000 mg/kg Acute toxicity estimate: 3,555 mg/kg
Acute inhalation toxicity	:	Acute toxicity estimate: > 10 mg/l Exposure time: 4 h Test atmosphere: vapour Acute toxicity estimate: > 40 mg/l Exposure time: 4 h Test atmosphere: vapour
Acute dermal toxicity	:	Acute toxicity estimate: > 1,000 mg/kg
Skin corrosion/irritation	:	no data available
Serious eye damage/eye irritation	:	Result: Irreversible effects on the eye Method: Expert judgement
Respiratory or skin sensitization	:	no data available
Carcinogenicity	:	no data available
Reproductive effects	:	No reproductive toxic effects expected.
Germ cell mutagenicity	:	Contains no ingredient listed as a mutagen
Teratogenicity	:	no data available
STOT - single exposure	:	no data available
STOT - repeated exposure	:	no data available
Aspiration toxicity	:	Based on available data, the classification criteria are not met.

Section: 12. ECOLOGICAL INFORMATION

Ecotoxicity

Environmental Effects	:	Harmful to aquatic life.

Components

Toxicity to fish	:	Sodium Chlorate LC50 Fish: > 1,000 mg/l Exposure time: 96 h

Components

Toxicity to daphnia and other aquatic invertebrates	:	Sodium Chlorate EC50 : > 1,000 mg/l Exposure time: 48 h

Components

Toxicity to algae : Sodium Chlorate
EC50 : > 1,000 mg/l
Exposure time: 72 h

Hydrogen Peroxide
EC50 : 1.38 mg/l
Exposure time: 72 h

Persistence and degradability

Greater than 95% of this product consists of inorganic substances for which a biodegradation value is not applicable.

Mobility

The environmental fate was estimated using a level III fugacity model embedded in the EPI (estimation program interface) Suite TM, provided by the US EPA. The model assumes a steady state condition between the total input and output. The level III model does not require equilibrium between the defined media. The information provided is intended to give the user a general estimate of the environmental fate of this product under the defined conditions of the models.
If released into the environment this material is expected to distribute to the air, water and soil/sediment in the approximate respective percentages;

Air : <5%
Water : 30 - 50%
Soil : 50 - 70%

The portion in water is expected to be soluble or dispersible.

Bioaccumulative potential

This preparation or material is not expected to bioaccumulate.

Other information

no data available

Section: 13. DISPOSAL CONSIDERATIONS

If this product becomes a waste, it is not a hazardous waste as defined by the Resource Conservation and Recovery Act (RCRA) 40 CFR 261, since it does not have the characteristics of Subpart C, nor is it listed under Subpart D.

Disposal methods : The product should not be allowed to enter drains, water courses or the soil. Where possible recycling is preferred to disposal or incineration. If recycling is not practicable, dispose of in compliance with local regulations. Dispose of wastes in an approved waste disposal facility.

Disposal considerations : Dispose of as unused product. Empty containers should be taken to an approved waste handling site for recycling or disposal. Do not re-use empty containers.

Section: 14. TRANSPORT INFORMATION

The shipper/consignor/sender is responsible to ensure that the packaging, labeling, and markings are in compliance with the selected mode of transport.

Land transport (DOT)

Proper shipping name	:	SODIUM CHLORATE, AQUEOUS SOLUTION
Technical name(s)	:	
UN/ID No.	:	UN 2428
Transport hazard class(es)	:	5.1
Packing group	:	II

Air transport (IATA)

Proper shipping name	:	SODIUM CHLORATE, AQUEOUS SOLUTION
Technical name(s)	:	
UN/ID No.	:	UN 2428
Transport hazard class(es)	:	5.1
Packing group	:	II

Sea transport (IMDG/IMO)

Proper shipping name	:	SODIUM CHLORATE, AQUEOUS SOLUTION
Technical name(s)	:	
UN/ID No.	:	UN 2428
Transport hazard class(es)	:	5.1
Packing group	:	II

Section: 15. REGULATORY INFORMATION

TSCA list : Not relevant

EPA Reg. No. : 1706-242

EPCRA - Emergency Planning and Community Right-to-Know Act

CERCLA Reportable Quantity

This product does not contain a RQ substance, or this product contains a substance with a RQ, however the calculated RQ exceeds the reasonably attainable upper limit.

SARA 304 Extremely Hazardous Substances Reportable Quantity

This material does not contain any components with a section 304 EHS RQ.

SARA 311/312 Hazards : Oxidiser (liquid, solid or gas)
Acute toxicity (any route of exposure)
Serious eye damage or eye irritation

SARA 302 : The following components are subject to reporting levels established by SARA Title III, Section 302:

Hydrogen Peroxide 7722-84-1

SARA 313 : This material does not contain any chemical components with known CAS numbers that exceed the threshold (De Minimis) reporting levels established by SARA Title III, Section 313.

California Prop. 65
This product does not contain any chemicals known to State of California to cause cancer, birth defects, or any other reproductive harm.

INTERNATIONAL CHEMICAL CONTROL LAWS :

United States TSCA Inventory
This product is exempted under TSCA and regulated under FIFRA. The inerts are on the Inventory List.

Canadian Domestic Substances List (DSL)
The substance(s) in this preparation are included in or exempted from the Domestic Substance List (DSL).

Korea. Korean Existing Chemicals Inventory (KECI)
All substances in this product comply with the Chemical Control Act (CCA) and are listed on the Existing Chemicals List (ECL)

Japan. ENCS - Existing and New Chemical Substances Inventory
All substances in this product comply with the Law Regulating the Manufacture and Importation Of Chemical Substances and are listed on the Existing and New Chemical Substances list (ENCS).

Australia. Industrial Chemical (Notification and Assessment) Act
All substances in this product comply with the National Industrial Chemicals Notification & Assessment Scheme (NICNAS).

Philippines Inventory of Chemicals and Chemical Substances (PICCS)
All substances in this product comply with the Republic Act 6969 (RA 6969) and are listed on the Philippines Inventory of Chemicals & Chemical Substances (PICCS).

China Inventory of Existing Chemical Substances
All substances in this product comply with the Provisions on the Environmental Administration of New Chemical Substances and are listed on or exempt from the Inventory of Existing Chemical Substances China (IECSC).

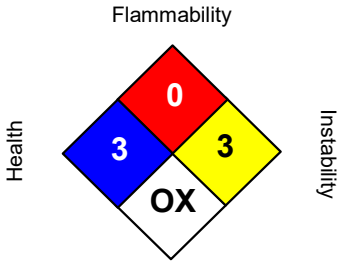
New Zealand. Inventory of Chemicals (NZIoC), as published by ERMA New Zealand
All substances in this product comply with the Hazardous Substances and New Organisms (HSNO) Act 1996,and are listed on or are exempt from the New Zealand Inventory of Chemicals.

Taiwan Chemical Substance Inventory
All substances in this product comply with the Taiwan Existing Chemical Substances Inventory (ECSI).

Section: 16. OTHER INFORMATION

PURATE

NFPA:



Special hazard.

HMIS III:

HEALTH	3
FLAMMABILITY	0
PHYSICAL HAZARD	3

0 = not significant, 1 =Slight,
2 = Moderate, 3 = High
4 = Extreme, * = Chronic

Revision Date	:	06/04/2019
Version Number	:	1.5
Prepared By	:	Regulatory Affairs

REVISED INFORMATION: Significant changes to regulatory or health information for this revision is indicated by a bar in the left-hand margin of the SDS.

The information provided in this Safety Data Sheet is correct to the best of our knowledge, information and belief at the date of its publication. The information given is designed only as a guidance for safe handling, use, processing, storage, transportation, disposal and release and is not to be considered a warranty or quality specification. The information relates only to the specific material designated and may not be valid for such material used in combination with any other materials or in any process, unless specified in the text.
For additional copies of an SDS visit www.nalco.com and request access.

BRENNTAG

SAFETY DATA SHEET

1. Identification

Product identifier **SULFURIC ACID 78%**

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 Not classified.

OSHA defined hazards Not classified.

Label elements

Signal word Danger

Hazard statement Causes severe skin burns and eye damage. Causes serious eye damage.

Precautionary statement

Prevention Do not breathe mist 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.

Storage Store locked up.

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

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

Supplemental information 78% of the mixture consists of component(s) of unknown acute oral toxicity. 78% of the mixture consists of component(s) of unknown acute dermal toxicity. 100% of the mixture consists of component(s) of unknown acute inhalation toxicity.

3. Composition/information on ingredients

Mixtures

Chemical name	Common name and synonyms	CAS number	%
SULFURIC ACID		7664-93-9	77.9991
Other components below reportable levels			22.0009

*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	Foam. 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. 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. Dike the spilled material, where this is possible. Absorb in vermiculite, dry sand or earth and place into containers. Following product recovery, flush area with water. Small Spills: Wipe up with absorbent material (e.g. cloth, fleece). Clean surface thoroughly to remove residual contamination. Never return spills to original containers for re-use. For waste disposal, see section 13 of the SDS. 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	Respiratory protection is “only required” when sprays are present in the air.
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). Store away from incompatible materials (see Section 10 of the SDS).

8. Exposure controls/personal protection

Occupational exposure limits

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

Components	Type	Value
SULFURIC ACID (CAS 7664-93-9)	PEL	1 mg/m3

US. ACGIH Threshold Limit Values

Components	Type	Value	Form
SULFURIC ACID (CAS 7664-93-9)	TWA	0.2 mg/m3	Thoracic fraction.

US. NIOSH: Pocket Guide to Chemical Hazards

Components	Type	Value
SULFURIC ACID (CAS 7664-93-9)	TWA	1 mg/m3

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

The following are recommendations for Personnel Protective Equipment (PPE). The employer/user of this product must perform a Hazard Assessment of the workplace according to OSHA regulations 29 CFR 1910.132 to determine the appropriate PPE for use while performing any task involving potential exposure to this product.

