LDEQ RECEIPT

2023 MAY 18 AM 11:24

KOCH
METHANOL ST. JAMES

Koch Methanol St. James
5181 Wildcat Street
St. James, LA 70086

Post Office Box 510
Vacherie, LA 70090

HAND DELIVERED

May 17, 2023

Mr. Scott Guilliams
Administrator, Water Permits
Louisiana Department of Environmental Quality
Office of Environmental Services
P.O. Box 4313
Baton Rouge, LA 70821-4313

RE: Koch Methanol St. James, LLC
Koch Methanol Facility
Renewal Application for LPDES Industrial Wastewater Discharge Permit
AI No. 194165

Dear Mr. Guilliams:

Koch Methanol St. James, LLC (Koch) operates the Koch Methanol (KMe) Plant and KMe Terminal, collectively known as the KMe Facility, located in St. James, St. James Parish, Louisiana. Koch is submitting the enclosed LPDES permit renewal application for the operations at the Koch Methanol Facility in accordance with the requirements of LAC 33:IX.Chapter 25. The facility currently operates under LA0127367, which became effective on November 12, 2020. Koch is submitting this application in advance of the submittal deadline, which is 180 days prior to November 12, 2025, to authorize anticipated changes at the facility and to reconcile the permit with the facility's as-built operations.

Koch is submitting this LPDES application to renew the referenced LA0127367 permit regarding current facility operations. In addition, Koch is seeking authorization to implement changes associated with the proposed KMe Optimization Project. As required, Koch is submitting an original renewal application as well as one additional copy for your review. Additionally, Koch is submitting a Request for Expedited Permit Processing with this application.

If you or your staff have any questions or require additional information during your review of this application, please contact Kevan Reardon at (580) 478-7621, kevan.reardon@kochind.com, or Brian Glover at (225) 408-2741, bglover@ramboll.com.

Sincerely,

Josh Wiggins
VP of Manufacturing & Plant Manager

LOUISIANA DEPARTMENT OF ENVIRONMENTAL QUALITY
Office of Environmental Services ▪ Public Participation & Permit Support Division
Post Office Box 4313 ▪ Baton Rouge, LA 70821-4313
Customer Service: 225-219-LDEQ (5337) or Toll Free 1-866-896-LDEQ (5337)

REQUEST FOR EXPEDITED PERMIT PROCESSING

This form is to be submitted when an applicant requests consideration for expedited processing of permits, modifications, licenses, registrations or variances in accordance with LAC 33:I.Chapter 18. Submission of this form shall in no way constitute approval of the expedited permit request. The LDEQ will notify the applicant in writing of the decision to expedite processing of the requested permit application. **ALL INFORMATION MUST BE PROVIDED. Please submit one form for *each* activity for which expedited processing is requested.**

SECTION I - FACILITY INFORMATION

Agency Interest (AI) #	194165	**Permit # (if permitted)**	LA0127367
Facility Name	Koch Methanol St. James, LLC		
Date Associated Permit Application Submitted	05/18/2023		
Media	☐ Air ☒ Water ☐ Solid Waste ☐ Haz. Waste	**Type of Permit Action**	☐ New Facility ☐ General Permit ☐ License ☐ Variance ☐ Modified Facility ☐ Registration ☒ Renewal w/ Modification
Owner / Operator Name	Koch Methanol St. James, LLC		
Parish Where Facility is Located	St. James Parish		
Mailing Address	Street	5181 Wildcat Street	
	City	St. James	State: LA, Zip: 70086
Technical Contact Available After Normal Work Hours	Name	HaLeigh Engler	
	Phone	(225) 264-2065	
	Cell Phone	(225) 264-2065	
	Fax	( )	
	E-mail	HaLeigh.Engler@kochind.com	

SECTION II - EXPEDITED PERMIT INFORMATION

1. How many new permanent jobs will result from this permit action?	Less than 5	
2. Date requested for final permit decision	or	☒ As soon as possible
3. Is construction activity proposed in permit application?	☐ Yes	☒ No
4. Does the applicant owe any outstanding fees to the LDEQ?	☐ Yes	☒ No
If you answered "Yes" to No. 4, above, attach explanation to this form.		
5. Is there a limit to the amount you are willing to pay to expedite the permit processing?	☐ Yes	☒ No

If you answered "Yes" to No. 5, above, please read and complete the following:		
I understand that if such a maximum amount is requested, the number of overtime hours an LDEQ employee or contractor works processing the permit, modification, license, registration, or variance shall be limited accordingly. If further processing of the document is required, the LDEQ's continued review will not be in accordance with the provisions of this Chapter, and the request will no longer be handled on an expedited basis. I understand that the LDEQ will charge a fee for the expedited processing which was performed. (LAC 33:I.1805).		
I wish to limit the expedited permit fee to:	**$**	
Provide the basis or need for this expedited permit processing request.	**Koch is requesting expedited permit processing to ensure that the KMe Optimization Project is approved in a timely fashion.**	

SECTION III - PUBLIC NOTICE

Public notice of all expedited permit processing will be provided in accordance with LAC 33:I.1809.A.

SECTION IV - CERTIFICATIONS

Check the appropriate box regarding pending enforcement actions and lawsuits.

☐ *I certify that as owner/operator I am not subject to any pending state or federal enforcement actions, including citizen suits brought under state or federal law for the subject facility or any other facility I own or operate.*

or

☒ *I am currently subject to pending state or federal enforcement actions, including citizen suits brought under state or federal law for the subject facility or any other facility I own or operate.*

Please read and complete the following:

I, as the duly authorized responsible official for the subject facility, certify in accordance with LAC 33:I.1803.C, that should additional information be required to complete the permit process, all requested information will be provided within the timeframes specified by the LDEQ.

I understand that:

- *If the requested information is not provided within the timeframes specified, or if the limit I have indicated as a maximum amount to be paid for expedited processing is reached, the LDEQ reserves the right to cease processing the permit, modification, license, registration, or variance as an expedited permit.*
- *If the LDEQ ceases expedited permit processing, I will be billed for the expedited processing that occurred in accordance with LAC 33: I.1805.B.*
- *Failure to pay the expedited permit processing fee by the due date specified on the invoice will constitute a violation of these regulations and shall subject the applicant to relevant enforcement action under the Louisiana Environmental Quality Act including, but not limited to, revocation or suspension of the permit, modification, license, registration, or variance.*
- *There is no guarantee that a final permit decision will be issued by the date I have requested.*
- *The submittal of this request does not release me from liability for any violations related to this activity or the Environmental Quality Act.*
- *A permit may be required prior to any construction at the site, operation of the proposed activity or commencement of discharges from this proposed activity, and I should refer to media-specific regulations for this information.*

Signature of Responsible Official	[signature]	**Title**	VP of Manufacturing & Plant Manager
Printed Name	Josh Wiggins	**Date**	5/17/23

Intended for
Koch Methanol St. James, LLC
Koch Methanol Facility
5181 Wildcat Street
St. James, St. James Parish, Louisiana

Agency Interest No.
194165

Date
May 2023

Prepared by
Ramboll US Consulting, Inc.

Project No.
1690029042

RENEWAL APPLICATION FOR AN LPDES INDUSTRIAL WASTEWATER DISCHARGE PERMIT

LPDES PERMIT NUMBER: LA0127367

KOCH™
METHANOL ST. JAMES

RAMBOLL

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APPENDICES

1. INTRODUCTION

Koch Methanol St. James, LLC (Koch) operates the Koch Methanol Plant (KMe Plant), an organic chemical manufacturing facility and the adjacent Koch Methanol Terminal (KMe Terminal), collectively known as the KMe Facility, located at 5181 Wildcat Street in St. James, St. James Parish, Louisiana (**Figure 1**). The KMe Facility is a fully integrated methanol production facility. The Standard Industrial Classification (SIC) code for the facility is 2869 – Industrial Organic Chemicals, Not Elsewhere Classified. The KMe Plant's agency interest number is 194165 and the KMe Terminal's agency interest number is 213599. Koch submitted a Notice of Change (NOC-1) form on June 18, 2021, to have the facility's name changed from YCI Methanol One, LLC to Koch Methanol St. James, LLC.

The KMe Facility currently operates under LPDES Permit No. LA0127367, which became effective on November 12, 2020, covering both the KMe Plant and the KMe Terminal operations. Koch is submitting this permit application utilizing Louisiana Department of Environmental Quality's (LDEQ) Industrial Wastewater Discharge Application (IND), in accordance with LAC 33:IX.2501.A.2. To satisfy requirements detailed in the IND form, this original application and one copy are being submitted for the renewal effort detailed herein. Koch's current permit will expire at midnight on November 12, 2025. Koch is submitting this application in advance of the submittal deadline, which is 180 days prior November 12, 2025, to authorize anticipated changes at the facility as a result of a planned KMe Optimization Project ("the Project"), described further in Section 2.3, and to reconcile the permit with the facility's as-built operations.

This application provides a facility overview and information regarding the KMe Facility water sourcing, wastewater treatment systems and outfalls, stormwater management practices, permit revision requests, and compliance history. Appendix A provides the Industrial Wastewater Discharge Permit Application (IND) Form. Appendix B provides the Environmental Assessment Statement (EAS). Appendix C provides stream composition information for Miscellaneous water streams being considered in this application. Appendix D provides additional detail regarding noncompliance events by providing applicable Noncompliance Report Forms (NCR Forms). Lastly, Appendix E provides the KMe Facility Bioassay Testing Results (i.e., Whole Effluent Toxicity results).

2. FACILITY OVERVIEW

2.1 Facility Location and Overview

The KMe Facility is located along the west bank of the Mississippi River approximately 30 miles south of Baton Rouge and approximately 55 miles from New Orleans, on approximately 1,300 acres in St. James Parish. **Figure 1** illustrates the location of the facility within St. James Parish. The facility boundaries and other key facility features including the existing effluent discharge outfall locations are shown in **Figures 2a, 2b, and 2c** herein.

2.2 Process Description

With this application, Koch proposes to increase the KMe Plant design production rate to approximately 6,200 metric tons per day (MTPD) of refined methanol, above the current designed production rate of 4,950 MTPD. Methanol is produced using the licensed Lurgi MegaMethanol® technology. The methanol production process consists of three main steps: synthesis (syngas) production; crude methanol synthesis; and methanol distillation.

The Lurgi MegaMethanol® process is an advanced, highly efficient technology for converting natural gas (i.e., methane) to methanol. The technology's main processing features include oxygen-blown natural gas reforming in combination with steam reforming; two-step methanol synthesis in water- and gas-cooled reactors; and the capability to recycle hydrogen to adjust synthesis gas composition.

2.2.1 Syngas Production

Syngas production by the combined reforming method starts with desulfurization and prereforming of natural gas feedstock. After prereforming, the natural gas is split into two branches, with one branch of the gas stream routed to the Steam Methane Reformer (SMR) unit. The SMR uses a catalyst in the presence of steam to reform methane into a raw syngas stream composed primarily of hydrogen, carbon monoxide, and carbon dioxide. The SMR contains two independent fuel/burner systems comprising the SMR furnace and the auxiliary burners firing in the SMR exhaust duct. The SMR auxiliary burners provide additional heat to the SMR exhaust stream, similar to duct burners, to facilitate heat recovery.

The other branch of the prereformed natural gas stream bypasses the SMR and is mixed with the raw syngas exiting the SMR unit. The combined stream is then routed to the secondary reforming process, the Autothermal Reformer (ATR), where oxygen is introduced as the reforming agent. The syngas stream leaving the ATR contains water as a by-product of the reforming process. Heat is recovered from this stream through various process heaters, and the water is knocked out as process condensate. This process condensate contains traces of dissolved gases and ammonia, which are stripped off in the Process Condensate Stripper and sent to the SMR unit for destruction. The stripped process condensate is recycled back to the Demineralization Unit to be reused as a clean water stream. The dry syngas is then routed to the methanol synthesis unit.

2.2.2 Methanol Synthesis

The methanol synthesis process utilizes two synthesis steps in series: twin water-cooled reactors followed by a gas-cooled reactor. The isothermal, water-cooled reactors use a highly reactive catalyst to partially convert the syngas to methanol. The heat of reaction from this process is drawn off by water cooling and is recovered to produce steam (which can be used to generate electricity via a condensing turbine, depending on the energy balance within the facility). The partially converted process gas stream is then routed to the gas-cooled methanol reactor, where it is further reacted by passing over a catalyst bed.