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

Skin protection

Hand protection Wear appropriate chemical resistant gloves. 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 COLORLESS

Odor ODORLESS

Odor threshold Not available.

pH 0

Melting point/freezing point -20 °F (-28.89 °C)

Initial boiling point and boiling range 478.76 °F (248.2 °C) estimated

Flash point Not available.

Evaporation rate Not available.

Flammability (solid, gas) Not applicable.

Upper/lower flammability or explosive limits

Flammability limit - lower (%) Not available.

Flammability limit - upper (%) Not available.

Explosive limit - lower (%) Not available.

Explosive limit - upper (%) Not available.

Vapor pressure Not available.

Vapor density Not available.

Relative density Not available.

Solubility(ies)	
Solubility (water)	Not available.
Partition coefficient (n-octanol/water)	Not available.
Auto-ignition temperature	Not available.
Decomposition temperature	Not available.
Viscosity	Not available.
Other information	
Density	14.24 lbs/gal
Explosive properties	Not explosive.
Oxidizing properties	Not oxidizing.
Percent volatile	22 % estimated
Specific gravity	1.71

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	Not known.
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	Not classifiable as to carcinogenicity to humans.

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 Not an aspiration hazard.

Chronic effects Prolonged inhalation may be harmful.

12. Ecological information

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

Components		Species	Test Results
SULFURIC ACID (CAS 7664-93-9)			
Aquatic			
Crustacea	EC50	Daphnia magna	> 100 mg/l, 48 hours
	LC50	Aesop shrimp (Pandalus montagui)	42.5 mg/l, 48 hours
		Cockle (Cerastoderma edule)	200 - 500 mg/l, 48 hours
		Common shrimp, sand shrimp (Crangon crangon)	70 - 80 mg/l, 48 hours
		Green or European shore crab (Carcinus maenas)	70 - 80 mg/l, 48 hours
Fish	LC50	Starry, european flounder (Platichthys flesus)	100 - 330 mg/l, 48 hours
		Western mosquitofish (Gambusia affinis)	42 mg/l, 24 hours
			42 mg/l, 48 hours
			42 mg/l, 96 hours

Persistence and degradability No data is available on the degradability of this product.

Bioaccumulative potential No data available.

Mobility in soil No data available.

Other adverse effects No other adverse environmental effects (e.g. ozone depletion, photochemical ozone creation potential, endocrine disruption, global warming potential) are expected from this component.

13. Disposal considerations

Disposal instructions Collect and reclaim or dispose in sealed containers at licensed waste disposal site. 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 UN1830

UN proper shipping name SULFURIC ACID

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 137

Transport information on packaging may be different from that listed. Transportation information on packaging may be different from that listed.

IATA

UN number UN1830

UN proper shipping name SULFURIC ACID

Transport hazard class(es)

Class	8
Subsidiary risk	-
Packing group	II
Environmental hazards	No.
ERG Code	137
Special precautions for user	Read safety instructions, SDS and emergency procedures before handling.

IMDG

UN number	UN1830
UN proper shipping name	SULPHURIC ACID with more than 51% acid solution (SULFURIC ACID)
Transport hazard class(es)	
Class	8
Subsidiary risk	-
Packing group	II
Environmental hazards	
Marine pollutant	No.
EmS	F-A, S-B
Special precautions for user	Read safety instructions, SDS and emergency procedures before handling.

DOT; IATA; IMDG

15. Regulatory information

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

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

Not regulated.

CERCLA Hazardous Substance List (40 CFR 302.4)

SULFURIC ACID (CAS 7664-93-9) Listed.

SARA 304 Emergency release notification

SULFURIC ACID (CAS 7664-93-9) 1000 LBS

OSHA Specifically Regulated Substances (29 CFR 1910.1001-1052)

Not regulated.

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)
SULFURIC ACID	7664-93-9	1000	1000		

SARA 311/312 Hazardous chemical Yes

Classified hazard categories
Skin corrosion or irritation
Serious eye damage or eye irritation

SARA 313 (TRI reporting)

Chemical name	CAS number	% by wt.
SULFURIC ACID	7664-93-9	77.9991

Other federal regulations

Clean Air Act (CAA) Section 112 Hazardous Air Pollutants (HAPs) List

Not regulated.

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

Not regulated.

Safe Drinking Water Act (SDWA) Not regulated.

Drug Enforcement Administration (DEA). List 2, Essential Chemicals (21 CFR 1310.02(b) and 1310.04(f)(2) and Chemical Code Number

SULFURIC ACID (CAS 7664-93-9) 6552

Drug Enforcement Administration (DEA). List 1 & 2 Exempt Chemical Mixtures (21 CFR 1310.12(c))

SULFURIC ACID (CAS 7664-93-9) 20 %WV

DEA Exempt Chemical Mixtures Code Number

SULFURIC ACID (CAS 7664-93-9) 6552

US state regulations

California Proposition 65

California Safe Drinking Water and Toxic Enforcement Act of 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.

International Inventories

Country(s) or region	Inventory name	On inventory (yes/no)*
Australia	Australian Inventory of Chemical Substances (AICS)	Yes
Canada	Domestic Substances List (DSL)	Yes
Canada	Non-Domestic Substances List (NDSL)	No
China	Inventory of Existing Chemical Substances in China (IECSC)	Yes
Europe	European Inventory of Existing Commercial Chemical Substances (EINECS)	Yes
Europe	European List of Notified Chemical Substances (ELINCS)	No
Japan	Inventory of Existing and New Chemical Substances (ENCS)	Yes
Korea	Existing Chemicals List (ECL)	Yes
New Zealand	New Zealand Inventory	Yes
Philippines	Philippine Inventory of Chemicals and Chemical Substances (PICCS)	Yes
Taiwan	Taiwan Toxic Chemical Substances (TCS)	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	05-06-2015
Revision date	09-13-2018
Version #	06
HMIS® ratings	Health: 3 Flammability: 0 Physical hazard: 0
NFPA ratings	Health: 3 Flammability: 0 Instability: 1
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.
Revision information	This document has undergone significant changes and should be reviewed in its entirety.

NALCO Water
An Ecolab Company

SAFETY DATA SHEET

3D TRASAR™ 3DT401

Section: 1. PRODUCT AND COMPANY IDENTIFICATION

Product name	:	3D TRASAR™ 3DT401
Other means of identification	:	Not applicable.
Recommended use	:	COOLING WATER TREATMENT
Restrictions on use	:	Refer to available product literature or ask your local Sales Representative for restrictions on use and dose limits.
Company	:	Nalco Company 1601 W. Diehl Road Naperville, Illinois 60563-1198 USA TEL: (630) 305-1000
Emergency telephone number	:	(800) 424-9300 (24 Hours) CHEMTREC
Issuing date	:	12/19/2019

Section: 2. HAZARDS IDENTIFICATION

GHS Classification

Skin corrosion	:	Category 1
Serious eye damage	:	Category 1

GHS Label element

Hazard pictograms :

Signal Word	:	Danger
Hazard Statements	:	Causes severe skin burns and eye damage.
Precautionary Statements	:	**Prevention:** Wear protective gloves/ protective clothing/ eye protection/ face protection. **Response:** IF SWALLOWED: Rinse mouth. Do NOT induce vomiting. IF ON SKIN (or hair): Take off immediately all contaminated clothing. Rinse skin with water/shower. IF INHALED: Remove person to fresh air and keep comfortable for breathing. Immediately call a POISON CENTER/doctor. IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing. Immediately call a POISON CENTER or doctor/ physician. **Disposal:** Dispose of contents/ container to an approved waste disposal plant.
Other hazards	:	None known.

Section: 3. COMPOSITION/INFORMATION ON INGREDIENTS

Pure substance/mixture	:	Mixture

Chemical Name	CAS-No.	Concentration: (%)
Sodium Molybdate Dihydrate	10102-40-6	10 - 30
Sodium Tolyltriazole	64665-57-2	1 - 5
Sodium Hydroxide	1310-73-2	1 - 5

Section: 4. FIRST AID MEASURES

In case of eye contact	:	Rinse immediately with plenty of water, also under the eyelids, for at least 15 minutes. Remove contact lenses, if present and easy to do. Continue rinsing. Get medical attention immediately.
In case of skin contact	:	Wash off immediately with plenty of water for at least 15 minutes. Use a mild soap if available. Wash clothing before reuse. Thoroughly clean shoes before reuse. Get medical attention immediately.
If swallowed	:	Rinse mouth with water. Do NOT induce vomiting. Never give anything by mouth to an unconscious person. Get medical attention immediately.
If inhaled	:	Remove to fresh air. Treat symptomatically. Get medical attention if symptoms occur.
Protection of first-aiders	:	In event of emergency assess the danger before taking action. Do not put yourself at risk of injury. If in doubt, contact emergency responders. Use personal protective equipment as required.
Notes to physician	:	Treat symptomatically.
Most important symptoms and effects, both acute and delayed	:	See Section 11 for more detailed information on health effects and symptoms.

Section: 5. FIREFIGHTING MEASURES

Suitable extinguishing media	:	Use extinguishing measures that are appropriate to local circumstances and the surrounding environment.
Unsuitable extinguishing media	:	None known.
Specific hazards during firefighting	:	Not flammable or combustible.
Hazardous combustion products	:	Carbon oxides nitrogen oxides (NOx) Sulphur oxides Oxides of phosphorus metal oxides
Special protective equipment for firefighters	:	Use personal protective equipment.
Specific extinguishing methods	:	Fire residues and contaminated fire extinguishing water must be disposed of in accordance with local regulations. In the event of fire and/or explosion do not breathe fumes.

Section: 6. ACCIDENTAL RELEASE MEASURES

Personal precautions, protective equipment and emergency procedures	:	Ensure adequate ventilation. Keep people away from and upwind of spill/leak. Avoid inhalation, ingestion and contact with skin and eyes. When workers are facing concentrations above the exposure limit they must use appropriate certified respirators. Ensure clean-up is conducted by trained personnel only. Refer to protective measures listed in sections 7 and 8.
Environmental precautions	:	Do not allow contact with soil, surface or ground water.
Methods and materials for containment and cleaning up	:	Stop leak if safe to do so. Contain spillage, and then collect with non-combustible absorbent material, (e.g. sand, earth, diatomaceous earth, vermiculite) and place in container for disposal according to local / national regulations (see section 13). For large spills, dike spilled material or otherwise contain material to ensure runoff does not reach a waterway. Flush away traces with water.

Section: 7. HANDLING AND STORAGE

Advice on safe handling	:	Do not ingest. Do not breathe dust/fume/gas/mist/vapours/spray. Do not get in eyes, on skin, or on clothing. Wash hands thoroughly after handling. Use only with adequate ventilation.
Conditions for safe storage	:	Do not store near acids. Keep out of reach of children. Keep container tightly closed. Store in suitable labelled containers.
Suitable material	:	Keep in properly labelled containers.
Unsuitable material	:	not determined

Section: 8. EXPOSURE CONTROLS/PERSONAL PROTECTION

Components with workplace control parameters

Components	CAS-No.	Form of exposure	Permissible concentration	Basis
Sodium Molybdate Dihydrate	10102-40-6	TWA (Total dust)	15 mg/m3 (as Mo)	OSHA Z1
		TWA	5 mg/m3 (as Mo)	OSHA Z1
		TWA (Inhalable fraction)	10 mg/m3 (as Mo)	ACGIH
		TWA (Respirable fraction)	3 mg/m3 (as Mo)	ACGIH
		TWA (Respirable fraction)	0.5 mg/m3 (as Mo)	ACGIH
Sodium Hydroxide	1310-73-2	Ceiling	2 mg/m3	ACGIH
		Ceiling	2 mg/m3	NIOSH REL
		TWA	2 mg/m3	OSHA Z1

Engineering measures : Effective exhaust ventilation system. Maintain air concentrations below occupational exposure standards.

Personal protective equipment

Eye protection	:	Safety goggles Face-shield
Hand protection	:	Wear impervious chemical-resistant gloves when handling this product. The following glove types are recommended based on our review of glove manufacturer information and/or other available sources. Nitrile-rubber, Butyl-Rubber and Neoprene gloves. Gloves should be discarded and replaced if there is any indication of degradation or chemical breakthrough.
Skin protection	:	Personal protective equipment comprising: suitable protective gloves, safety goggles and protective clothing
Respiratory protection	:	Use local exhaust ventilation or other engineering controls as necessary to control airborne vapour and mist. Where concentrations in air may exceed the limits given in this section or when significant vapours are generated, use an approved air purifying respirator fitted with a gas and vapour cartridge. Use a particulate pre-filter where operations generate significant mists or aerosols. Recommended gas and vapour cartridge: Combined particulates, inorganic and acidic gas/vapour, ammonia/amines and organic vapour type In event of emergency or planned entry into unknown concentrations, a positive pressure, full-facepiece SCBA or supplied-air respirator should be used.
Hygiene measures	:	Handle in accordance with good industrial hygiene and safety practice. Remove and wash contaminated clothing before re-use. Wash face, hands and any exposed skin thoroughly after handling. Provide suitable facilities for quick drenching or flushing of the eyes and body in case of contact or splash hazard.

The Personal Protective Equipment (PPE) recommendations provided above have been made in good faith based on typical expected conditions of use. PPE selection should always be completed in conjunction with a proper risk assessment and in accordance with a PPE management program.

Section: 9. PHYSICAL AND CHEMICAL PROPERTIES

Appearance	:	liquid
Colour	:	yellow
Odour	:	no data available
Flash point	:	Not applicable.
pH	:	12.7
Odour Threshold	:	no data available
Melting point/freezing point	:	Melting point/freezing point: -8 °C
Initial boiling point and boiling range	:	no data available
Evaporation rate	:	no data available
Flammability (solid, gas)	:	Not applicable.

Upper explosion limit	:	no data available
Lower explosion limit	:	no data available
Vapour pressure	:	no data available
Relative vapour density	:	no data available
Relative density	:	1.235, (15.6 °C),
Density	:	no data available
Water solubility	:	Complete
Solubility in other solvents	:	no data available
Partition coefficient: n-octanol/water	:	no data available
Auto-ignition temperature	:	no data available
Thermal decomposition	:	no data available
Viscosity, dynamic	:	no data available
Viscosity, kinematic	:	5.41 mm2/s (23.9 °C)
Molecular weight	:	no data available
VOC	:	no data available

Section: 10. STABILITY AND REACTIVITY

Reactivity	:	No dangerous reaction known under conditions of normal use.
Chemical stability	:	Stable under normal conditions.
Possibility of hazardous reactions	:	No dangerous reaction known under conditions of normal use.
Conditions to avoid	:	None known.
Incompatible materials	:	Strong acids
Hazardous decomposition products	:	In case of fire, hazardous decomposition products may be produced such as: Carbon oxides nitrogen oxides (NOx) Sulphur oxides Oxides of phosphorus metal oxides

Section: 11. TOXICOLOGICAL INFORMATION

Information on likely routes of exposure	:	Inhalation, Eye contact, Skin contact

Potential Health Effects

Eyes	:	Causes serious eye damage.
Skin	:	Causes severe skin burns.

Ingestion	:	Causes digestive tract burns.
Inhalation	:	May cause nose, throat, and lung irritation.
Chronic Exposure	:	Health injuries are not known or expected under normal use.

Experience with human exposure

Eye contact	:	Redness, Pain, Corrosion
Skin contact	:	Redness, Pain, Corrosion
Ingestion	:	Corrosion, Abdominal pain
Inhalation	:	Respiratory irritation, Cough

Toxicity

Product

Acute oral toxicity	:	Acute toxicity estimate: > 5,000 mg/kg
Acute inhalation toxicity	:	no data available
Acute dermal toxicity	:	no data available
Skin corrosion/irritation	:	no data available
Serious eye damage/eye irritation	:	no data available
Respiratory or skin sensitization	:	no data available
Carcinogenicity	:	no data available
Reproductive effects	:	no data available
Germ cell mutagenicity	:	no data available
Teratogenicity	:	no data available
STOT - single exposure	:	no data available
STOT - repeated exposure	:	no data available
Aspiration toxicity	:	no data available

Components

Acute inhalation toxicity	:	Sodium Molybdate Dihydrate LC50 rat: > 1.93 mg/l Exposure time: 4 h Test atmosphere: dust/mist

Components

Acute dermal toxicity	:	Sodium Molybdate Dihydrate LD50 rabbit: > 2,000 mg/kg

Section: 12. ECOLOGICAL INFORMATION

Ecotoxicity

Environmental Effects : Harmful to aquatic life with long lasting effects.

Product

Toxicity to fish : LC50 Fathead Minnow: 1,359 mg/l
Exposure time: 96 hrs
Test substance: Product

NOEC Fathead Minnow: 1,080 mg/l
Exposure time: 96 hrs
Test substance: Product

LC50 Rainbow Trout: 330 mg/l
Exposure time: 96 hrs
Test substance: Product

NOEC Rainbow Trout: 250 mg/l
Exposure time: 96 hrs
Test substance: Product

Toxicity to daphnia and other aquatic invertebrates : EC50 Ceriodaphnia dubia: 1,943 mg/l
Exposure time: 48 hrs
Test substance: Product

LC50 Ceriodaphnia dubia: 2,206 mg/l
Exposure time: 48 hrs
Test substance: Product

NOEC Ceriodaphnia dubia: 1,080 mg/l
Exposure time: 48 hrs
Test substance: Product

Components

Toxicity to algae : Sodium Tolyltriazole
LC50 : 26.2 mg/l
Exposure time: 72 h

Persistence and degradability

Total Organic Carbon (TOC) : 45,000 mg/l

Chemical Oxygen Demand (COD): 160,000 mg/l

Biochemical Oxygen Demand (BOD):

Incubation Period	Value	Test Descriptor
5 d	< 400 mg/l	

Mobility

no data available

Bioaccumulative potential

no data available

Other information

no data available

Section: 13. DISPOSAL CONSIDERATIONS

Disposal methods	:	The product should not be allowed to enter drains, water courses or the soil. Where possible recycling is preferred to disposal or incineration. If recycling is not practicable, dispose of in compliance with local regulations. Dispose of wastes in an approved waste disposal facility.
Disposal considerations	:	Dispose of as unused product. Empty containers should be taken to an approved waste handling site for recycling or disposal. Do not re-use empty containers.

Section: 14. TRANSPORT INFORMATION

The shipper/consignor/sender is responsible to ensure that the packaging, labeling, and markings are in compliance with the selected mode of transport.

Land transport (DOT)

Proper shipping name	:	CAUSTIC ALKALI LIQUID, N.O.S.
Technical name(s)	:	Sodium Tolyltriazole, Sodium Hydroxide
UN/ID No.	:	UN 1719
Transport hazard class(es)	:	8
Packing group	:	III
Reportable Quantity (per package)	:	47,617 lbs
RQ Component	:	SODIUM HYDROXIDE

Air transport (IATA)

Proper shipping name	:	CAUSTIC ALKALI LIQUID, N.O.S.
Technical name(s)	:	Sodium Tolyltriazole, Sodium Hydroxide
UN/ID No.	:	UN 1719
Transport hazard class(es)	:	8
Packing group	:	III
Reportable Quantity (per package)	:	47,617 lbs
RQ Component	:	SODIUM HYDROXIDE

Sea transport (IMDG/IMO)

Proper shipping name	:	CAUSTIC ALKALI LIQUID, N.O.S.
Technical name(s)	:	Sodium Tolyltriazole, Sodium Hydroxide
UN/ID No.	:	UN 1719
Transport hazard class(es)	:	8
Packing group	:	III

Section: 15. REGULATORY INFORMATION

TSCA list : No substances are subject to a Significant New Use Rule.