The crude methanol is cooled and condensed, and a purge gas stream is separated. Hydrogen can be separated from the purge gas; the hydrogen-rich stream contains minor amounts of non-reactive components in the form of nitrogen and any remaining methane. This stream is used for prereformer and synthesis loop catalyst reduction and can also be recycled to methanol synthesis and for desulfurization. The remaining purge gas is combusted as fuel gas in the SMR and Boiler. The liquid crude methanol is routed to the methanol distillation unit.

2.2.3 Methanol Distillation

The crude methanol contains impurities together with unconverted reactants and traces of dissolved gases from the methanol synthesis stage. The stream is degassed in an expansion vessel, which rids the crude methanol stream of much of the dissolved N_2, CO_2, CO, H_2, and methane. The expansion gas stream is combusted in the SMR as fuel. Volatile light ends and the remainder of the dissolved gases are removed in the Prerun Column, which separates them into an overhead vapor stream. The overhead vapor stream, called distillation off gas, also is combusted as fuel in the SMR. The less volatile, higher boiling components are further separated using two methanol columns in series. The first of the methanol columns operates at high pressure, while the second operates at atmospheric pressure. The overhead stream from the high-pressure column is used to heat the bottoms of the atmospheric pressure column. The overhead streams from both columns are condensed and refluxed back to their respective columns, with some portion of each split off as the product methanol. Product grade methanol exiting the distillation process is sent to TK-04002A/B storage tanks prior to further storage and distribution at the KMe Terminal. An additional storage tank containing raw methanol, TK-04001, is used to reprocess methanol that does not meet product specifications and to process other methanol containing streams. A chiller/scrubber system controls emissions from the raw methanol storage tank and the two product grade storage tanks. Methanol from the scrubber water is recovered by pumping the scrubber water to the expansion vessel or directly to the raw methanol tank for reprocessing.

2.2.4 KMe Terminal

The purpose of the KMe Terminal is to store and transfer methanol product. The facility consists of four internal floating roof methanol product tanks (TK-2301, TK-2302, TK-2303, and TK-2304), methanol truck and rail loading operations, and infrastructure for transferring methanol to and from marine loading operations at the St. James Terminal, which are located adjacent to the site and owned and operated by Plains Marketing LP.

2.2.5 Water Management

The KMe Facility utilizes surface water from the Mississippi River for process operations. The raw river water is filtered and treated to make it suitable for use in the process, with removed solids returned to the Mississippi river. Municipal potable water is used for non-process related operations and activities, such as safety showers and road dust mitigation. For process wastewater streams that require treatment prior to discharge, the KMe Facility is equipped with a wastewater collection and treatment plant that is designed and operated to meet the stringent federal and state wastewater discharge requirements of the LPDES permit. This is achieved via equalization, pH adjustment, biological treatment, and clarification.

The KMe Facility was designed to minimize the amount of methanol sent to its wastewater collection and treatment plant, and wastewater streams that contain higher concentrations of methanol are recycled back into the process to recover the methanol product. Process wastewaters generated directly in the process of making methanol are treated in the wastewater treatment plant (WWTP) before being monitored at Outfall 301 and discharged to the Mississippi River via Outfall 001. Other process wastewaters generated indirectly in the process of making methanol, such as boiler and cooling tower blowdown, are monitored and discharged via Outfall 201 and then to the Mississippi River through Outfall 001. Miscellaneous process wastewaters from maintenance activities (e.g., water used to pressure test equipment) are either treated in the WWTP, monitored, and discharged to the Mississippi River, or monitored prior to discharge to either the Mississippi River or St. James Canal.

Stormwater collected in the process block areas (with higher potential for contamination) is treated in the WWTP and monitored prior to discharge at the Mississippi River via Outfall 001. For most stormwater events, the full amount of stormwater is treated in the WWTP; however, during high-rate rainfall events, after the first inch of rainfall the potential for contamination is lower, and the stormwater may be diverted via a monitored outfall (Outfall 401) to a pond that discharges to the Mississippi River via Outfall 001.

Non-process area stormwater (with a low potential for contamination) is monitored and discharged to the St. James Canal via stormwater outfalls.

Sanitary wastewater (e.g., restrooms, showers, sinks) generated by onsite personnel, contractors, and visitors is treated appropriately and the site is permitted to discharge treated sanitary wastewater via Outfall 101 to the Mississippi River through Outfall 001.

2.3 Proposed KMe Optimization Project

Koch plans for an Optimization Project ("the Project") to take place at the site, consisting of a number of activities, including a raw material feed upgrade, improvements to plant cooling capability, and other equipment upgrades, with the collective primary goal of increasing utilization of existing assets and methanol production. The Project is intended to achieve a 25% increase of the KMe Facility design production rate from approximately 4,950 MTPD to 6,200 MTPD of refined methanol.

To meet the additional cooling needs anticipated for the Project, Koch plans to make upgrades to existing fin fan coolers as well as the existing cooling tower. These upgrade projects are in the early stages of design. This work may involve upgrades to or replacement of the fin fans for improved cooling capability at increased production rates. The cooling tower upgrades are anticipated to include addition of a new cooling tower cell and new or upgraded pumps for increased cooling tower circulation rates above current capability.

All potential increases in process wastewater and subsequent outfall discharges as a result of the Project -- approximately 25% -- have been captured within this permit renewal application to provide an assessment of anticipated KMe Facility water use and water discharges following the Project. The Project results in a negligible increase in site footprint (i.e., impermeable surfaces) and therefore a negligible increase in stormwater flow from the site.

2.4 Proposed As-Built and Other Changes

Koch's current permit will expire at midnight on November 12, 2025. Koch is submitting this application in advance of the submittal deadline, which is 180 days prior November 12, 2025. Proposed changes include the addition and modification of permit requirements to reconcile the original permit with the facility's as-built operations. Further detail is provided in Section 7.2.

3. WATER SOURCING

The KMe Facility relies primarily on water sourcing from the Mississippi River to support the methanol production operations. An intake structure designed and operated in accordance with Section 316(b) of the Clean Water Act feeds the plant's operational, cooling, and firefighting demands. The facility also uses St. James Parish municipal water supply for use in non-process related activities around the site. Greater than 99% of water is sourced from the Mississippi River while less than 1% of water is sourced from the municipal source. These are the only water sources currently used; no water is or will be utilized from the St. James Canal at the KMe Facility. A water flow diagram is provided in **Figure 3a**.

3.1 Cooling Water Intake Structure (CWIS)

The KMe Facility utilizes a water intake structure with three intake pumps located on the west bank of the Mississippi River on the east end of the facility, at mile marker 157.8, approximately 29° 59' 30.11" N, 90° 50' 0.16" W. The design of the system ensures protection of aquatic life by minimizing impingement and entrainment. The intake structure draws the Mississippi River water at a flow rate ranging from 0 to 7,500 gallons per minute (gpm) or 0 to 16 cubic feet per second (cfs). Water intake is through a passive intake screen system with a maximum intake screen velocity of 0.5 feet per second (fps), in accordance with US Fish & Wildlife Service (USFWS) guidelines and 40 CFR § 125 (Subpart I).

Each of the intake screens utilizes a wedge wire screen material to control the entrance velocity of the screen. The screen slot openings are 0.125 inches, with an intake screen capacity of 4,400 gpm at a maximum local through-slot velocity not to exceed the 0.5 fps intake velocity threshold. The screen is designed such that, when 50% plugged, the screen will maintain the required flow while also remaining under the 0.5 fps intake velocity threshold. The pump intake screens are located below the mean low water line of the river and at least three (3) feet above the riverbed to account for fluctuations in the Mississippi River seasonal flow levels. The system uses an air backwash system to keep the screen clean and eliminate the need for mechanical debris handling devices.

Water used at the facility for process and cooling operations consists entirely of water from the Mississippi River. Approximately 88% of withdrawn Mississippi River water is used for cooling purposes at the facility – this accounts for cooling tower makeup and evaporation from the cooling tower. The amount of water used is minimized as the KMe Facility operates a closed-loop, recirculating cooling water system that extensively recycles approximately 200,000 gpm of water. The other 12% of the Mississippi River water is used elsewhere such as for firewater supply, and a portion goes through additional treatment to become process feedwater (e.g., boiler feedwater, demineralized water).

The CWIS has been operational at the KMe Plant for approximately two (2) years, and the total amount of intake water for 2022 was approximately 1,453,378,819 gallons.

3.2 Raw Water Treatment

Raw water is sourced from the Mississippi River and is first treated with a biological growth preventor and coagulant. Next the water is treated with a polymer in the clarifiers to aid in settling prior to final solids removal with sand filters. This system generates “Treated Water,” which is used in the plant’s cooling water system, a third-party air separator unit, as well as to provide plant utility water and plant fire water supply. Raw water can also be used for fire water if additional water is needed in the event of a plant emergency. Sand filter backwash water is routed back to the raw water treatment clarifiers or can be routed to the Wastewater Treatment Plant Pre-settling Clarifier. Settled solids in the raw water treatment clarifiers (i.e., natural river sediment) are returned directly to the Mississippi River via Outfall 001.

3.3 Demineralized Water

Following clarification via the raw water treatment unit, Treated Water is routed for further treatment in the Demineralization Unit in order to be utilized in the production of methanol. The Demineralization Unit provides feed water (i.e., “Demin Water”) to the facility’s steam and condensate system for use in methanol production and to provide feedwater necessary for the Boilers to produce steam.

Demineralization, which removes hardness and dissolved solids and minerals, is necessary to avoid scale accumulation in boiler tubes, heat exchangers, and other plant equipment. The process of Demineralization includes processing water through a series of cation and anion resin beds to chemically convert the minerals through an ion exchange process so they are removed from the water stream. The cation and anion resin beds are regenerated and backwashed as necessary to continue treatment. Regeneration and backwash wastewaters are monitored for pH and neutralized as needed, prior to treatment in the Wastewater Treatment Plant and discharged via Outfall 301 to the Mississippi River via Outfall 001.

3.4 Potable Water

Koch utilizes the St. James Parish municipal water supply for use in non-process related operations and activities, including road dust mitigation, safety showers, and in the occupied buildings for sanitary and potable use. The KMe Facility used approximately 778 gpd (0.001 MGD) during the 2022 calendar year. The Project is not anticipated to increase potable water usage.

4. WASTEWATER TREATMENT SYSTEMS

Koch owns and operates two wastewater treatment plants. The process wastewater treatment plant (Unit 900) is designed to treat a variety of effluent streams prior to discharge via Outfall 301 to the Mississippi River. Separate from the process wastewater treatment plant, the sanitary wastewater treatment unit is utilized to collect sanitary discharges from the site for treatment prior to discharge via Outfall 101 to the Mississippi River. **Figure 4** herein provides additional detail of the treatment operations on site.

4.1 Wastewater Collection and Treatment Operations

4.1.1 Sanitary Wastewater Treatment

Sanitary wastewater is collected for treatment by the onsite sanitary wastewater treatment unit prior to discharge. The sanitary wastewater treatment unit collects domestic wastewater from toilets, washbasins, and showers (except safety showers) from occupied buildings. The treated sanitary wastewater discharges from Outfall 101 into Pond 1 and ultimately to the Mississippi River via Outfall 001. Upgrades to the site's sanitary treatment systems are being evaluated and the anticipated increased flowrate to Outfall 101 has been included in the content of this permit renewal.

4.1.2 Process Wastewater Treatment Plant

The Process Wastewater Treatment Plant treats process wastewaters, first-flush stormwater collected in the process areas, and miscellaneous wastewaters from maintenance activities. The Process Wastewater Treatment Plant utilizes equalization, pH adjustment, biological treatment, and clarification, as further detailed below, for treatment prior to discharge via Outfall 301 to the Mississippi River via Outfall 001.

The KMe Facility utilizes an Equalization Basin to absorb fluctuations in the inlet flow rates to the treatment unit as well as to smooth out variations in the composition of the wastewater to be treated, thus protecting the biological treatment from sudden changes in the operating conditions.

After the injection of nutrients and in-line pH adjustment, the equalized wastewater stream undergoes biological treatment in the Moving Bed Biofilm Reactor (MBBR) to reduce organic compounds and decrease biological oxygen demand (BOD). The MBBR is aerated with a coarse bubble diffuser to ensure adequate air supply to the biomass.

Following biological treatment, the wastewater is clarified to remove solids. The KMe Facility has installed a Dissolved Air Flotation (DAF) system to replace the original design for clarification, bringing further solids removal efficiency to the treatment system. Additionally, the KMe Facility has the option to use sock filters of varying micron size to provide additional filtration, as needed.

The treated wastewater from the DAF routes into the Treated Water Sump before it is pumped to the final discharge point, Outfall 301, before ultimately discharging to the Mississippi River via Outfall 001.

Regeneration effluent and backwash waters from the demineralization system are routed to the neutralization basin for pH adjustment, if needed, prior to treatment in the Wastewater Treatment Plant and then discharge via Outfall 301 to Outfall 001 to the Mississippi River.

The solids removed in the DAF are sent to the Sludge Thickener, where solids are further concentrated by gravity settling. Sludge from the Pre-Settling Clarifier is sent to the Sludge Thickener where the mixture is treated with a flocculating agent to improve the performance of the last dewatering stage, which takes place in a centrifuge. Solids from the centrifuge are removed and properly disposed as required by applicable state and federal regulations. The liquid decanted from the centrifuge is routed to the Area Sump to be reprocessed and treated in the WWTP.

4.2 Blowdown Discharge

The following wastewater streams do not contain a significant organic load and therefore are minimally treated prior to discharge via Outfall 201 to Outfall 001 to the Mississippi River:

- Blowdown from boiler;
- Blowdown from the cooling water system; and,
- Blowdown from the waste heat system.

Treatment may include but is not limited to sodium bisulfite dosing for chlorine removal and/or acid/base usage for pH adjustment. The wastewater stream is continuously monitored for temperature and is sampled according to permit requirements.

4.3 Water Treatment Chemicals

Table 4-1 below includes a list of common chemicals used in the facility's wastewater treatment operations, water conditioning processes, and/or present in streams treated in the wastewater treatment plant. Specific brand names or vendors may vary from those listed; however, the nature of the chemicals is similar.

Table 4-1: KMe Facility Water Treatment Chemicals		
Trade/Common Name	**Chemical Purpose**	**Chemical Presence**
ChemTreat P8281L(N)	Water clarification agent	Wastewater Treatment, Raw Water Treatment, Demineralized Water Treatment, Cooling Water Treatment

Table 4-1: KMe Facility Water Treatment Chemicals		
Trade/Common Name	**Chemical Purpose**	**Chemical Presence**
Sodium Hydroxide 50% MEM	Ion Exchange Regenerant; pH adjustment	Wastewater Treatment, Demineralized Water Treatment
ChemTreat PB809	Biological Wastewater Treatment Aid	Wastewater Treatment
Sulfuric Acid (93%)	Ion Exchange Regenerant; pH adjustment	Wastewater Treatment, Raw Water Treatment, Demineralized Water Treatment, Cooling Water Treatment
ChemTreat P8315E	Wastewater Polymer/Flocculant	Wastewater Treatment
Sulfuric Acid (3%)	pH Adjustment	Wastewater Treatment
ChemTreat BL1303	Dilute high purity caustic	Wastewater Treatment, Boiler Water Treatment
ChemTreat FO180	Defoamer	Wastewater Treatment
Sodium Hydroxide 20% MEM 1-way	pH Adjustment	Wastewater Treatment
ChemTreat PB8045	Biological Treatment Nitrogen Phosphate Supplement	Wastewater Treatment
78% crude glycerin	Biological Treatment BOD Supplement	Wastewater Treatment
ChemTreat P873L	DADMAC polymer	Wastewater Treatment
ChemTreat P880L	DADMAC polymer	Wastewater Treatment
ChemTreat P824L	DADMAC polymer	Wastewater Treatment
ChemTreat P893L	DADMAC / Aluminum Chlorohydrate polymer	Wastewater Treatment
ChemTreat OC9103	Sulfide scavenger	Wastewater Treatment
Aquachlor 12.5% Sodium Hypochlorite	Disinfecting Agent	Raw Water Treatment, Demineralized Water Treatment, Cooling Water Treatment
ChemTreat CD24 - 20% Sulfuric Acid	pH Adjustment	Raw Water Treatment
ChemTreat CL25D - 25% Sodium Chlorite	Disinfecting Agent	Raw Water Treatment
ChemTreat CL4520	Microbiocide	Raw Water Treatment
PurDox BCD (40% $NaClO_3$ - 8% H_2O_2)	Biocide	Raw Water Treatment
ChemTreat CT775	Phosphoric acid	Raw Water Treatment
ChemTreat P817E	Polymer/flocculant	Raw Water Treatment
Sodium hydroxide, Caustic (20-50%)	pH Adjustment	Raw Water Treatment

Table 4-1: KMe Facility Water Treatment Chemicals		
Trade/Common Name	**Chemical Purpose**	**Chemical Presence**
ChemTreat P835E	Cationic emulsion polymer	Demineralized Water Treatment
ChemTreat BL124	Chlorine scavenger	Cooling Water Treatment
ChemTreat CL2150	Non-oxidizing biocide	Cooling Water Treatment
ChemTreat CL4132	Corrosion inhibitor	Cooling Water Treatment, Passivation of Cooling Water System
Quadrasperse® CL5859	Anti-scalant dispersant	Cooling Water Treatment
ChemTreat CL1495	Corrosion inhibitor	Cooling Water Treatment
ChemTreat BL1746	Phosphate	Steam and Condensate Treatment
ChemTreat BL1744	Corrosion inhibitor	Steam and Condensate Treatment
ChemTreat BL1794	Phosphate	Boiler Water Treatment
ChemTreat BL1260	Oxygen scavenger	Boiler Water Treatment
ChemTreat BL1559	Neutralizing amine	Boiler Water Treatment
ChemTreat BL1797	Phosphate/ internal treatment	Boiler Water Treatment
ChemTreat CT907	Surfactant	Passivation of Cooling Water System, Cooling Water Treatment
FlexPro Plus CL5680	Corrosion inhibitor	Passivation of Cooling Water System
ChemTreat CL206	Non-oxidizing biocide	Passivation of Cooling Water System
ChemTreat BL1302	Sodium hydroxide	Passivation of Cooling Water System
Green Magic 1000	Polymer cleaner	Wastewater Treatment System, Miscellaneous Cleaning
Dissolvine E39	Chelating Agent	Wastewater Treatment System
ChemTreat CL240	Defoamer	Cooling Water Treatment
ChemTreat CN202	Cleaner	Miscellaneous Cleaning
Chem Treat CN220	Cleaner	Miscellaneous Cleaning
Zep-O-Clean	Cleaner	Miscellaneous Cleaning
DryTec Calcium Hypochlorite	Algicide	Maintenance of walking surfaces
ChemTreat CL2840	Corrosion inhibitor	Jacket Water Treatment
CL2904	Corrosion inhibitor	Jacket Water Treatment
DPD Free Chlorine Reagent	Lab reagent	Field lab
DPD Total Chlorine Reagent	Lab reagent	Field lab

Table 4-1: KMe Facility Water Treatment Chemicals		
Trade/Common Name	**Chemical Purpose**	**Chemical Presence**
PhosVer 3 Phosphate Reagent	Lab reagent	Field lab
Citric Acid	Lab reagent	Field lab
NitriVer 2 Nitrite Reagent	Lab reagent	Field lab
FerroVer Iron Reagent	Lab reagent	Field lab
Ferrozine Iron Reagent	Lab reagent	Field lab
Chlorophosphonazo Indicator	Lab reagent	Field lab
Buffer Solution 4.01	Lab reagent	Field lab
Buffer Solution 7.00	Lab reagent	Field lab
Buffer Solution 10.01	Lab reagent	Field lab
pH Storage Solution	Lab reagent	Field lab
pH Buffer 4.10	Lab reagent	Field lab
pH Buffer 6.97	Lab reagent	Field lab
pH Buffer 9.15	Lab reagent	Field lab
ROSS Electrode Solution Reference	Lab reagent	Field lab
ROSS Electrode Solution Sodium	Lab reagent	Field lab
Hach Molybdate 3 Reagent	Lab reagent	Field lab
Hach DEHA 2 Reagent	Lab reagent	Field lab

5. WASTEWATER DESCRIPTIONS BY OUTFALL

The following Outfall descriptions are based on the active LPDES permit under which Koch currently operates:

5.1 Outfall 001

The continuous discharge of clarifier underflow and previously monitored discharge from Internal Outfalls 101 (treated sanitary wastewater), 201 (boiler blowdown and cooling tower blowdown), 301 (demineralizer unit backwash and regeneration effluent, process wastewater, potable water, and first flush stormwater), 401 (post-first flush stormwater), and 012A (hydrostatic test wastewater). Outfall 001 discharges into the Mississippi River.

5.2 Outfall 101

The continuous discharge of treated sanitary wastewater into Pond 1 and ultimately the Mississippi River via Outfall 001. Anticipated discharge flowrates have been incorporated into this renewal application.

5.3 Outfall 201

The continuous discharge of boiler blowdown and cooling tower blowdown via Outfall 001 into the Mississippi River.

5.4 Outfall 301

The continuous discharge of demineralizer unit backwash and regeneration effluent, process wastewater, potable water, and first flush stormwater. Outfall 301 ultimately discharges via Outfall 001 into the Mississippi River.

5.5 Outfall 401

The intermittent discharge of post-first flush stormwater and previously monitored discharge from Internal Outfall 012B. Outfall 401 discharges directly into Pond 1 and ultimately the Mississippi River via Outfall 001.

5.6 Outfall 002

The intermittent discharge of tank farm area stormwater and previously monitored discharge from Internal Outfall 012B to the St. James Canal.

5.7 Outfalls 005 and 006

The intermittent discharge of low contamination potential stormwater and previously monitored discharge from Internal Outfall 012B to the St. James Canal.

5.8 Outfalls 007 and 008

The intermittent discharge of non-process area stormwater to the St. James Canal.

5.9 Outfall 009

The intermittent discharge of non-process area stormwater and previously monitored discharge from Internal Outfall 012B to the St. James Canal.

5.10 Outfalls 012A and 012B

The intermittent discharge of hydrostatic test wastewater. Outfall 012A discharges via Outfall 001 to the Mississippi River. Outfall 012B discharges through Outfalls 002, 005, 006, or 009 to the St. James Canal.

The details of each outfall are provided in **Table 5-1** below:

Table 5-1: Outfall Location & Discharge Routing

Outfall Number	Discharge Routing	Type of Discharge	Latitude	Longitude
001	Direct to Mississippi River	Process	29° 59′ 30.34″ N	90° 49′ 59.84″ W
101	To Mississippi River via Outfall 001 via Pond 1	Sanitary	29° 58′ 49.51″ N	90° 51′ 45.67″ W
201	To Mississippi River via Outfall 001	Non-process/Misc.	29° 58′ 53.97″ N	90° 51′ 40.25″ W
301	To Mississippi River via Outfall 001	Process	29° 58′53.97″ N	90° 51′ 40.25″ W
401	To Mississippi River via Outfall 001 via Pond 1	Stormwater, Non-process/Misc.	29° 58′ 49.47″ N	90° 51′ 45.65″ W
002	To St. James Canal	Stormwater, Non-process/Misc.	29° 59′ 26.76″ N	90° 50′ 37.25″ W
005	To St. James Canal via Pond 2	Stormwater	29° 58′ 53.88″ N	90° 51′ 48.76″ W
006	To St. James Canal via Pond 2	Stormwater	29° 58′ 50.96″ N	90° 51′ 46.66″ W
007	To St. James Canal	Stormwater	29° 58′ 47.83″ N	90° 51′ 44.24″ W
008	To St. James Canal	Stormwater	29° 58′ 52.96″ N	90° 51′ 55.98″ W
009	To St. James Canal	Stormwater	29° 58′ 53.64″ N	90° 51′ 56.05″ W
012A	To Mississippi River via Outfall 001	Hydrostatic Test Wastewater	N/A	N/A
012B	To Mississippi River via Outfall 401, OR To St. James Canal via Outfalls 002 and 005	Hydrostatic Test Wastewater	N/A	N/A
Proposed 003*	To St. James Canal	Stormwater	29° 58′ 37.50″ N	90° 51′ 49.97″ W

Notes:
*Outfall 003 is being proposed (**Section 7** herein) to better represent the current stormwater outfalls (005,006,007,008) with similar watersheds and comingling prior to discharge to the St. James Canal.

The details of each stormwater outfall are provided in **Table 5-2** below. Additional details of the surfaces comprising the facility's footprint is depicted on **Figure 6** herein.