No substances are subject to TSCA 12(b) export notification requirements.

EPCRA - Emergency Planning and Community Right-to-Know Act

CERCLA Reportable Quantity

Components	CAS-No.	Component RQ (lbs)	Calculated product RQ (lbs)
Sodium Hydroxide	1310-73-2	1000	30778

SARA 304 Extremely Hazardous Substances Reportable Quantity

This material does not contain any components with a section 304 EHS RQ.

SARA 311/312 Hazards : Skin corrosion or irritation
Serious eye damage or eye irritation

SARA 302 : This material does not contain any components with a section 302 EHS TPQ.

SARA 313 : This material does not contain any chemical components with known CAS numbers that exceed the threshold (De Minimis) reporting levels established by SARA Title III, Section 313.

California Prop. 65

This product does not contain any chemicals known to State of California to cause cancer, birth defects, or any other reproductive harm.

INTERNATIONAL CHEMICAL CONTROL LAWS :

Canadian Domestic Substances List (DSL)

The substance(s) in this preparation are included in or exempted from the Domestic Substance List (DSL).

United States TSCA Inventory

On or in compliance with the active portion of the TSCA inventory

Australia. Industrial Chemical (Notification and Assessment) Act

On the inventory, or in compliance with the inventory

Japan. ENCS - Existing and New Chemical Substances Inventory

not determined

Korea. Korean Existing Chemicals Inventory (KECI)

On the inventory, or in compliance with the inventory

Philippines Inventory of Chemicals and Chemical Substances (PICCS)

On the inventory, or in compliance with the inventory

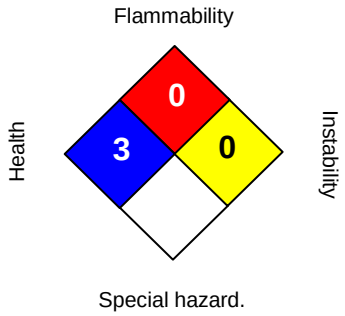
China Inventory of Existing Chemical Substances

On the inventory, or in compliance with the inventory

Taiwan Chemical Substance Inventory
not determined

Section: 16. OTHER INFORMATION

NFPA:



HMIS III:

HEALTH	3
FLAMMABILITY	0
PHYSICAL HAZARD	0

0 = not significant, 1 = Slight,
2 = Moderate, 3 = High
4 = Extreme, * = Chronic

Revision Date	:	12/19/2019
Version Number	:	1.8
Prepared By	:	Regulatory Affairs

REVISED INFORMATION: Significant changes to regulatory or health information for this revision is indicated by a bar in the left-hand margin of the SDS.

The information provided in this Safety Data Sheet is correct to the best of our knowledge, information and belief at the date of its publication. The information given is designed only as a guidance for safe handling, use, processing, storage, transportation, disposal and release and is not to be considered a warranty or quality specification. The information relates only to the specific material designated and may not be valid for such material used in combination with any other materials or in any process, unless specified in the text.
For additional copies of an SDS visit www.nalco.com and request access.

SAFETY DATA SHEET

PRODUCT

NALCO 71-D5

1. CHEMICAL PRODUCT AND COMPANY IDENTIFICATION

PRODUCT NAME : **NALCO 71-D5**

EMERGENCY TELEPHONE NUMBER(S) : Argentina: Ciquime 0800-222-2933/ 011 4613-1100; Nalco 011-15-5409-6868.
Brazil: ABIQUIM/PROQUÍMICA: 0800-118270;
Colombia, Bogotá: 288-6012 (24 hours)
Colombia, Fuera de Bogotá: 01 800 09 16012 (24 hours)
Chile: CITUC (56-2) 635-3800 (24 hours), Nalco (56-2) 640-2000 / Fax (56-2) 624-1908
Mexico SETIQ-ANIQ: 01-800-002-1400 & 01-55-5559-1588 (24 hours)
Venezuela: 0800NALCO00/0800-6252600 (24 hours)
USA: 703-527-3887 (Chemtrec, accepts calls by collect - 24 hours)

COMPANY IDENTIFICATION :
Nalco Argentina S.R.L., -Victoria Ocampo, 360 Piso 3° - Capital Federal, Buenos Aires, Argentina, C1107AAP, (54) 11 5166-2566.
Ecolab Química Ltda, Rod. Indio Tibirica, 3201 - Bairro do Raffo, Suzano, SP, Brazil, 08655-000, (11) 4745-4700.
Nalco Industrial Services Chile Ltda., Avenida Las Esteras Norte 2341, Quilicura, Santiago, Chile.
Nalco de Colombia Ltda., Calle 18 # 35 - 280, Soledad, Atlantico, Colombia, (57) 5 - 3748887 Ext: 110.
Nalco de México S. de R.L. de C.V., Km 52.5 Carretera México-Toluca, Lerma, Edo. México, Mexico, 52000, (728) 285-0522.
Nalco Venezuela S.C.A., Via Buena Vista Km.1, Anaco, Edo. Anzoategui, Venezuela, 6003.

NFPA 704M/HMIS RATING
HEALTH : 2 / 2 FLAMMABILITY : 1 / 1 INSTABILITY : 0 / 0 OTHER :
0 = Insignificant 1 = Slight 2 = Moderate 3 = High 4 = Extreme * = Chronic Health Hazard

2. COMPOSITION/INFORMATION ON INGREDIENTS

Substance ☐ Mixture ☒

CHEMICAL DESCRIPTION : Hydrocarbon solvent, Polymer, Fatty acid

Our hazard evaluation has identified the following chemical substance(s) as hazardous.

Hazardous Substance(s)	CAS NO	% (w/w)
Straight Run Middle Distillate	64741-44-2	60.0 - 100.0
Polypropylene Glycol	25322-69-4	10.0 - 30.0
Paraffin Wax	8002-74-2	1.0 - 5.0
Oxyalkylate	Proprietary	1.0 - 5.0
Aliphatic hydrocarbon	Proprietary	10.0 - 30.0

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3. HAZARDS IDENTIFICATION

****EMERGENCY OVERVIEW****

IMPORTANT HAZARDS: **WARNING**
Repeated exposure may cause skin dryness or cracking. Harmful: may cause lung damage if swallowed.
Do not get in eyes, on skin, on clothing. Do not take internally. Use with adequate ventilation. Avoid breathing vapor. In case of contact with eyes, rinse immediately with plenty of water and seek medical advice. After contact with skin, wash immediately with plenty of water. Use a mild soap if available. Protect product from freezing.
Wear suitable protective clothing, gloves and eye/face protection.
Low Fire Hazard; liquids may burn upon heating to temperatures at or above the flash point. May evolve oxides of carbon (COx) under fire conditions.

PRIMARY ROUTES OF EXPOSURE :
Eye, Skin, Inhalation

HUMAN HEALTH HAZARDS - ACUTE :

EYE CONTACT :
May cause irritation with prolonged contact.

SKIN CONTACT :
Frequent or prolonged contact with product may defat and dry the skin, leading to discomfort and dermatitis.

INGESTION :
Not a likely route of exposure. May cause nausea and vomiting. Can cause chemical pneumonia if aspirated into lungs following ingestion. Can cause central nervous system depression.

INHALATION :
Repeated or prolonged exposure may irritate the respiratory tract. Product mist or vapors may cause headache, nausea, vomiting, drowsiness, stupor or unconsciousness. Can cause central nervous system depression.

AGGRAVATION OF EXISTING CONDITIONS :
Skin contact may aggravate an existing dermatitis condition.

HUMAN HEALTH HAZARDS - CHRONIC :
No adverse effects expected other than those mentioned above.

WARNING: The empty containers may contain residues. Do not reuse containers.

ENVIRONMENTAL HAZARDS :
Harmful to aquatic organisms, may cause long-term adverse effects in the aquatic environment. Keep out of waterways. Spilled product may pose a risk to the aquatic ecosystem if released.

4. FIRST AID MEASURES

EYE CONTACT :
Immediately flush with plenty of water for at least 15 minutes. If symptoms develop, seek medical advice.

SKIN CONTACT :
Flush with large amounts of water. Use soap if available. If symptoms develop, seek medical advice.

INGESTION :
Get medical attention. Do not induce vomiting: contains petroleum distillates and/or aromatic solvents. If conscious, washout mouth and give water to drink.

INHALATION :
Remove to fresh air, treat symptomatically. If symptoms develop, seek medical advice.

NOTE TO PHYSICIAN :
Based on the individual reactions of the patient, the physician's judgement should be used to control symptoms and clinical condition. DO NOT INDUCE VOMITING.

5. FIRE FIGHTING MEASURES

FLASH POINT : 127 °C (PMCC)

EXTINGUISHING MEDIA :
Foam, Carbon dioxide, Dry powder, Other extinguishing agent suitable for Class B fires, For large fires, use water spray or fog, thoroughly drenching the burning material.
Water mist may be used to cool closed containers.

UNSUITABLE EXTINGUISHING MEDIA :
Do not use water unless flooding amounts are available.

FIRE AND EXPLOSION HAZARD :
Low Fire Hazard; liquids may burn upon heating to temperatures at or above the flash point. May evolve oxides of carbon (COx) under fire conditions.

SPECIAL PROTECTIVE EQUIPMENT FOR FIRE FIGHTING :
In case of fire, wear a full face positive-pressure self contained breathing apparatus and protective suit.

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6. ACCIDENTAL RELEASE MEASURES

PERSONAL PRECAUTIONS :
Restrict access to area as appropriate until clean-up operations are complete. Use personal protective equipment recommended in Section 8 (Exposure Controls/Personal Protection). Stop or reduce any leaks if it is safe to do so. Keep people away from and upwind of spill/leak. Ventilate spill area if possible. Ensure clean-up is conducted by trained personnel only. Do not touch spilled material. Have emergency equipment (for fires, spills, leaks, etc.) readily available. Notify appropriate government, occupational health and safety and environmental authorities.