Table 5-2: Stormwater Outfall Watersheds			
Outfall Number	**Area of Impervious Surface (%)**	**Total Area Drained (acres)**	**Maximum Flow Rate[1] (MGD)**
401	100	2.5	0.29
002	25	16.0	1.54
005	80	14.0	0.93
006	80	11.4	0.70
007	10	6.9	5.09
008	10	4.6	5.09
009	20	21.6	4.65
Proposed 003*	20	116.4	11.81[2]

Outfall 401 is routed to the Mississippi River via Outfall 001. Outfalls 002, 005, 006, 007, 008 and 009 are routed to the St. James Canal.
1 – Flow rates based on DMR data (2021-2022)
2 – Estimated flow for combination of current Outfalls 005, 006, 007 and 008.
*Outfall 003 is being proposed (**Section 7** herein) to better represent the current stormwater outfalls with similar watersheds and comingling prior to discharge to the St. James Canal.

6. STORMWATER MANAGEMENT PRACTICES

The KMe Facility utilizes a system of stormwater conveyances (ditches, troughs, sumps, etc.) to route low contamination potential stormwater to a number of outfalls, as outlined in **Table 5-2** above as well as in **Figure 3b** herein. Stormwater falling in areas with a higher contamination potential, however, is routed for treatment as detailed below. All of the facility's stormwater discharges are managed under the Stormwater Pollution Prevention Plan (SWPPP).

6.1 Overview

6.1.1 Inside Battery Limits (ISBL)/Process Area Stormwater

As a Best Management Practice (BMP), the KMe Facility captures first flush ISBL/process area stormwater via an extensive trench system, referred to as the potentially contaminated sewer system (PCSS). The stormwater is collected in the PCSS system, transferred to the PCSS Basin, and routed, for treatment in the facility's WWTP before discharge via Outfall 301 and ultimately Outfall 001 to the Mississippi River. The PCSS network comprises paved and bermed surfaces in the process operations areas at the facility.

During high rate of precipitation rain events, after the first 1 inch of rainfall is collected in the PCSS Basin, the excess stormwater collected can divert away from the wastewater treatment plant if needed to mitigate overflow. This low contamination potential stormwater is referred to as "post-first flush stormwater" and is routed to Pond 1 via Outfall 401, and then ultimately the Mississippi River via Outfall 001. No process area stormwater is routed to the St. James Canal.

6.1.2 Outside Battery Limits (OSBL)/Non-Process Area Stormwater

The facility's support areas immediately surrounding the process area are gravel-lined to reduce runoff rates, with stormwater collected via stormwater trenches for discharge to Pond 2 via Outfalls 005 and 006, as well as Outfall 008, as outlined in **Section 5** herein. This system of collection and detention in on site ponds allows for reduction of sediment loading to area waterways as solids are allowed to settle prior to discharge off site.

Stormwater from areas around the control room building sheet flows before collection in a swale for discharge to St. James Canal via Outfall 007.

The tank farm consists of four (4) product storage tanks and is located on the eastern portion of the site. The tank farm is surrounded by an earthen dike with valves controlling the discharge of stormwater. Any accumulated stormwater inside the dike area is visually inspected for sheen or other signs of contamination. Upon confirming neither sheen nor other signs of contamination are present, the water is discharged via valve then released into Outfall 002 which discharges to the St. James Canal.

6.1.3 Product Loading Area Stormwater

The KMe Facility Product Loading Area consists of rail and truck loading facilities where final methanol product is loaded into containers for shipment offsite. The loading areas are located at the north side of the facility. Within the areas, there are designed mechanisms (i.e., sumps and catch pans) to mitigate stormwater contamination.

Contact stormwater (i.e., stormwater that collects in the sumps and catch pans under the loading operations) is routed to the PCSS for treatment via the facility's WWTP and discharged via Outfall 301 to the Mississippi River through Outfall 001.

Non-contact stormwater (i.e., stormwater that accumulates outside of the catch pan areas of the loading operations) accumulates in the bermed area. These valves are routinely kept closed in the case of a large loss of containment to keep the spill localized for cleanup. Stormwater is visually inspected for sheen or other signs of contamination. Upon confirming neither sheen nor other signs of contamination are present, the water is discharged via valves then discharged to a ditch which routes to Outfall 009 and to the St. James Canal.

6.2 Outdoor Chemical and Petroleum Product Storage

Chemical products or other oily substances used on site are stored under cover or indoors where practicable so as to limit contact with stormwater. Bulk storage containers inherently located outdoors, such as at the facility's tank farm, are tanks properly designed to contain the materials and are provided appropriately sized containment per SPCC/SPC regulations. Tank farm area stormwater accumulated within the diked area is visually inspected for sheen or other signs of contamination. Upon confirming neither sheen nor other signs of contamination are present, the water is discharged via valves. Additional inspections occur through routine operations including operator rounds physically monitoring the areas as well as visual inspections by using real-time camera systems.

6.3 Significant Materials Treated/Stored/Disposed of in the Past Three Years

The facility does not treat, store, or dispose of significant materials onsite and has not done so in the past three years. The facility utilizes generally accepted industry practices for the handling of chemicals to minimize contact of chemicals with the environment. The exposure is minimized by means of prudent storage practices, as well as minimization of materials stored on site at any one time to the degree practicable.

6.4 Materials Management Practices

The KMe Facility uses structural and nonstructural control measures to prevent or minimize the potential release of toxic and hazardous pollutants. Hazardous materials are contained in storage containers (e.g., totes, tanks, vessels) that prevent spills and leaks and are in areas under cover. Chemical storage containers are provided secondary containment equipped with sumps and valves, as specified in the facility's Spill Prevention, Control, and Countermeasure (SPCC) Plan and/or the Spill Prevention and Control (SPC) Plan.

These areas are inspected routinely by qualified and properly trained personnel. Examples of conditions that are checked include: (1) no leaking or deteriorating containers or piping are present; (2) containers are properly closed; (3) containment drain valves are closed; and (4) the containment system is free of cracks and gaps. Inspection records are kept on file in accordance with the SPCC Plan.

All spills, whether considered minor (small spills with no potential for off site impact) or major (large spills reportable to outside authorities and with the potential to result in a hazardous situation), are promptly addressed at the facility. Employees are trained to take appropriate actions to report, stop, and/or reduce the migration of released materials. These actions include discontinuing transfer operations, shutting off the source of released materials, constructing temporary berms, or closing valves to contain materials.

Any employee who discovers a spill is trained to contact the supervisor-in-charge. The supervisor-in-charge uses all available manpower and equipment necessary to control and contain a spill. This includes actions such as using portable pumps to remove material, deploying booms to contain spilled material, and digging or obstructing ditches to divert spilled material and prevent the material from exiting the facility. The facility is contracted with outside emergency response, clean-up and disposal companies who are available to respond quickly to the site when contacted. Environmental personnel are available 24 hours a day to assist at the scene of a spill and/or contact the necessary local, state, and federal agencies if required.

In addition to structural controls, the facility employs various nonstructural control measures through spill prevention plans (SWPPP and SPCC/SPC), employee training, orientation training, refresher training on operation of valves and other control equipment, regular inspections of specific equipment and areas (sumps, pumps, dikes, tanks and drains), preventative maintenance, and housekeeping measures that minimize or reduce the potential release of pollutants to the environment.

The BMPs outlined above coupled with structural controls such as the curbing and collection system of the ISBL/process area provide a mitigating defense against stormwater contamination reaching receiving streams.

6.5 Pesticide and Herbicide Usage

Commercially available pesticides and herbicides are used on an as-needed basis throughout the facility by certified individuals licensed for pesticide application in the state. Pesticides and herbicides are periodically used for reasons such as weed control, rodent control, and insect control. Products are applied per manufacturer directions and applied in a manner to minimize potential impact to receiving waterways. Products are reviewed for their chemical composition and approved applications utilizing the site's chemical review program. Chemical approvals are requested as needed if a regulated outfall may be impacted.

6.6 History of Leaks or Spills

Table 6-1 presents reportable spills to land at the facility that were greater than the reportable quantity threshold since the beginning of the KMe Facility operation.

Table 6-1: History of Leaks or Spills					
Date	**Location**	**Material**	**Quantity**	**Reason**	**Response Action**
1/21/2023	Above-ground portable storage tank (approximate coordinates for release: 29° 58' 49.9656, -90° 51' 27.795)	Diesel Fuel	123 gallons	The fuel dispenser handle was placed back into position incorrectly after routine use.	The spill was identified and contained to the immediate area. Berms and absorbents were put in place to mitigate the spill from travelling offsite. The impacted soil was removed and placed into a covered container for disposal.

7. PERMIT REVISION REQUESTS

With this permit renewal application, Koch is providing the requests below for the Department's consideration in issuing the next permit for the facility. These change requests are reflective of as-built operations of the facility as well as the planned KMe Optimization Project (Section 2.3 herein) at the facility that is anticipated to increase the design methanol production rate.

7.1 Project-related Changes

1. Koch requests to increase the allowable discharge flows from Outfall 301 by approximately 25% to accommodate the anticipated increase in the design production rate following the planned KMe Optimization Project (i.e., "the Project"). The increased production rate will yield increased volume of several wastewater streams routing to the wastewater treatment plant including saturator blowdown and demineralization regeneration backwash.
   - Estimated new average flow: 0.25 MGD
   - Estimated new max daily flow: 0.48 MGD

2. Koch requests to increase the allowable flow for Outfall 201 by approximately 25%. Outfall 201 is the discharge of cooling tower and boiler blowdown. The heat load on the cooling towers will increase proportionally with plant production rates. Steam generated by process heat in Waste Heat Boilers and Water-Cooled Reactors is anticipated to scale linearly with planned production increases.
   - Estimated new average flow: 1.68 MGD
   - Estimated new max daily flow: 4.52 MGD

3. In addition to the above flow increases, an increase to Outfall 001 is also requested to account for the increases at the contributing internal outfalls. The final discharge from Outfall 001 to the Mississippi River comprises Outfalls 201, 301, 101, and 401, and raw water clarifier underflow.
   - Estimated new average flow: 2.09 MGD
   - Estimated new max daily flow: 5.18 MGD

7.2 As-built and Other Changes

1. Koch requests that stormwater Outfalls 005, 006, 007, and 008 be combined due to the nature of each outfall location having a similar watershed and ultimately commingling prior to discharge. The new combined outfall location is: (29º 58" 37.50" N, 90º 51' 49.97" W) at the outlet near Heavy Haul Road (see **Figure 2c**), where each existing outfall comingles prior to leaving the property.
   - Koch respectfully requests the new outfall to be named Outfall 003, which is not found in the current permit.

  - Upon instituting the newly combined outfall, please remove these prior outfalls (Outfalls 005, 006, 007, and 008) from the permit as their discharges will now be accounted for and monitored in a centralized location.

2. Koch requests to amend the description of current Outfall 007 (proposed to be consolidated in Outfall 003) to include "energy substation stormwater, non-contact stormwater."

3. Koch requests to increase the allowable flow for Outfall 101, composed entirely of treated sanitary wastewater from occupied buildings. The KMe Facility's estimated flows provided below are based on plans to centralize current treatment operations to aid in more efficient treatment for site personnel sanitary wastewater.
   - Estimated new average flow: 3,800 gpd
   - Estimated new max daily flow: 7,600 gpd

4. Koch requests to include allowances for the following effluents to the respective outfalls listed to properly account for routine water streams generated and used onsite (Appendix C):
   - Fire system test water: Outfalls 001, 201, 301, 401, 003, 002, 009 (proposed Outfall 004)
   - Potable Water: Outfalls 001, 201, 301, 401, 003, 002, 009 (proposed Outfall 004)
   - Clarified Water (i.e., treated water): Outfalls 001, 201, 301, 401, 003, 002, 009 (proposed Outfall 004)
   - Non-Contact Cooling Water: Outfalls 001, 201, 301, 401, 003, and 009 (proposed Outfall 004)
   - Demineralized Water: Outfalls 001, 201, 301, 401, 003, and 009 (proposed Outfall 004)
   - Boiler Feedwater: Outfalls 001, 201, 301, 401, 003, and 009 (proposed Outfall 004)
   - Steam Condensate: Outfalls 001, 201, 301, 401, 003, 002, 009 (proposed Outfall 004)

5. Koch requests Outfall 301 be updated to intermittent flow due to the WWTP not flowing continuously for 24 hours a day/7 days a week. Intermittent flow occurs during some operating modes.

6. Koch requests the ability to route water from Pond 1 directly to the WWTP for treatment if potentially contaminated stormwater flows into Pond 1.

7. Koch requests the option to route wastewater from the equalization basin to the clarification system (i.e. bypassing biological treatment) with discharge to Outfall 301 if this wastewater meets the effluent limits of the permit.

8. Koch requests to reassign current Outfall 009 to be Outfall 004 moving forward as part of efforts to align outfall locations and nomenclature with the as-built facility.

9. Koch requests to amend the description of current Outfall 009 (proposed Outfall 004) to include "rail and truck loading area, non-contact stormwater."

10. Koch requests to amend the monitoring description of Outfall 001 from continuous flow recorder to estimated flow. Outfall 001 comprises four flows: Outfall 201, Outfall 301, Clarifier Underflow, and Pond 1 which consists of Outfalls 101, 401, and stormwater. The four (4) sources into Outfall 001 are equipped with flowmeters that read flow continuously.

11. Koch requests to provide a special condition in reference to LPDES Permit Standard Condition Section C: Monitoring and Records, Item 6: Flow Measurements. Koch requests that it be allowed to test flow measuring devices in a manner consistent with industry standards and/or to utilize technology to verify accuracy.

12. Koch requests to relocate the sample point for Outfall 401 to coordinates below:
    - 29º 58′ 54″ N, 90º 51′ 39″ W
    - Due to the timing of discharge in relation to high rate of precipitation rain events and potentially unsafe weather conditions, Koch requests to add a footnote for Outfall 401 that a sample can be taken from a representative location of the discharge.

13. Koch requests to reduce the frequency for Outfall 301 monitoring of volatile, acid, and base neutral compounds from semi-annually to annually due to the historical performance of analysis resulting in primarily of non-detection.

14. Koch requests to add laboratory wastewater as a stream that is routed to the wastewater treatment plant for treatment prior to discharge via Outfall 301 to Outfall 001 to the Mississippi River.

15. Air Liquide's co-located plant (SIC: 2813) serves the KMe Facility with oxygen supply and discharges a variety of effluents to KMe Facility Outfalls, as described below. Koch seeks to ensure the effluents are properly accounted for in the respective outfalls noted for each stream.
    - Intermittent discharge of steam condensate via surface flow in stormwater collection routed to current Outfall 009 (proposed Outfall 004).
    - Intermittent discharge of ambient air condensate containing clean water from the compressors and piping via sheet flow to current Outfall 009 (proposed Outfall 004).
    - Intermittent discharge of cooling water via blowdown to Outfall 201, which may contain oil residuals from cooling system. The cooling water

is on a closed loop system except during freeze events when the drain is open to prevent the pipe from freezing.

- Intermittent discharge of process area stormwater via the PCSS to WWTP to Outfall 301.
- Intermittent discharge of low-contamination potential stormwater to Outfall 009 (proposed Outfall 004).
- Intermittent discharge of evaporation system clarified water if waste nitrogen to water ratio is imbalanced. The discharge sheet flows to grade and ultimately to current Outfall 009 (Proposed Outfall 004).
- Intermittent discharge of plant-wide fire system test water sheet flows to current Outfall 009 and/or is collected for routing to the KMe Facility PCSS for treatment and discharge via Outfall 301.
- Intermittent discharge of vaporizer blowdown and spillover is pumped to the KMe Facility PCSS to WWTP for treatment in the event of contamination prior to discharge from Outfall 301.

8. COMPLIANCE HISTORY

A summary of water discharge compliance matters associated with the KMe Facility is detailed below. This includes permit excursions including those reported on the facility's Discharge Monitoring Reports (DMRs) or bypasses, administrative orders, compliance orders, notices of violations, cease and desist orders, or any other water-related enforcement actions either already resolved or currently pending. Noncompliance Report Forms (NCR Forms) are provided in Appendix D for the following events and/or short descriptions are provided below.

Table 8-1: Compliance History

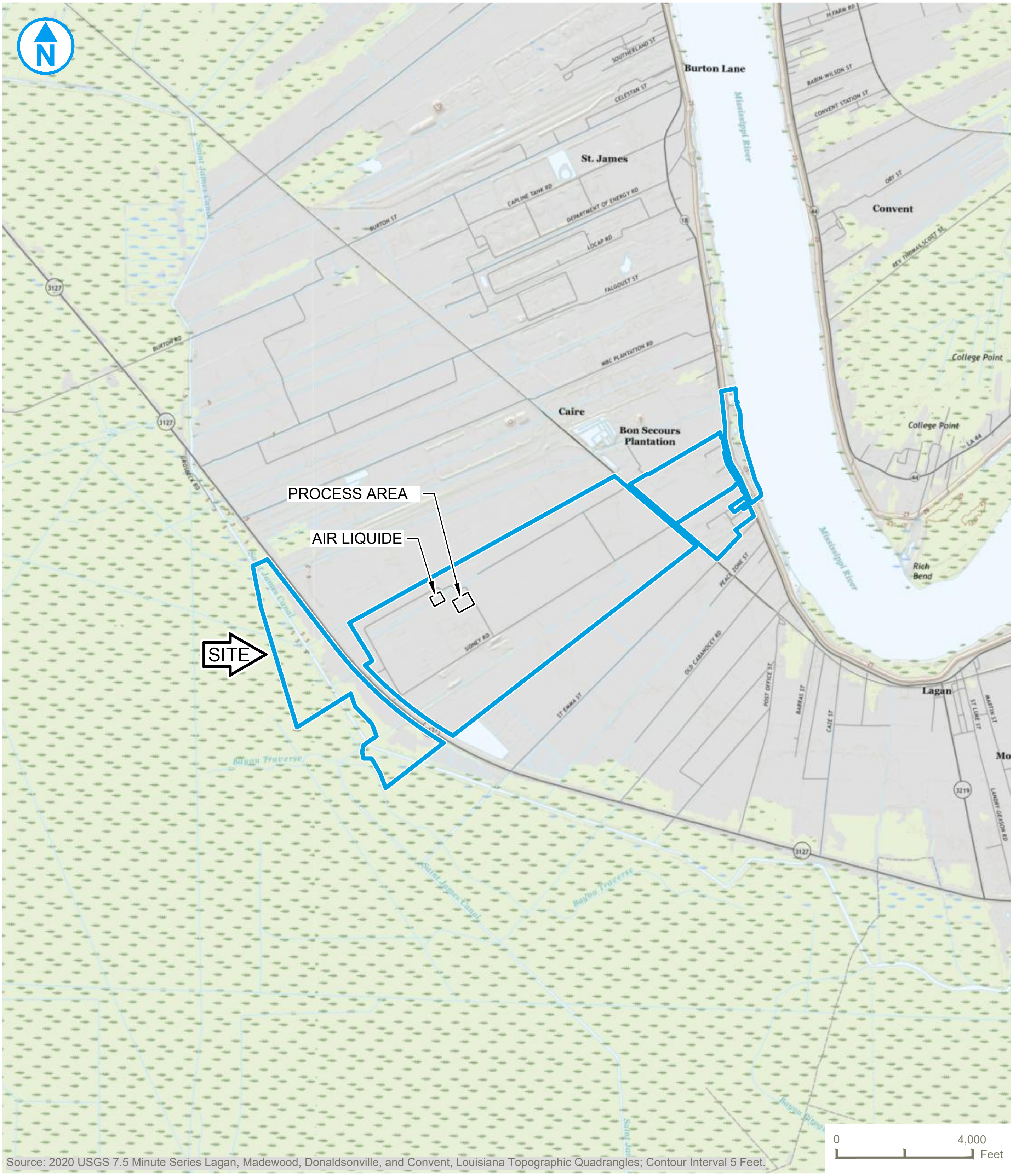
Date	Outfall	Parameter	Value	Permit Limit
12/9/2020	012B	Oil & Grease	Daily Max: 40.6 mg/L	Daily Max: 15 mg/L
1/29/2021	301	Chloroform	Daily Max: 0.12 lb/day Monthly Avg: 0.10 lb/day	Daily Max: 0.08 lb/day Monthly Avg: 0.04 lb/day
3/3/2021	009	Unauthorized Discharge	--	--
3/4/2021	101	TSS	Daily Max: 72 mg/L Monthly Avg: 72 mg/L	Daily Max: 45 mg/L Monthly Avg: 30 mg/L
5/1/2021	301	pH range excursions, >60 minutes	1.0 event	0.0 event
5/10/2021	301	pH range excursions, >60 minutes	1.0 event	0.0 event
5/10/2021	001	pH range excursions, >60 minutes	1.0 event	0.0 event
8/24 – 8/26/2021	301	All	Sample Collection or Method Missed[1]	--
9/14/2021	008	TOC	Daily Max: 6,880 mg/L	Daily Max: 50 mg/L
9/14/2021	201	TRC	Daily Max: 0.35 mg/L	Daily Max: 0.2 mg/L
9/14/2021	006	Unauthorized Discharge	--	--
1/20/2022	005	Unauthorized Discharge[2]	--	--
6/7/2022	005	Unauthorized Discharge	--	--
9/22/2022	301	All	Sample Collection or Method Missed[3]	--
9/30/2022	401	All	Sample Collection or Method Missed[4]	--
10/4/2022	301	All	Sample Collection or Method Missed[5]	--

Table 8-1: Compliance History				
Date	**Outfall**	**Parameter**	**Value**	**Permit Limit**
11/30/2022	301	TSS	Monthly Avg: 132 lb/day	Monthly Avg: 116 lb/day
12/2/2022	005	Unauthorized Discharge	--	--
12/15/2022	005	Unauthorized Discharge	--	--
2/15/2023	201	TRC	Daily Max: 0.6 mg/L	Daily Max: 0.2 mg/L
2/27 – 2/28/2023	005	Unauthorized Discharge	--	--

Notes:
1: Due to Hurricane Ida, the third-party lab was unable to process samples taken before the storm, due to holding time and refrigeration requirements.
2: A light sheen was observed during a heavy rainfall event at Outfall 005.
3: During the 3rd quarter of 2022, Outfall 401 only discharged once and the opportunity to sample was missed.
4: TSS and BOD_5 are sampled three times a week. During the week of 9/19/2022, the third sample was missed resulting in only collecting 12 out of the required 13 samples for the month.
5: TSS is sampled three times a week. During the week of 10/3/2022, the third sample was collected and sent to the third-party lab. The lab inadvertently failed to analyze the sample; therefore only 12 out of the required 13 samples were analyzed for the month.

FIGURE 1
SITE LOCATION MAP

L:\Loop Project Files_CAD\1690029042_Koch_St_James_LPDES_Permit\01_Site Locaton Map (St James Parish LA).dwg



Map Scale: 1:48,000 | Map Center: 29°59'1.93", -90°51'25.47"