METHODS FOR CLEANING UP :
SMALL SPILLS: Soak up spill with absorbent material. Place residues in a suitable, covered, properly labeled container. Wash affected area. LARGE SPILLS: Contain liquid using absorbent material, by digging trenches or by diking. Reclaim into recovery or salvage drums or tank truck for proper disposal. Clean contaminated surfaces with water or aqueous cleaning agents. Contact an approved waste hauler for disposal of contaminated recovered material. Dispose of material in compliance with regulations indicated in Section 13 (Disposal Considerations).

ENVIRONMENTAL PRECAUTIONS :
Harmful to aquatic organisms, may cause long-term adverse effects in the aquatic environment., If drains, streams, soil or sewers become contaminated, notify local authority., Prevent material from entering sewers or waterways.

7. HANDLING AND STORAGE

HANDLING :
Do not get in eyes, on skin, on clothing. Do not take internally. Use with adequate ventilation. Do not breathe vapors/gases/dust. Keep the containers closed when not in use. Have emergency equipment (for fires, spills, leaks, etc.) readily available. Ensure all containers are labeled.
For more information on prevention during the handling of the product, consult section 8.

STORAGE CONDITIONS :
Store in suitable labeled containers. Store the containers tightly closed. Store separately from oxidizers. Store separately from bases. Store away from heat and sources of ignition. Avoid extremes of temperature.

SUITABLE CONSTRUCTION MATERIAL :
Nylon, PTFE, Plexiglass, Perfluoroelastomer, HDPE (high density polyethylene), Mild steel, Aluminum, Brass, Stainless Steel 304, Stainless Steel 316L, Copper, Hastelloy C-276, Shipping and long term storage compatibility with construction materials can vary; we therefore recommend that compatibility is tested prior to use.

UNSUITABLE CONSTRUCTION MATERIAL :
Natural rubber, Polyethylene, Neoprene, Chlorosulfonated polyethylene rubber, Buna-N, Polypropylene, Ethylene propylene, Polyurethane, Fluoroelastomer, Polytetrafluoroethylene/polypropylene copolymer, EPDM

8. EXPOSURE CONTROLS/PERSONAL PROTECTION

Equipment of respiratory protection must be used if the exposure limits established by the local legislation are exceeded. The equipment must be approved by the local Agency responsible for the safety of the workers.

OCCUPATIONAL EXPOSURE LIMITS :
Exposure guidelines have not been established for this product. Available exposure limits for the substance(s) are shown below.

Country/Source	Substance(s)	Basis	ppm	mg/m3
AIHA/WEEL	Polypropylene Glycol	TWA		10
ARGENTINA	Paraffin Wax	GV		2
CHILE	Paraffin Wax	LPP		1.6
MEXICO	Paraffin Wax	MX OEL/LMPE-PPT		2
		MX OEL/LMPE-CT		6
PANAMA	Paraffin Wax	CPT		2
		CCT		4
PERU	Paraffin Wax	TWA		2
VENEZUELA	Paraffin Wax	CAP		2
USA	Polypropylene Glycol	WEEL/TWA		10
	Paraffin Wax	ACGIH/TWA		2
	Paraffin Wax (Fumes)	NIOSH REL/TWA		2

* A skin notation refers to the potential significant contribution to overall exposure by the cutaneous route, including mucous membranes and the eyes.

ENGINEERING MEASURES :
The use of local exhaust ventilation is recommended to control emissions near the source. Laboratory samples should be handled in a fumehood. Provide mechanical ventilation of confined spaces.

RESPIRATORY PROTECTION :
Where concentrations in air may exceed the limits given in this section or when significant mists, vapors, aerosols, or dusts are generated, an approved air purifying respirator equipped with suitable filter cartridges is recommended. Consult the respirator / cartridge manufacturer data to verify the suitability of specific devices. If respiratory

protection is required, institute a complete respiratory protection program including selection, fit testing, training, maintenance and inspection. In event of emergency or planned entry into unknown concentrations a positive pressure, full-facepiece SCBA should be used.

HAND PROTECTION :
When handling this product, the use of chemical gauntlets is recommended., The choice of work glove depends on work conditions and what chemicals are handled. Please contact the PPE manufacturer for advice on what type of glove material may be suitable., Gloves should be replaced immediately if signs of degradation are observed.

SKIN PROTECTION :
Wear standard protective clothing.

EYE PROTECTION :
Wear safety glasses with side-shields.

HYGIENE RECOMMENDATIONS :
Use good work and personal hygiene practices to avoid exposure. Keep an eye wash fountain available. Keep a safety shower available. If clothing is contaminated, remove clothing and thoroughly wash the affected area. Launder contaminated clothing before reuse. Always wash thoroughly after handling chemicals. When handling this product never eat, drink or smoke.

9. PHYSICAL AND CHEMICAL PROPERTIES

PHYSICAL STATE	Liquid
APPEARANCE	Clear to hazy - Straw-colored
ODOR	Hydrocarbon
ODOR THRESHOLD	No data available.

FLASH POINT :	127 °C (PMCC)
LOWER EXPLOSION LIMIT :	No data available.
UPPER EXPLOSION LIMIT :	No data available.
SPECIFIC GRAVITY	0.825 - 0.904 @ 25 °C
DENSITY	6.9 - 7.5 lb/gal
SOLUBILITY IN WATER	Insoluble
pH	No data available.
VISCOSITY	13.8 cps @ 27 °C
VISCOSITY	16 cst @ 27 °C
FREEZING POINT	7.2 °C
VAPOR PRESSURE	0.1 mm Hg @ 26 °C

Note: These physical properties are typical values for this product and are subject to change.

10. STABILITY AND REACTIVITY

STABILITY :
Stable under normal conditions.

HAZARDOUS POLYMERIZATION :
Hazardous polymerization will not occur.

CONDITIONS TO AVOID :
Avoid extremes of temperature. Heat and sources of ignition including static discharges.

MATERIALS TO AVOID :
Contact with strong oxidizers (e.g. chlorine, peroxides, chromates, nitric acid, perchlorate, concentrated oxygen, permanganate) may generate heat, fires, explosions and/or toxic vapors. Bases Contact with strong alkalies (e.g. ammonia and its solutions, carbonates, sodium hydroxide (caustic), potassium hydroxide, calcium hydroxide (lime), cyanide, sulfide, hypochlorites, chlorites) may generate heat, splattering or boiling and toxic vapors.

HAZARDOUS DECOMPOSITION PRODUCTS :
Under fire conditions: Oxides of carbon

11. TOXICOLOGICAL INFORMATION

The following results are for the product.

ACUTE ORAL TOXICITY :

Species:	Rat
LD50:	> 15,380 mg/kg
Test Descriptor:	Product

ACUTE DERMAL TOXICITY :

Species:	Rabbit
LD50:	> 3,038 mg/kg
Test Descriptor:	Product

PRIMARY SKIN IRRITATION :

Species:	Rabbit
Draize Score:	3.1 /8.0
Test Descriptor:	Product

PRIMARY EYE IRRITATION :
Species: Rabbit
Draize Score: 6.0 /110.0
Test Descriptor: Product

SENSITIZATION :
This product is not expected to be a sensitizer.

CARCINOGENICITY :
None of the substances in this product are listed as carcinogens by the International Agency for Research on Cancer (IARC), the National Toxicology Program (NTP) or the American Conference of Governmental Industrial Hygienists (ACGIH).

HUMAN HAZARD CHARACTERIZATION :
Based on our hazard characterization, the potential human hazard is: Moderate

12. ECOLOGICAL INFORMATION

ECOTOXICOLOGICAL EFFECTS :

The following results are for the product.
Acute Fish Results:

Species	Exposure	Test Type	Value	Test Descriptor
Rainbow Trout	96 h	LC50	75 mg/l	Product
Fathead Minnow	96 h	LC50	190 mg/l	Product

ACUTE INVERTEBRATE RESULTS:

Species	Exposure	Test Type	Value	Test Descriptor
Ceriodaphnia dubia	48 hrs	LC50	4.32 mg/l	Product
Daphnia magna	48 h	LC50	6.5 mg/l	Product

PERSISTENCY AND DEGRADATION :

Total Organic Carbon (TOC) : 195,870 mg/l

Chemical Oxygen Demand (COD) : 2,500,000 mg/l

Biological Oxygen Demand (BOD):

Incubation Period	Value	Test Descriptor
5 d	102,440 mg/l	Product

The organic portion of this preparation is expected to be inherently biodegradable.

MOBILITY :
The environmental fate was estimated using a level III fugacity model embedded in the EPI (estimation program interface) Suite TM, provided by the US EPA. The model assumes a steady state condition between the total input and output. The level III model does not require equilibrium between the defined media. The information provided is intended to give the user a general estimate of the environmental fate of this product under the defined conditions of the models.
If released into the environment this material is expected to distribute to the air, water and soil/sediment in the approximate respective percentages;

Air	Water	Soil/Sediment
10 - 30%	30 - 50%	30 - 50%

The portion in water is expected to float on the surface.

BIOACCUMULATION POTENTIAL
Component substances have a potential to bioaccumulate.

ENVIRONMENTAL HAZARD AND EXPOSURE CHARACTERIZATION
Based on our hazard characterization, the potential environmental hazard is: Moderate

If released into the environment, see CERCLA/SUPERFUND in Section 15.

N/A = Not available

13. DISPOSAL CONSIDERATIONS

PRODUCT: The disposition of this material must in compliance with the Federal, State and Municipal Laws in use. Consult with your office of environmental control if necessary.

REST OF THE PRODUCT: The disposition of this material must be in compliance with the Federal, State and Municipal Laws in use. Consult with your office of environmental control if necessary.