PROJECT: 1690029042 DATED: 3/22/2023 DESIGNER: CKLAI

KEY MAP

KOCH METHANOL ST. JAMES, LLC
ST. JAMES PARISH, LOUISIANA

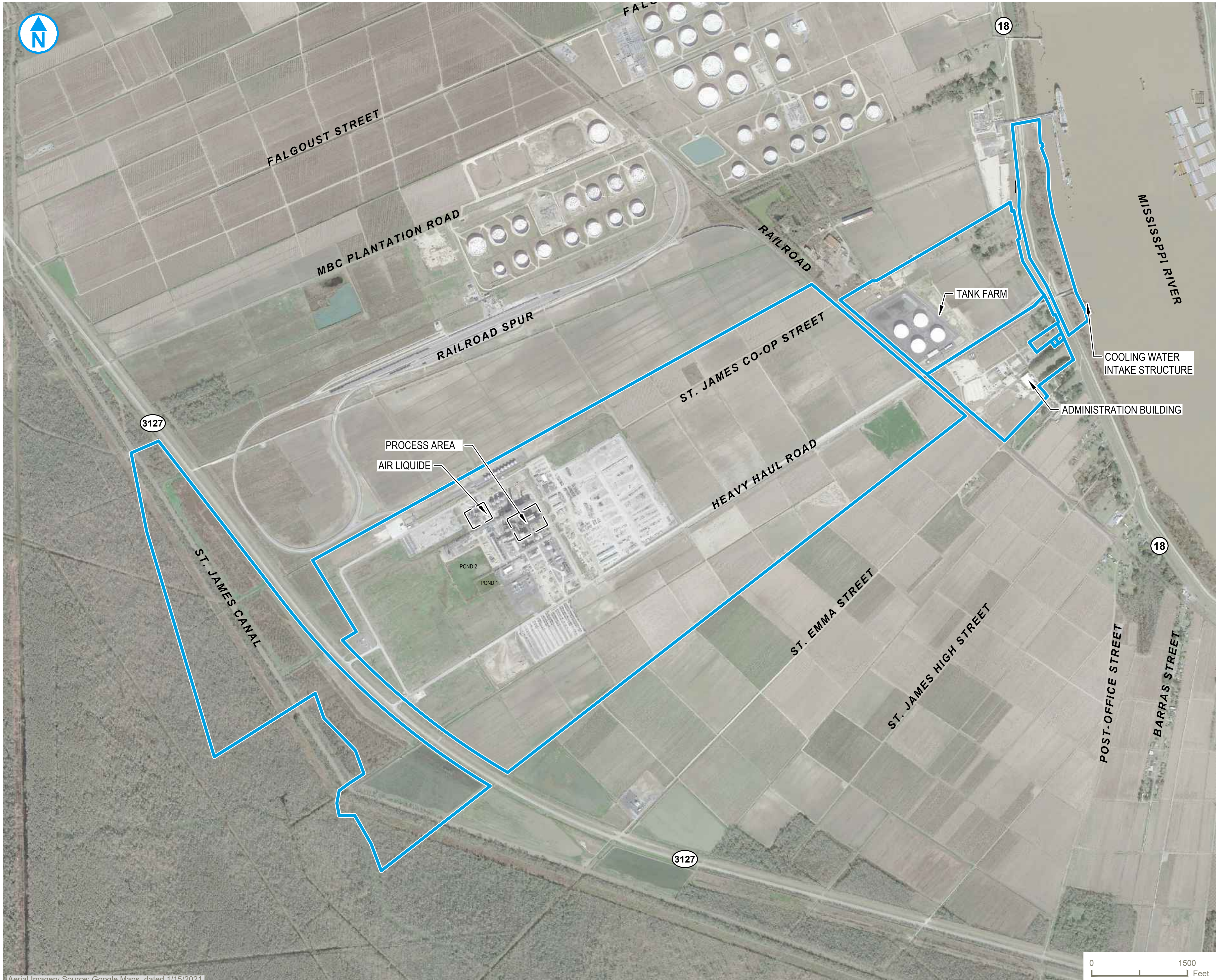
FIGURE 01
SITE LOCATION MAP

RAMBOLL US CONSULTING, INC.
A RAMBOLL COMPANY

RAMBOLL

FIGURE 2A
SITE LAYOUT

PROPERTY BOUNDARY (APPROXIMATE)



Note: Process area outline is approximate and is for visual representation only.

FIGURE 02a
SITE LAYOUT

KOCH METHANOL ST. JAMES, LLC
ST. JAMES PARISH, LOUISIANA

RAMBOLL US CONSULTING, INC.
A RAMBOLL COMPANY

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PROJECT: 1690029042 DATED: 5/9/2023 DESIGNER: CKLAI

FIGURE 2B
SITE LAYOUT
(TANK FARM/ADMINISTRATION AREA)

PROPERTY BOUNDARY (APPROXIMATE)

OUTFALL LOCATION

FIGURE 02b
TANK FARM/ ADMINISTRATION AREA

KOCH METHANOL ST. JAMES, LLC
ST. JAMES PARISH, LOUISIANA

RAMBOLL US CONSULTING, INC.
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RAMBOLL

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DESIGNER: CKLAI

DATED: 5/9/2023

PROJECT: 1690029042

FIGURE 2C
SITE LAYOUT
(PROCESS AREA)

PROPERTY BOUNDARY (APPROXIMATE)

OUTFALL LOCATION

PROPOSED OUTFALL LOCATION

STORMWATER FLOW

Note: Process area outline is approximate and is for visual representation only.

FIGURE 02c
PROCESS AREA

KOCH METHANOL ST. JAMES, LLC
ST. JAMES PARISH, LOUISIANA

RAMBOLL US CONSULTING, INC.
A RAMBOLL COMPANY

RAMBOLL

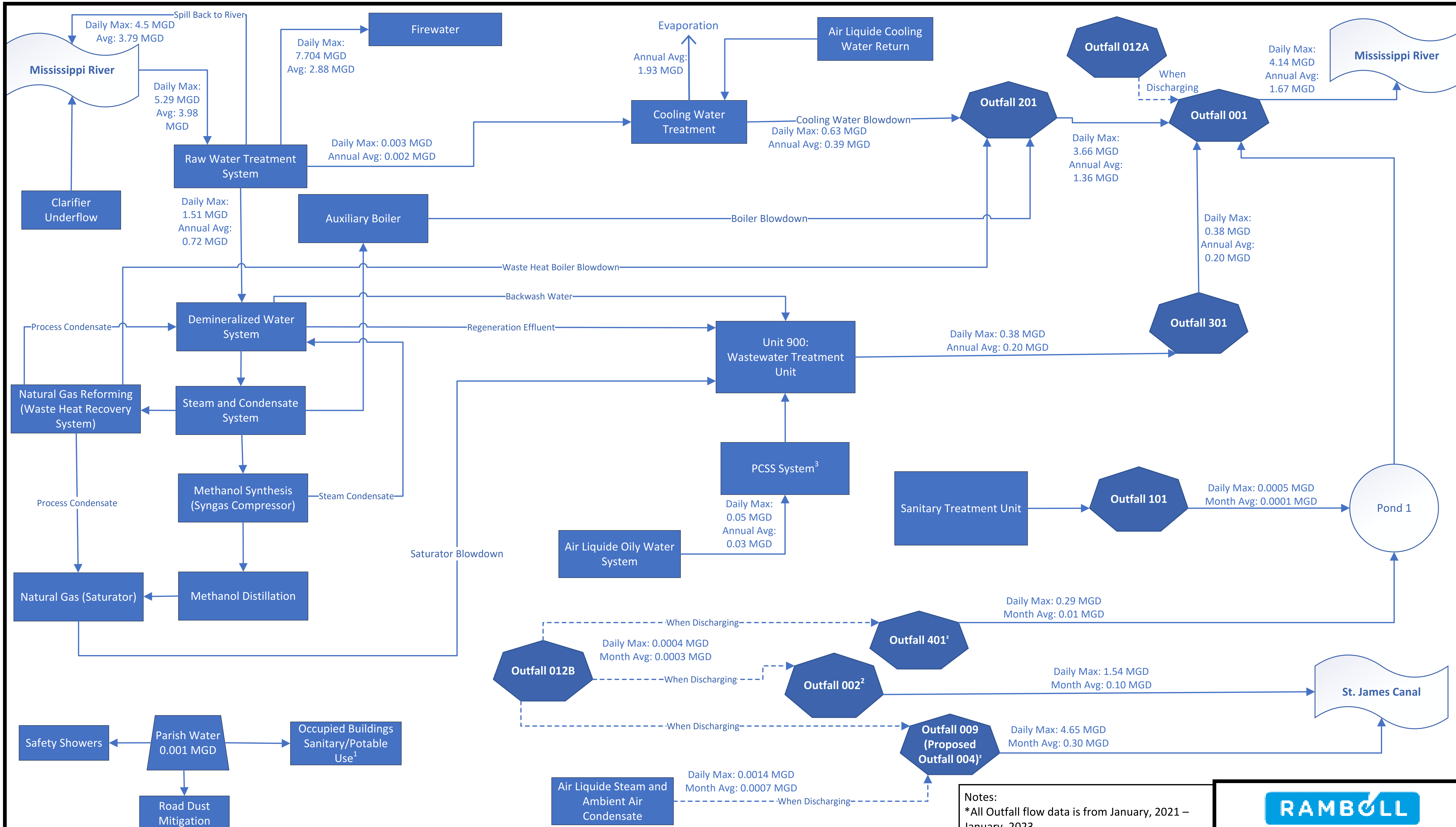
L:\Loop Project Files_CAD\1690029042_Koch_St_James_LPDES_Permit\02c_Process Area.dwg

DESIGNER: CKLAI

DATED: 5/9/2023

PROJECT: 1690029042

FIGURE 3A
WATER BALANCE DIAGRAM



Koch Methanol St. James, LLC –
Koch Methanol Facility
AI No. 194165
St. James Parish, LA

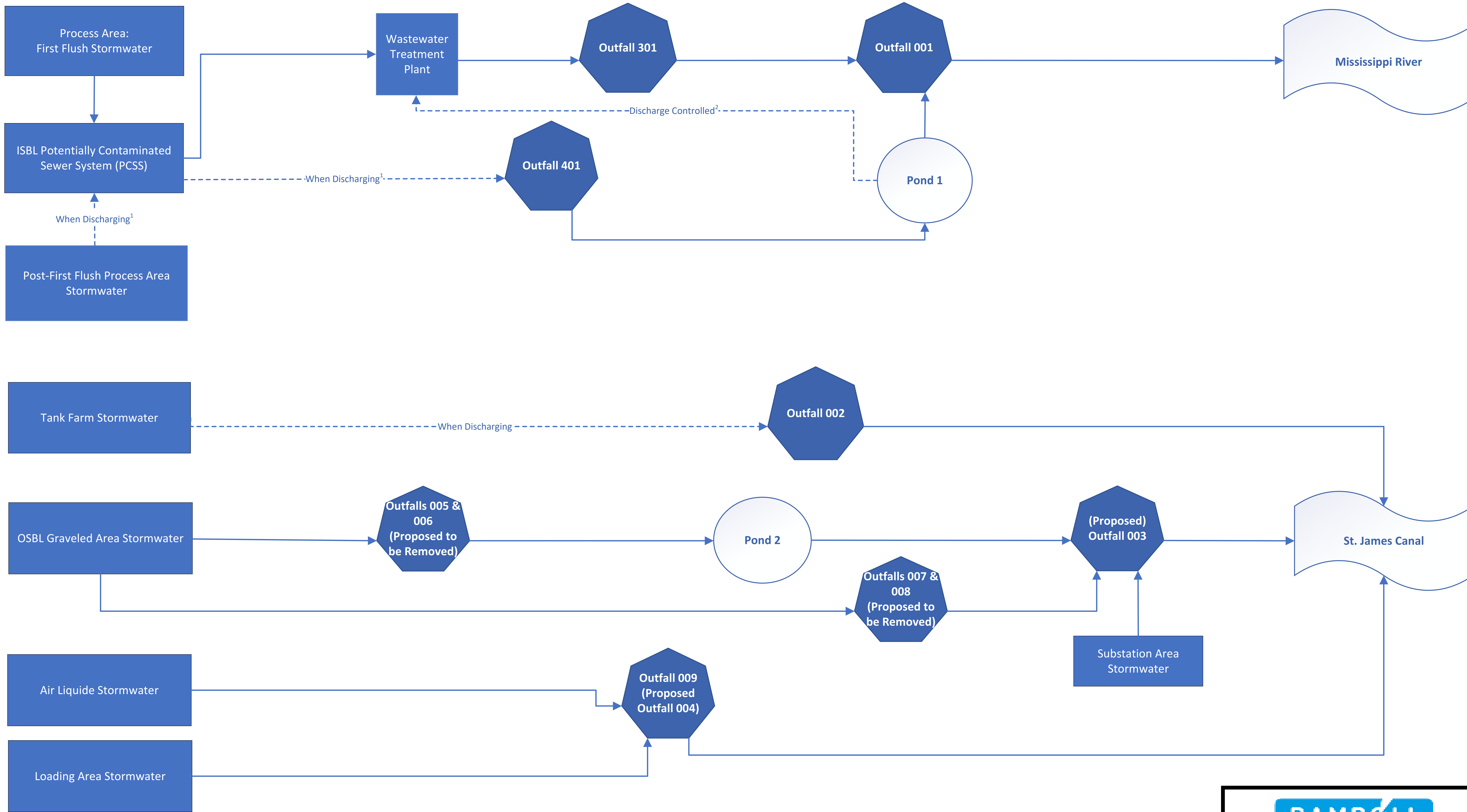
Notes:
*All Outfall flow data is from January, 2021 – January, 2023
1: Admin building sanitary is a no discharge system.
2: Outfall contains stormwater. Please see Figure 3b.
3: PCSS contains mostly stormwater but some other "low volume, non-process streams"

RAMBOLL

Water Balance Diagram

Date: 5/9/23	KOCH METHANOL ST. JAMES	Figure 3a
Drafter: LPS		

FIGURE 3B
STORMWATER FLOW DIAGRAM



Koch Methanol St. James, LLC –
Koch Methanol Facility
AI No. 194165
St. James Parish, LA

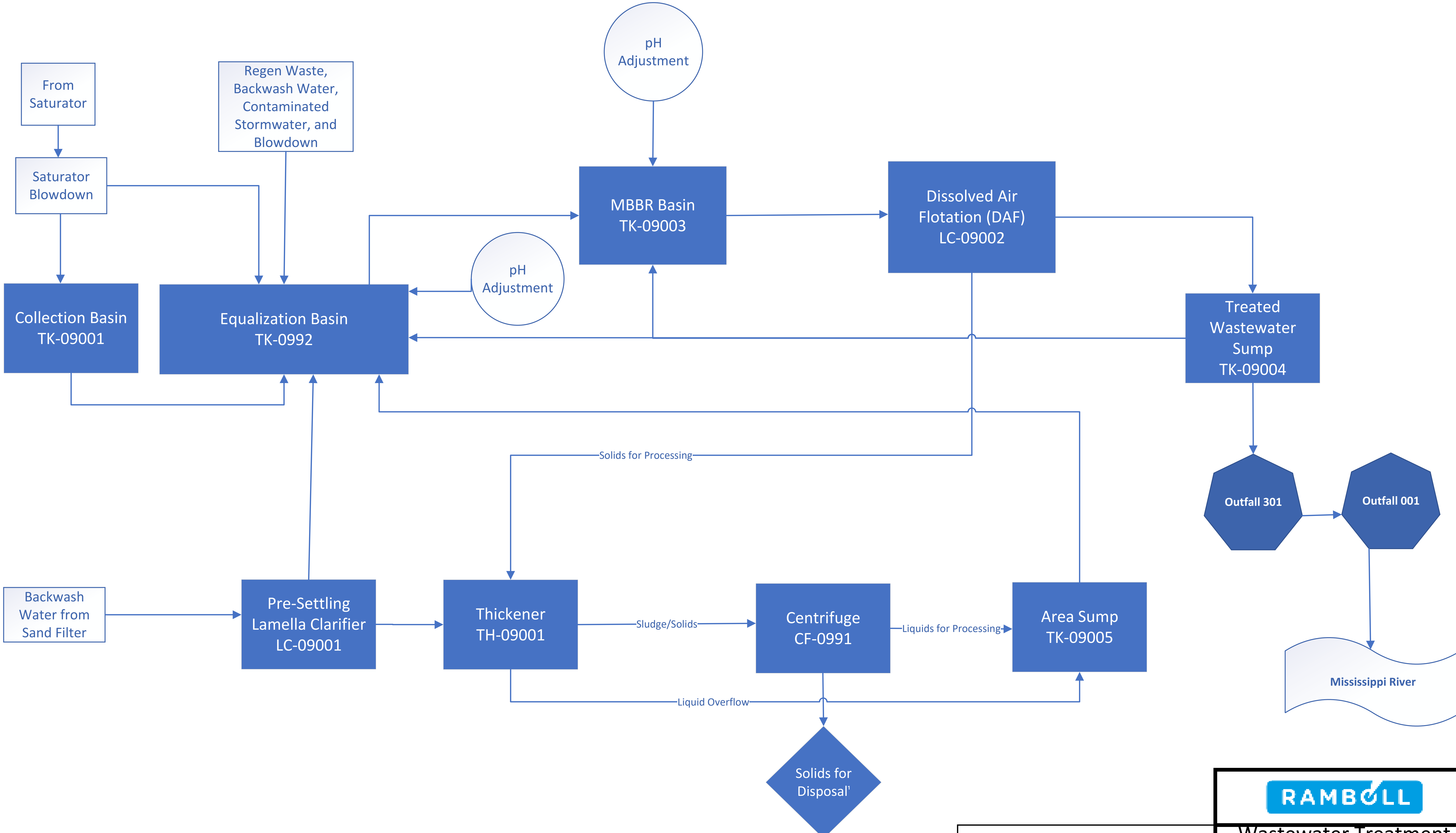
Notes:
1: During high rate rain events, the PCSS is diverted to Outfall 401.
2: Pond 1 discharge is controlled. Water can be routed to the WWTP if a sheen or abnormal discharge is observed.

RAMBOLL

Stormwater Flow Diagram

Date: 5/9/23	KOCH METHANOL ST. JAMES	Figure 3b
Drafter: LPS		

FIGURE 4
WASTEWATER TREATMENT DIAGRAM



Koch Methanol St. James, LLC –
Koch Methanol Facility
AI No. 194165
St. James Parish, LA

Notes:
1. Off site disposal handled by third party contractor.

RAMBOLL

Wastewater Treatment Diagram

Date: 5/9/23

Drafter: LPS

KOCH
METHANOL ST. JAMES

Figure 4

FIGURE 5A
STORMWATER DRAINAGE MAP – CURRENTLY PERMITTED

MK	DATE	REVISIONS	BY	AP.
7				
6				
5				
4				
3				
2				
1				

KOCH METHANOL

DES. S. Louviere | CH. HE
DR. SRL | AP. HE
DATE: 04/25/23 | SCALE: N/A

STJ2-M1 & LS STORMWATER DRAINAGE MAP CURRENTLY PERMITTED

ORIG. DWG# STJ2-M1-0000-PR23-0001
DOCUMENT NO. STJ2-M1-0000-CS08-0001
REV. 0

FIGURE 5B
STORMWATER DRAINAGE MAP – PROPOSED CHANGE

MK	DATE	REVISIONS	BY	AP.
7				
6				
5				
4				
3				
2				
1				

KOCH METHANOL

DES. SRL	CH. HE
DR. SRL	AP. HE
DATE: 04/24/23	SCALE: N/A

STJ2-M1 & LS
STORMWATER DRAINAGE MAP
PROPOSED

ORIG. DWG#

DOCUMENT NO. STJ2-M1-0000-CS08-0001

REV. 0

FIGURE 6
SITE GROUND SURFACE TYPE MAP

GRASS/VEGETATION = ~ 300 ACRES

GRAVEL = ~ 140 ACRES

AGRICULTURAL = ~ 350 ACRES

CONCRETE/PAVING = ~ 70 ACRES

LINED PONDS = ~ 1.75 ACRES

ROOFS = ~ 5 ACRES

MK	DATE	REVISIONS	BY	AP.
7				
6				
5				
4				
3				
2				
1				

KOCH™ METHANOL

DES.	CH.
SRL	HE
DR.	AP.
SRL	HE
DATE:	SCALE:
04.21.23	N/A

SITE SURFACE TYPE MAP
SURFACE TYPE PLOT PLAN
PLOT PLAN

ORIG. DWG#

DOCUMENT NO. STJ2-M1-0000-PR23-0002

REV. 0

APPENDIX A
INDUSTRIAL WASTEWATER DISCHARGE PERMIT, IND FORM

To: Prospective Applicants for an Industrial Wastewater Discharge Permit

Attached is an **Industrial Wastewater Discharge Permit Application, IND,** for a Louisiana Pollutant Discharge Elimination System (LPDES) permit, authorized under EPA's delegated NPDES program in accordance with the Clean Water Act. To be considered complete, every item on the form must be addressed and the last page signed by an authorized company agent. If an item does not apply, please enter "NA" (for not applicable) to show that the question was considered.

In accordance with LAC 33:2501.D.2, all permittees with currently effective permits shall submit a new application at least 180 days before the expiration date of the existing permit.

Applicable fees (draft and annual) will be sent under separate invoices. DO NOT submit fees with this application.

Your **completed application**, with a marked **U.S.G.S. Quadrangle map** or equivalent (Refer to Section VI.B for examples) attached, should be submitted to:

Mailing Address:
Department of Environmental Quality
Office of Environmental Services
Post Office Box 4313
Baton Rouge, LA 70821-4313
Attention: Water Permits Division

Physical Address: (if hand delivered)
Department of Environmental Quality
Office of Environmental Services
602 N. Fifth Street
Baton Rouge, LA 70802
Attention: Water Permits Division

Please be advised that completion of this application may not fulfill all state, federal, or local requirements for facilities of this size and type.

According to L. R. S. 48:385, any discharge to a state highway ditch, cross ditch, or right-of-way shall require approval from:

Louisiana DOTD
Office of Engineering
Road Design Section
Post Office Box 94245
Baton Rouge, LA 70804-9245
(225) 379-1927

AND

Louisiana Department of Health
Office of Public Health
Center for Environmental Health Services
Post Office Box 4489
Baton Rouge, LA 70821-4489
(225) 342-7499

In addition, the plans and specifications for sanitary treatment plants must be approved by the Louisiana Department of Health, Office of Public Health at the address above.

A copy of the LPDES regulations may be obtained from the Department's website at http://www.deq.louisiana.gov/portal/tabid/1674/Default.aspx.

For questions regarding this application, please contact the Water Permits Division at (225) 219-9371. For help regarding completion of this application, please contact DEQ, Small Business / Small Community Assistance at 1-800-259-2890.

Date	May 18, 2023		Please check all that apply:	☐ Initial/Proposed Permit
Agency Interest No.	AI	194165		☐ Permit Modification
LWDPS Permit No.	WP			X Permit Renewal
NPDES/LPDES Permit	LA	LA0127367		X Existing Facility

STATE OF LOUISIANA
DEPARTMENT OF ENVIRONMENTAL QUALITY

Office of Environmental Services, Water Permits Division
Post Office Box 4313
Baton Rouge, La 70821-4313
PHONE#: (225) 219-9371

LPDES PERMIT APPLICATION TO DISCHARGE WASTEWATER FROM INDUSTRIAL FACILITIES

(Attach additional pages if needed.)

Application to the Department of Environmental Quality (DEQ) may alternately be submitted on the following:

1. Appropriate EPA National Pollutant Discharge Elimination System (NPDES) Application:
   Form 1 and any of the following appropriate forms: Form 2B, Form 2C, Form 2D, Form 2E, or Form 2F *plus*
   Section IV, Section VIII (if appropriate), *1701 SECTION, & Signatory and Authorization SECTION* of this form (IND)

SECTION I - FACILITY INFORMATION

A. Permit is to be issued to the following: (must have operational control over the facility operations - see LAC 33:IX.2501.B and LAC 33:IX.2503.A and B).

1. Legal Name of Applicant/Owner *(Company, Partnership, Corporation, etc.)* Koch Methanol St. James, LLC

   Facility Name Koch Methanol Facility

   Mailing Address 5181 Wildcat Street, St. James, LA

   Zip Code: 70086

   If applicant named above is not also the owner, state owner name, phone # and address.
   The finished Product storage and Loading operations are owned by KMe St. James Holding, LLC.

   Address: 4111 East 37th Street North, Wichita, KS 67220
   Same Phone contact as KMe St. James, LLC (713) 829-8742

   Please check status: ☐ Federal ☐ Parish ☐ Municipal ☐ State ☐ Public X Private ☐ Other:

2. Location of facility. Please provide a specific street, road, highway, interstate, and/or River Mile/Bank location of the facility for which the application is being submitted *(e.g., 602 N. 5th Street).*

   5181 Wildcat Street

   City St. James Parish St. James

   Front Gate Coordinates:

   Latitude- 29 deg. 58 min. 29 sec. 2 thou.

   Longitude- -90 deg. 52 min. 3 sec. 8 thou.

   Method of Coordinate Determination: Google Earth

SECTION I - FACILITY INFORMATION

(Quad Map, Previous Permit, website, GPS)

Is the facility located on Indian Lands? ☐ Yes ☒ No

3. Name & Title of Contact Person at Facility Josh Wiggins, VP of Manufacturing & Plant Manager

Phone (713) 829-8742 Fax N/A e-mail Josh.Wiggins@kochind.com

SIC (Standard Industrial Classification) code(s): Primary: 2869 3rd ____ 2nd ____ 4th ____

SIC codes can be obtained from the U.S. Department of Labor internet site at https://www.osha.gov/pls/imis/sicsearch.html

B. Name and address of the person who completed the application:

Name & Title Darren Digby, Senior Managing Consultant

Company Ramboll US Consulting, Inc

Phone (225) 408-2844 Fax N/A e-mail ddigby@ramboll.com

Address 8235 YMCA Plaza Drive, Suite 300, Baton Rouge, LA 70810

Contact this person for questions regarding the application? ☒ Yes ☐ No

C. Name and address of billing contact:

Name & Title Kevan Reardon, EHS & Security Leader

Company Koch Methanol St. James, LLC

Phone (580) 478-7621 Fax N/A e-mail Kevan.Reardon@kochind.com

Address 5181 Wildcat Street, St. James, LA 70086

D. Facility Information.

1. Facility Type Organic Chemical Manufacturing (cannery, petroleum refinery, dairy, etc.)
If concentrated animal feeding operation or aquatic animal production facility, complete EPA Form 2B.