USED PACKAGES/CONTAINERS: The disposition of this material must be in compliance with the Federal, State and Municipal Laws in use. Consult with your office of environmental control if necessary.

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14. TRANSPORT INFORMATION

The information in this section is for reference only and should not take the place of a shipping paper (bill of lading) specific to an order. Typical Proper Shipping Names for this product are as follows.

LAND TRANSPORT: generally applicable for transport in Latin America

Proper Shipping Name : PRODUCT IS NOT REGULATED DURING TRANSPORTATION

AIR TRANSPORT (ICAO/IATA) :

Proper Shipping Name : PRODUCT IS NOT REGULATED DURING TRANSPORTATION

MARINE TRANSPORT (IMDG/IMO) :

Proper Shipping Name : PRODUCT IS NOT REGULATED DURING TRANSPORTATION

15. REGULATORY INFORMATION

This section contains additional information that may have relevance to regulatory compliance. The information in this section is for reference only. It is not exhaustive, and should not be relied upon to take the place of an individualized compliance or hazard assessment. Nalco accepts no liability for the use of this information.

Argentina: Our MSDS complies with the Law 19587 - Decree 351/79 and Resolution 295/03.

Mexico: Our MSDS complies with the Mexican Oficial Rule NOM-018 STPS-2000, Risk identification and communication system by chemical substances in the work place.

Chile: Our MSDS complies with the Chilean Rule:Nch. 2245 (Chemical Substances - Material Safety Data Sheet - Requirements).

Colombia: Our MSDS complies with the requirements established by the Colombian Technical Rule 4435.

Venezuela: Our MSDS complies with the rule COVENIN 3059:2002. Dangerous Materials. Material Safety Data Sheet (MSDS).

NATIONAL REGULATIONS, BRAZIL
Brazil: Our FISPQ complies with the Brazilian Rule ABNT NBR 14725.

NATIONAL REGULATIONS, USA :

CERCLA/SUPERFUND, 40 CFR 302 :
Notification of spills of this product is not required.

SARA/SUPERFUND AMENDMENTS AND REAUTHORIZATION ACT OF 1986 (TITLE III) - SECTIONS 302, 311, 312, AND 313 :

SECTION 302 - EXTREMELY HAZARDOUS SUBSTANCES (40 CFR 355) :
This product does not contain substances listed in Appendix A and B as an Extremely Hazardous Substance.

SECTIONS 311 AND 312 - MATERIAL SAFETY DATA SHEET REQUIREMENTS (40 CFR 370) :
Our hazard evaluation has found this product to be hazardous. The product should be reported under the following indicated EPA hazard categories:

X	Immediate (Acute) Health Hazard
-	Delayed (Chronic) Health Hazard
-	Fire Hazard
-	Sudden Release of Pressure Hazard
-	Reactive Hazard

Under SARA 311 and 312, the EPA has established threshold quantities for the reporting of hazardous chemicals. The current thresholds are: 500 pounds or the threshold planning quantity (TPQ), whichever is lower, for extremely hazardous substances and 10,000 pounds for all other hazardous chemicals.

SECTION 313 - LIST OF TOXIC CHEMICALS (40 CFR 372) :
This product does not contain substances on the List of Toxic Chemicals.

TOXIC SUBSTANCES CONTROL ACT (TSCA) :
The substances in this preparation are included on or exempted from the TSCA 8(b) Inventory (40 CFR 710)

FEDERAL WATER POLLUTION CONTROL ACT, CLEAN WATER ACT, 40 CFR 401.15 / formerly Sec. 307, 40 CFR 116.4 / formerly Sec. 311 :
This product may contain trace levels (<0.1% for carcinogens, <1% all other substances) of the following substance(s) listed under the regulation. Additional components may be unintentionally present at trace levels.

Substance(s)	Citations
• Naphthalene	Sec. 307, Sec. 311
• Sulfuric Acid	Sec. 311

CLEAN AIR ACT, Sec. 112 (Hazardous Air Pollutants, as amended by 40 CFR 63), Sec. 602 (40 CFR 82, Class I and II Ozone Depleting Substances) :
This product contains the following substances listed in the regulation. Additional components may be unintentionally present at trace levels.

Substance(s)	Citations
• Polypropylene Glycol	Sec. 111

CALIFORNIA PROPOSITION 65 :
Substances known to the State of California to cause cancer and/or reproductive toxicity are present as an impurity or residue.

MICHIGAN CRITICAL MATERIALS :
Substances listed under this regulation are not intentionally added or expected to be present in this product. Listed components may be present at trace levels.

STATE RIGHT TO KNOW LAWS :
The following substances are disclosed for compliance with State Right to Know Laws:

Paraffin Wax	8002-74-2
Straight Run Middle Distillate	64741-44-2

NATIONAL REGULATIONS, CANADA :

WORKPLACE HAZARDOUS MATERIALS INFORMATION SYSTEM (WHMIS) :
This product has been classified in accordance with the hazard criteria of the Controlled Products Regulations (CPR) and the MSDS contains all the information required by the CPR.

WHMIS CLASSIFICATION :
D2B - Materials Causing Other Toxic Effects - Toxic Material

CANADIAN ENVIRONMENTAL PROTECTION ACT (CEPA) :
The substance(s) in this preparation are included in or exempted from the Domestic Substance List (DSL).

AUSTRALIA
All substances in this product comply with the National Industrial Chemicals Notification & Assessment Scheme (NICNAS).

CHINA
All substances in this product comply with the Provisions on the Environmental Administration of New Chemical Substances and are listed on or exempt from the Inventory of Existing Chemical Substances China (IECSC).

EUROPE
The substances in this preparation have been reviewed for compliance with the EINECS or ELINCS inventories.

JAPAN
This product contains substance(s) which are not in compliance with the Law Regulating the Manufacture and Importation Of Chemical Substances and are not listed on the Existing and New Chemical Substances list (ENCS).

KOREA
All substances in this product comply with the Toxic Chemical Control Law (TCCL) and are listed on the Existing Chemicals List (ECL)

NEW ZEALAND
All substances in this product comply with the Hazardous Substances and New Organisms (HSNO) Act 1996,and are listed on or are exempt from the New Zealand Inventory of Chemicals.

16. OTHER INFORMATION

This product material safety data sheet provides health and safety information. The product is to be used in applications consistent with our product literature. Individuals handling this product should be informed of the recommended safety precautions and should have access to this information. For any other uses, exposures should be evaluated so that appropriate handling practices and training programs can be established to insure safe workplace operations. Please consult your local sales representative for any further information.

REFERENCES

Hazardous Substances Data Bank, National Library of Medicine, Bethesda, Maryland (TOMES CPS™ CD-ROM Version), Micromedex, Inc., Englewood, CO.

IARC Monographs on the Evaluation of the Carcinogenic Risk of Chemicals to Man, Geneva: World Health Organization, International Agency for Research on Cancer.

Integrated Risk Information System, U.S. Environmental Protection Agency, Washington, D.C. (TOMES CPS™ CD-ROM Version),
Micromedex, Inc., Englewood, CO.

Annual Report on Carcinogens, National Toxicology Program, U.S. Department of Health and Human Services, Public Health Service.

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Registry of Toxic Effects of Chemical Substances, National Institute for Occupational Safety and Health, Cincinnati, OH,
(TOMES CPS™ CD-ROM Version), Micromedex, Inc., Englewood, CO.

The Teratogen Information System, University of Washington, Seattle, WA (TOMES CPS™ CD-ROM Version), Micromedex, Inc., Englewood, CO.

Prepared By : Product Safety Department
Date issued : 16.05.2013
Version Number : 2.0

NALCO Water
An Ecolab Company

SAFETY DATA SHEET

3D TRASAR™ 3DT470

Section: 1. PRODUCT AND COMPANY IDENTIFICATION

Product name	:	3D TRASAR™ 3DT470
Other means of identification	:	Not applicable.
Recommended use	:	COOLING WATER TREATMENT
Restrictions on use	:	Refer to available product literature or ask your local Sales Representative for restrictions on use and dose limits.
Company	:	Nalco Company 1601 W. Diehl Road Naperville, Illinois 60563-1198 USA TEL: (630) 305-1000
Emergency telephone number	:	(800) 424-9300 (24 Hours) CHEMTREC
Issuing date	:	04/08/2022

Section: 2. HAZARDS IDENTIFICATION

GHS Classification

Corrosive to metals	:	Category 1
Skin corrosion	:	Category 1
Serious eye damage	:	Category 1
Skin sensitization	:	Category 1

GHS Label element

Hazard pictograms :

Signal Word : Danger

Hazard Statements : May be corrosive to metals.
Causes severe skin burns and eye damage.
May cause an allergic skin reaction.

Precautionary Statements : **Prevention:**
Keep only in original container. Avoid breathing dust/ fume/ gas/ mist/ vapours/ spray. Wear protective gloves/ protective clothing/ eye protection/ face protection.
Response:
IF SWALLOWED: Rinse mouth. Do NOT induce vomiting. IF ON SKIN (or hair): Take off immediately all contaminated clothing. Rinse skin with water/shower. IF INHALED: Remove person to fresh air and keep comfortable for breathing. Immediately call a POISON CENTER/doctor. IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing. Immediately call a POISON CENTER or doctor/ physician.

Storage:
Store in corrosive resistant container with a resistant inner liner.
Disposal:
Dispose of contents/ container to an approved waste disposal plant.

Other hazards : Do not mix with bleach or other chlorinated products – will cause chlorine gas.

Section: 3. COMPOSITION/INFORMATION ON INGREDIENTS

Pure substance/mixture : Mixture

Chemical Name	CAS-No.	Concentration: (%)
Polycarboxylic acid polymer	Proprietary	30 - 60
Carboxylic acid	Proprietary	0.1 - 1

Section: 4. FIRST AID MEASURES

In case of eye contact : Rinse immediately with plenty of water, also under the eyelids, for at least 15 minutes. Remove contact lenses, if present and easy to do. Continue rinsing. Get medical attention immediately.

In case of skin contact : Wash off immediately with plenty of water for at least 15 minutes. Wash clothing before reuse. Thoroughly clean shoes before reuse. Get medical attention immediately.

If swallowed : Rinse mouth with water. Do NOT induce vomiting. Never give anything by mouth to an unconscious person. Get medical attention immediately.

If inhaled : Remove to fresh air. Treat symptomatically. Get medical attention if symptoms occur.

Protection of first-aiders : In event of emergency assess the danger before taking action. Do not put yourself at risk of injury. If in doubt, contact emergency responders. Use personal protective equipment as required.

Notes to physician : Treat symptomatically.

Most important symptoms and effects, both acute and delayed : See Section 11 for more detailed information on health effects and symptoms.

Section: 5. FIREFIGHTING MEASURES

Suitable extinguishing media : Use extinguishing measures that are appropriate to local circumstances and the surrounding environment.

Unsuitable extinguishing media : None known.

Specific hazards during firefighting : Not flammable or combustible.

Hazardous combustion : Decomposition products may include the following materials: Carbon oxides

products		nitrogen oxides (NOx) Sulphur oxides
Special protective equipment for firefighters	:	Use personal protective equipment.
Specific extinguishing methods	:	Fire residues and contaminated fire extinguishing water must be disposed of in accordance with local regulations. In the event of fire and/or explosion do not breathe fumes.

Section: 6. ACCIDENTAL RELEASE MEASURES

Personal precautions, protective equipment and emergency procedures	:	Ensure adequate ventilation. Keep people away from and upwind of spill/leak. Avoid inhalation, ingestion and contact with skin and eyes. When workers are facing concentrations above the exposure limit they must use appropriate certified respirators. Ensure clean-up is conducted by trained personnel only. Refer to protective measures listed in sections 7 and 8.
Environmental precautions	:	Do not allow contact with soil, surface or ground water.

Section: 7. HANDLING AND STORAGE

Advice on safe handling	:	Do not ingest. Do not breathe dust/fume/gas/mist/vapours/spray. Do not get in eyes, on skin, or on clothing. Wash hands thoroughly after handling. Use only with adequate ventilation. Do not mix with bleach or other chlorinated products – will cause chlorine gas.
Conditions for safe storage	:	Keep away from light, direct sunlight. Keep away from strong bases. Keep out of reach of children. Keep container tightly closed. Store in suitable labelled containers.
Suitable material	:	Keep in properly labelled containers.
Unsuitable material	:	not determined

Section: 8. EXPOSURE CONTROLS/PERSONAL PROTECTION

Components with workplace control parameters

Contains no substances with occupational exposure limit values.

Engineering measures	:	Effective exhaust ventilation system. Maintain air concentrations below occupational exposure standards.

Personal protective equipment

Eye protection	:	Safety goggles Face-shield
Hand protection	:	Wear impervious chemical-resistant gloves when handling this product. The following glove types are recommended based on our review of glove manufacturer information and/or other available sources. Nitrile-rubber, Butyl-Rubber and Neoprene gloves. Other glove types may be used for short term, incidental contact if determined

		by testing to provide adequate worker protection. Gloves should be discarded and replaced if there is any indication of degradation or chemical breakthrough.
Skin protection	:	Personal protective equipment comprising: suitable protective gloves, safety goggles and protective clothing
Respiratory protection	:	No personal respiratory protective equipment normally required. If user operations generate significant vapours that cannot be controlled with ventilation or engineering controls, use an approved air-purifying respirator fitted with a gas and vapour cartridge. Use a particulate pre-filter where operations generate significant mists or aerosols. Recommended gas and vapour cartridge: Acid gas cartridge. In event of emergency or planned entry into unknown concentrations, a positive pressure, full-facepiece SCBA or supplied-air respirator should be used.
Hygiene measures	:	Handle in accordance with good industrial hygiene and safety practice. Remove and wash contaminated clothing before re-use. Wash face, hands and any exposed skin thoroughly after handling. Provide suitable facilities for quick drenching or flushing of the eyes and body in case of contact or splash hazard.

The Personal Protective Equipment (PPE) recommendations provided above have been made in good faith based on typical expected conditions of use. PPE selection should always be completed in conjunction with a proper risk assessment and in accordance with a PPE management program.

Section: 9. PHYSICAL AND CHEMICAL PROPERTIES

Appearance	:	liquid
Colour	:	Clear amber
Odour	:	mild
Flash point	:	105 °C
pH	:	< 2, (25 °C)
Odour Threshold	:	no data available
Melting point/freezing point	:	-5 °C
Initial boiling point and boiling range	:	100 °C
Evaporation rate	:	no data available
Flammability (solid, gas)	:	Not applicable.
Upper explosion limit	:	no data available
Lower explosion limit	:	no data available
Vapour pressure	:	no data available
Relative vapour density	:	no data available
Relative density	:	1.230, (25 °C),
Density	:	no data available

Water solubility	:	Complete
Solubility in other solvents	:	no data available
Partition coefficient: n-octanol/water	:	no data available
Auto-ignition temperature	:	no data available
Thermal decomposition	:	no data available
Viscosity, dynamic	:	45 mPa.s (25 °C)
Viscosity, kinematic	:	no data available
Molecular weight	:	no data available
VOC	:	no data available

Section: 10. STABILITY AND REACTIVITY

Reactivity	:	No dangerous reaction known under conditions of normal use.
Chemical stability	:	Stable under normal conditions.
Possibility of hazardous reactions	:	Do not mix with bleach or other chlorinated products – will cause chlorine gas.
Conditions to avoid	:	None known.
Incompatible materials	:	Strong bases
Hazardous decomposition products	:	In case of fire, hazardous decomposition products may be produced such as: Carbon oxides nitrogen oxides (NOx) Sulphur oxides

Section: 11. TOXICOLOGICAL INFORMATION

Information on likely routes of exposure	:	Inhalation, Eye contact, Skin contact

Potential Health Effects

Eyes	:	Causes serious eye damage.
Skin	:	Causes severe skin burns. May cause allergic skin reaction.
Ingestion	:	Causes digestive tract burns.
Inhalation	:	May cause nose, throat, and lung irritation.
Chronic Exposure	:	Health injuries are not known or expected under normal use.

Experience with human exposure

Eye contact	:	Redness, Pain, Corrosion

Skin contact	:	Redness, Pain, Irritation, Corrosion, Allergic reactions
Ingestion	:	Corrosion, Abdominal pain
Inhalation	:	Respiratory irritation, Cough

Toxicity

Product

Acute oral toxicity	:	no data available
Acute inhalation toxicity	:	no data available
Acute dermal toxicity	:	no data available
Skin corrosion/irritation	:	no data available
Serious eye damage/eye irritation	:	no data available
Respiratory or skin sensitization	:	no data available
Carcinogenicity	:	no data available
Reproductive effects	:	No toxicity to reproduction
Germ cell mutagenicity	:	Contains no ingredient listed as a mutagen
Teratogenicity	:	no data available
STOT - single exposure	:	no data available
STOT - repeated exposure	:	no data available
Aspiration toxicity	:	No aspiration toxicity classification

Components

Acute oral toxicity	:	Polycarboxylic acid polymer LD50 rat: 125,000 mg/kg

Section: 12. ECOLOGICAL INFORMATION

Toxicity

Environmental Effects	:	This product has no known ecotoxicological effects.

Components

Toxicity to fish	:	Polycarboxylic acid polymer LC50 Fish: 580 mg/l Exposure time: 96 h

Components

Toxicity to daphnia and other aquatic invertebrates	:	Polycarboxylic acid polymer EC50 Aquatic Invertebrate: > 1,000 mg/l Exposure time: 48 h

Persistence and degradability

no data available

Mobility

no data available

Bioaccumulative potential

no data available

Other information

no data available

Section: 13. DISPOSAL CONSIDERATIONS

Disposal methods	:	Where possible recycling is preferred to disposal or incineration. If recycling is not practicable, dispose of contents/container in accordance with local regulations Dispose of wastes in an approved waste disposal facility.
Disposal considerations	:	Dispose of as unused product. Empty containers should be taken to an approved waste handling site for recycling or disposal. Do not re-use empty containers.

Section: 14. TRANSPORT INFORMATION

The shipper/consignor/sender is responsible to ensure that the packaging, labeling, and markings are in compliance with the selected mode of transport.

Land transport (DOT)

Proper shipping name	:	CORROSIVE LIQUID, ACIDIC, ORGANIC, N.O.S.
Technical name(s)	:	Polycarboxylic acid polymer
UN/ID No.	:	UN 3265
Transport hazard class(es)	:	8
Packing group	:	III

Air transport (IATA)

Proper shipping name	:	CORROSIVE LIQUID, ACIDIC, ORGANIC, N.O.S.
Technical name(s)	:	Polycarboxylic acid polymer
UN/ID No.	:	UN 3265
Transport hazard class(es)	:	8
Packing group	:	III

Sea transport (IMDG/IMO)

Proper shipping name	:	CORROSIVE LIQUID, ACIDIC, ORGANIC, N.O.S.
Technical name(s)	:	Polycarboxylic acid polymer
UN/ID No.	:	UN 3265
Transport hazard class(es)	:	8
Packing group	:	III

Section: 15. REGULATORY INFORMATION

TSCA list : No substances are subject to a Significant New Use Rule.

No substances are subject to TSCA 12(b) export notification requirements.

EPCRA - Emergency Planning and Community Right-to-Know Act

CERCLA Reportable Quantity

This product does not contain a RQ substance, or this product contains a substance with a RQ, however the calculated RQ exceeds the reasonably attainable upper limit.

SARA 304 Extremely Hazardous Substances Reportable Quantity

This material does not contain any components with a section 304 EHS RQ.

SARA 311/312 Hazards : Corrosive to metals
Respiratory or skin sensitisation
Skin corrosion or irritation
Serious eye damage or eye irritation

SARA 302 : This material does not contain any components with a section 302 EHS TPQ.

SARA 313 : This material does not contain any chemical components with known CAS numbers that exceed the threshold (De Minimis) reporting levels established by SARA Title III, Section 313.

California Prop. 65

This product does not contain any chemicals known to State of California to cause cancer, birth defects, or any other reproductive harm.

INTERNATIONAL CHEMICAL CONTROL LAWS :

China Inventory of Existing Chemical Substances

All substances in this product comply with the Provisions on the Environmental Administration of New Chemical Substances and are listed on or exempt from the Inventory of Existing Chemical Substances China (IECSC).

United States TSCA Inventory

On or in compliance with the active portion of the TSCA inventory

Australia. Australian Industrial Chemicals Introduction Scheme (AICIS)

On the inventory, or in compliance with the inventory.

Japan. ENCS - Existing and New Chemical Substances Inventory

On the inventory, or in compliance with the inventory.

Korea. Korean Existing Chemicals Inventory (KECI)

On the inventory, or in compliance with the inventory.

Philippines Inventory of Chemicals and Chemical Substances (PICCS)

On the inventory, or in compliance with the inventory.

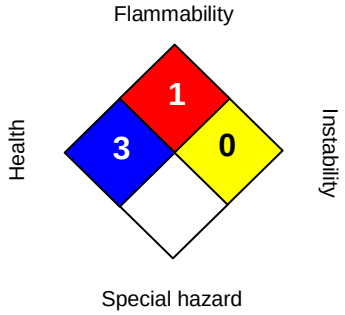
Taiwan Chemical Substance Inventory

All substances in this product comply with the Taiwan Existing Chemical Substances Inventory (ECSI).

Canadian Domestic Substances List (DSL)
The substance(s) in this preparation are included in or exempted from the Domestic Substance List (DSL).

Section: 16. OTHER INFORMATION

NFPA:



HMIS III:

HEALTH	3*
FLAMMABILITY	1
PHYSICAL HAZARD	0

0 = not significant, 1 = Slight,
2 = Moderate, 3 = High
4 = Extreme, * = Chronic

Revision Date	:	04/08/2022
Version Number	:	1.0
Prepared By	:	Regulatory Affairs

REVISED INFORMATION: Significant changes to regulatory or health information for this revision is indicated by a bar in the left-hand margin of the SDS.

The information provided in this Safety Data Sheet is correct to the best of our knowledge, information and belief at the date of its publication. The information given is designed only as a guidance for safe handling, use, processing, storage, transportation, disposal and release and is not to be considered a warranty or quality specification. The information relates only to the specific material designated and may not be valid for such material used in combination with any other materials or in any process, unless specified in the text.
For additional copies of an SDS visit www.nalco.com and request access.


BURNS McDONNELL

Leah Whallon

From: Koenings, Jamie M <jmkoenings@burnsmcd.com>
Sent: Tuesday, September 3, 2024 11:34 AM
To: Leah Whallon; chigginbotham@targaresources.com
Subject: RE: Application to Amend Permit No. WQ0005329000; Targa Midstream Services LLC; Mont Belvieu Complex
Attachments: WQ5329 Spanish NORI language.docx

Follow Up Flag: Follow up
Flag Status: Flagged

Hi Leah,

I apologize for the delay in responding. We appreciate the opportunity to review the language to be included in the Notice of Receipt of Application and Intent to Obtain a Water Quality Permit (NORI). Please see below for the redline revisions to the language to be included in the NORI.

> APPLICATION. Targa Midstream Services LLC, 811 Louisiana Street, Suite 2100, Houston, Texas 77002, which owns a natural gas processing facility, has applied to the Texas Commission on Environmental Quality (TCEQ) to amend Texas Pollutant Discharge Elimination System (TPDES) Permit No. WQ0005329000 (EPA I.D. No. TX0002887) to authorize: the addition of the following to discharge via Outfall 001 on an intermittent flow basis: reverse osmosis treated water of 1,600 gallons per day, boiler water during inclement weather, process upsets, and maintenance activities of 1,300 gallons per day, and cooling water backflush water of 3,000 gallons per day, all of which constitute <1% of overall flow; to increase the flow to a daily average flow of 350,000 gallons per day and a daily maximum flow of 1,100,000 gallons per day via Outfall 001; and the addition of hydrostatic test water via Outfalls 003, 005, and 006. The facility is located at 10119 Highway 146, in the city of Mont Belvieu, in Chambers County, Texas ~~77523~~ 77580. The discharge route is from the plant site to ~~to~~ various unnamed tributaries via Outfalls 001, 003, 005, and 006, thence to Cedar Bayou Tidal; and via Outfalls 002 and 004 directly to Cedar Bayou Tidal. TCEQ received this application on August 1, 2024. The permit application will be available for viewing and copying at Sam and Carmena Goss Memorial Branch, 1 John Hall Drive, Mont Belvieu, in Chambers County, Texas, and at Stratford Branch Library, 509 Stratford Street, Highlands, 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 exact location, refer to the application. https://gisweb.tceq.texas.gov/LocationMapper/?marker=-94.900555.29.84&level-18
>
> Further information may also be obtained from Targa Midstream Services LLC at the address stated above or by calling Mr. Kieth Adams, Senior Operations Manager, at 281-385-3370.

The above corrected language above has been translated into Spanish and has been attached to this email in a Microsoft Word document, as requested.

If you have any questions or need any additional information, please do not hesitate to reach to me or Christina.

Thank you,
Jamie

Jamie M. Koenings \ Burns & McDonnell
she, her, hers
Senior Compliance Specialist \ Environmental Services

M 512-745-9272
jmkoenings@burnsmcd.com \ burnsmcd.com
6200 Bridge Point Pkwy, Suite 400, Austin, TX 78730

Proud to be one of *FORTUNE*'s 100 Best Companies to Work For

Please consider the environment before printing this email.

From: Leah Whallon <Leah.Whallon@Tceq.Texas.Gov>
Sent: Thursday, August 29, 2024 4:57 PM
To: chigginbotham@targaresources.com
Cc: Koenings, Jamie M <jmkoenings@burnsmcd.com>
Subject: RE: Application to Amend Permit No. WQ0005329000; Targa Midstream Services LLC; Mont Belvieu Complex

Good Afternoon,

I'm following up on the status of this request as I have not received the response yet. Please let me know if you have any questions or need additional time to complete the response.

Thank you,

Leah Whallon
Texas Commission on Environmental Quality
Water Quality Division
512-239-0084
leah.whallon@tceq.texas.gov

How is our customer service? Fill out our online customer satisfaction survey at www.tceq.texas.gov/customersurvey

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From: Leah Whallon
Sent: Wednesday, August 14, 2024 5:00 PM
To: chigginbotham@targaresources.com
Cc: jmkoenings@burnsmcd.com
Subject: Application to Amend Permit No. WQ0005329000; Targa Midstream Services LLC; Mont Belvieu Complex

Good Afternoon,

Please see the attached Notice of Deficiency letter dated August 14, 2024 requesting additional information needed to declare the application administratively complete. Please send the complete response by August 28, 2024.

Please let me know if you have any questions.

Thank you,

Leah Whallon
Texas Commission on Environmental Quality
Water Quality Division
512-239-0084
leah.whallon@tceq.texas.gov

How is our customer service? Fill out our online customer satisfaction survey at www.tceq.texas.gov/customersurvey

The corrected NORI language translated into Spanish

SOLICITUD. Targa Midstream Services LLC, 811 Louisiana Street, Suite 2100, Houston, Texas 77002 ha solicitado a la Comisión de Calidad Ambiental de Texas (TCEQ) para modificar el Permiso No. WQ0005329000 (EPA I.D. No. TX0002887) del Sistema de Eliminación de Descargas de Contaminantes de Texas (TPDES) para autorizar: la adición de lo siguiente a la descarga a través del Emisario 001 en forma de flujo intermitente: agua tratada por ósmosis inversa de 1,600 galones por día, agua de caldera durante condiciones climáticas adversas, alteraciones del proceso y actividades de mantenimiento de 1,300 galones por día, y agua de enfriamiento agua de retrolavado de 3000 galones por día, lo cual constituye <1% del flujo total; aumentar el caudal a un caudal promedio diario de 350,000 galones diarios y un caudal máximo diario de 1,100,000 galones diarios a través del Emisario 001; y la adición de agua de prueba hidrostática a través de los Emisarios 003, 005 y 006. La instalación está ubicada en 10119 Highway 146, en la ciudad de Mont Belvieu, en el condado de Chambers, Texas 77580. La ruta de descarga es desde el sitio de la planta hasta varios afluentes sin nombre a través de los emisarios 001, 003, 005 y 006, desde allí hasta Cedar Bayou Tidal; y a través de los emisarios 002 y 004 directamente a Cedar Bayou Tidal. La TCEQ recibió esta solicitud el 1 de agosto de 2024. La solicitud de permiso estará disponible para ver y copiar en Sam and Carmena Goss Memorial Branch, 1 John Hall Drive, Mont Belvieu, en el condado de Chambers, Texas, y en Stratford Branch Library, 509 Stratford. Street, Highlands, en el condado de Harris, Texas, antes de la fecha de publicación de este aviso en el periódico. La solicitud, incluidas las actualizaciones y los avisos asociados, están disponibles 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 instalación se proporciona como cortesía pública y no forma parte de la solicitud o aviso. Para conocer la ubicación exacta, consulte la aplicación. https://gisweb.tceq.texas.gov/LocationMapper/?marker=-94.900555.29.84&level-18

También se puede obtener más información de Targa Midstream Services LLC en la dirección indicada anteriormente o llamando al Sr. Kieth Adams, Gerente Senior de Operaciones, al 281-385-3370.