2. Nature of Business. Please provide a brief description.
The Koch Methanol Facility produces refined Grade AA methanol, using natural gas as feed. Product grade methanol is sent offsite directly by pipeline for loading and distribution to customers, or stored in tanks prior to loading on site for distribution.

3. Water Discharge Permit Revision (if applicable): Describe the requested revision(s) to the existing permit.
On behalf of Koch, this application is being submitted for renewal of the existing permit. Requested revisions to the permit during this review are detailed in **Section 7** of the accompanying Supplemental Report.

4. List all permits or construction approvals received or applied for under the following programs: RCRA, UIC, NPDES, PSD, Nonattainment, NESHAPS, Ocean Dumping, Dredge and Fill under Section 404 of the Clean Water Act, other relevant environmental permits.
Title V Permit Nos. 2560-00295-V5, 3169-V3, LPDES Permit No: LA0127367, LAG535491, LAJ660000

5. List each source of supply water in gallons per day.

Well Water	[ ]	Yes	[X]	No	Gallons per day	N/A
City Water	[X]	Yes	[ ]	No	Gallons per day	778 gpd
Intake Structure	[X]	Yes	[ ]	No	Gallons per day	3.98 Avg MGD/ 5.29 Daily Max MGD
Other	[ ]	Yes	[X]	No	Gallons per day	N/A

Is Section 316(b) of the Clean Water Act applicable to your facility? [X] Yes [ ] No

If the intake structure (s) have a cumulative design intake flow of greater than 2 MGD and 25% or more of the actual intake flow is used exclusively for cooling purposes, please complete Attachment C, page 43.

6. Is your source water different from your receiving waters? [ ] Yes [X] No

If yes, list the name and describe the quality of the source water below (e.g. fresh, brackish, salt, etc.).

N/A

7. Is there a surface water intake for domestic drinking water supply located within fifty (50) miles downstream from the point or proposed point of discharge?

[X] Yes [ ] No

E. Facility Operations.

1. Processes used which produce industrial wastewater discharged into waters of the State.

Please explain the operations in your facility in a comprehensive fashion. Include a description of the composition of any boiler blowdown and/or cooling water additives and corrosion inhibitors (include MSDS Sheets as an attachment to the application). If you are a producer of a product, what steps are taken to produce that product, especially those that generate a wastestream? If you are provider of a service, be specific (give quantitative values where possible, i.e. a physical measure of the amount of business you do in an average day, week, or month) about what the service is, how it is provided, and how it generates wastewater. Attach extra sheets if space below is insufficient. If appropriate, make processes coincide with sources identified in Section II.

Please see **Section 2.2** of the accompanying Supplemental Report.

2. Products/Services.

The facility is currently designed to generate approximately 4,950 metric tons per day (MTPD) of methanol for delivery to local, regional, and global markets.

SECTION I - FACILITY INFORMATION

3. Raw Materials.

Natural gas serves as the main feedstock of the facility's methanol generation process.

4. Guideline/Production.

If an effluent guideline applies to the applicant and is expressed in terms of production (or other measure of operation), a reasonable measure of the applicant's actual production for each product reported in pounds per day, or other applicable units, is necessary.

Provide the highest monthly average production rate of the previous year. If this would not be representative of your normal production rate, provide total annual production rates from the previous 5 years.

The highest production rate of the previous year 2022 was 5,086 MTPD.

If planning to increase the rate of production at this facility, please provide the current production rate, the anticipated rate and the planned date for increased production.

Current Production Rate: 4,950 MTPD

Proposed Production Rate: 6,200 MTPD

Date Proposed Production Rate Began/Will Begin: June 2024

Affected Outfall	Guideline Citation	Subpart and Fraction of Total Production	Production Rate in lbs/day
Outfall 301	*40 CFR 414*	*Subpart F = 100%,*	*$1.37x10^7$ lbs/day*

If your facility is classified as a Petroleum Refinery and falls within the Federal Guidelines cited under 40 CFR 419, refer to Attachment A.

5. Zebra Mussels.
   Describe any treatment employed or planned at the facility to eliminate/combat zebra mussel incursion.
   Mitigation measures against zebra mussels will be implemented on as needed basis, though
   have not been required to date.

6. Do you have any alternate methods of wastewater disposal other than discharge (e.g. deep well injection, land application, etc.)?
   ☐ Yes X No
   If yes, please describe and list percent or fraction of wastewater.
   N/A, The answer provided is regarding wastewater generated during normal operations, and not
   wastewater collected from abnormal operations such as a wastewater release, resin cleaning, etc.

F. Facility History

1. Anticipated date or original date of startup or change in operations.
   June 2024
2. When did, or will, present operations start?
   October 2020
3. If applicable, what previous operations were located at the site and what was the name of the facility?
   N/A
4. If this is new construction, describe the site property prior to construction.
   (e.g., was it undisturbed or was there a previous structure on that site?)
   N/A
5. If this is new construction, what date was or will the facility be completed? N/A

SECTION II – DISCHARGE INFORMATION

A. Primary Industrial Category. Please check the primary industrial category applicable to your facility.

☑	Primary Industry Category	Volatile	Acid	Base/Neutral	Pesticide/PCB
	Adhesives and Sealant	×	×	×	
	Aluminum Forming	×	×	×	
	Auto and Other Laundries	×	×	×	×
	Battery Manufacturing	×		×	
	Coal Mining				
	Coil Coating	×	×	×	
	Copper Forming	×	×	×	
	Electrical and Electronic Components	×	×	×	×
	Electroplating	×	×	×	
	Explosives Manufacturing		×	×	
	Foundries	×	×	×	
	Gum and Wood Chemicals (EXCEPT Subparts D&F)	×	×		
	Gum and Wood Chemicals (Subparts D&F)	×	×	×	
	Inorganic Chemicals Manufacturing	×	×	×	
	Iron and Steel Manufacturing	×	×	×	
	Leather Tanning and Finishing	×	×	×	
	Mechanical Products Manufacturing	×	×	×	
	Nonferrous Metals Manufacturing	×	×	×	×
	Ore Mining (Subpart B ONLY)		×		
X	Organic Chemicals Manufacturing	×	×	×	×
	Paint and Ink Formulation	×	×	×	
	Pesticides	×	×	×	×
	Petroleum Refining	×			
	Pharmaceutical Preparations	×	×	×	
	Photographic Equipment and Supplies	×	×	×	
	Plastic and Synthetic Materials Manufacturing	×	×	×	×
	Plastics Processing	×			
	Porcelain Enameling				
	Printing and Publishing	×	×	×	×
	Pulp and Paper Mills (*1)				
	Rubber Processing	×	×	×	
	Soap and Detergent Manufacturing	×	×	×	
	Steam Electric Power Plants	×	×		
	Textile Mills (Subpart C EXEMPT from this table)	×	×	×	
	Timber Products Processing	×	×	×	×

(*1) Requirements have been affected by a suspension from EPA; therefore, use Table I.A located at LAC 33:IX.7107 to determine applicability.

☐ **Check here if none of the Primary Industrial Categories above are applicable to your facility.**

SECTION II – DISCHARGE INFORMATION

B. Outfall Identification.

Provide a description of all wastestreams contributing to the effluent for each outfall including process wastewater, sanitary wastewater, cooling water, stormwater runoff, and washdown water, etc. and the average flow contributed by each operation. For facilities not currently operating, please provide this information using your best engineering judgment.

Outfall Number	Outfall Description (List all wastestreams contributing to flow)	Treatment Description	Long Term Average Flow (*) in MGD	Maximum 30-Day Flow (**) in MGD
001	The continuous discharge of clarifier underflow and previously monitored discharge from Internal Outfalls 101, 201, 301, 401, and 012A.	N/A	1.67	2.58
101	The continuous discharge of treated sanitary wastewater.	Separation or settling for particulates and biological wastewater treatment for organics as needed	0.0003	0.0004
201	The continuous discharge of boiler blowdown and cooling tower blowdown.	Neutralization	1.36	2.12
301	The continuous discharge of demineralizer unit backwash and regeneration effluent, process wastewater, potable water, and first flush stormwater.	Separation or settling for particulates and biological wastewater treatment for organics as needed.	0.20	0.25
401	The intermittent discharge of post-first flush stormwater and previously monitored discharge from Internal Outfall 012B	Limited solids settling via drainage system residence time	0.01	0.06
002	The intermittent discharge of tank farm area stormwater and previously monitored discharge from Internal Outfall 012B.	Visual Inspection prior to discharge	0.10	0.20
005	The intermittent discharge of low contamination potential stormwater, non-process	Limited solids settling via drainage system residence time	0.06	0.12

	area stormwater, and previously monitored discharge from Internal Outfall 012B			
006	The intermittent discharge of low contamination potential stormwater and previously monitored discharge from Internal Outfall 012B	Limited solids settling via drainage system residence time	0.05	0.09
007	The intermittent discharge of non-process area stormwater	Limited solids settling via drainage system residence time	0.32	0.67
008	The intermittent discharge of non-process area stormwater	Limited solids settling via drainage system residence time	0.33	0.67
009	The intermittent discharge of non-process area stormwater, previously monitored discharge from Internal Outfall 012B and condensate from Air Liquide.	Limited solids settling via drainage system residence time	0.29	0.61
012A	The intermittent discharge of hydrostatic test water	Pre-Discharge Sampling	N/A No Discharge	N/A No Discharge
012B	The intermittent discharge of hydrostatic test water	Pre-Discharge Sampling	0.03	0.06

* Long Term Average Flow – The sum of all of the monthly average values measured over the previous two years divided by the number of monthly average values measured within the same period.

** Maximum 30 day Flow - The maximum monthly average value is the highest value of all the monthly averages over the previous two years.

C. Complete this section for each outfall (including internal outfalls) that contains <u>process wastewater.</u>

Process Wastewater is any water which, during manufacturing or processing, comes into direct contact with or results from the production or use of any raw material, intermediate product, finished product, byproduct, or waste product.

Outfalls are discharge points. An external outfall is a discrete discharge point beyond which the wastestream receives no further mixing with other wastestreams prior to discharging into a receiving waterbody. An internal outfall is an outfall for a wastestream that combines with other wastestream(s) before discharging into an "external" outfall. Please provide your after-treatment test results in the units asked for on the application. Sampling shall be performed prior to mixing with any other waters. For proposed facilities, estimates should be provided for any expected contaminants even though the facility is not in place yet. Make additional copies for each process outfall.

1. Outfall No. **001**

2. Outfall Location. Provide a description of the physical location for each outfall.
   (e.g., At the point of discharge from the treatment facility located on the southwest corner of the facility, prior to commingling with any other waters.)
   Effluent pipe located near the eastern border of property line along Hwy 18.

3. Latitude/Longitude of Discharge:
   Latitude- 29 deg. 59 min. 30.34 sec. 0 thou.
   Longitude- -90 deg. 49 min. 59.84 sec. 0 thou.
   Method of Coordinate Determination: Google Earth
   (Quad Map, Previous Permit, website, GPS)

4. If a new discharge, when do you expect to begin discharging? N/A

5. Indicate how the wastewater reaches state waters (named water bodies). This will usually be either *directly*, by *open ditch* (if it is a highway ditch, indicate the highway), or by *pipe*. Please specifically name all of the minor water bodies that your wastewater will travel through on the way to a major water body. This information can be obtained from U.S.G.S. Quadrangle Maps. Include river mile of discharge point if available. See Section VII.
   By Effluent Pipe (effluent pipe, ditch, etc.);
   thence into ____ (parish drainage ditch, canal, etc.);
   thence into ____ (named bayou, creek, stream, etc.);
   thence into Mississippi River (lake, river, etc.).

6. Frequency of flow (check 1 box only).
   [X] Continuous [ ] Batch [ ] Intermittent
   If this is not a continuous discharge, please give a detailed description of the frequency of flow.
   (e.g., number of months per year, number of days per week, number of hours per day, number of hours of discharge per batch, number of batches per day, etc.).
   N/A

7. Treatment Method. Please be very specific (attach additional pages as necessary).
   N/A

C. Complete this section for each outfall (including internal outfalls) that contains __process wastewater__.

Process Wastewater is any water which, during manufacturing or processing, comes into direct contact with or results from the production or use of any raw material, intermediate product, finished product, byproduct, or waste product.

Outfalls are discharge points. An external outfall is a discrete discharge point beyond which the wastestream receives no further mixing with other wastestreams prior to discharging into a receiving waterbody. An internal outfall is an outfall for a wastestream that combines with other wastestream(s) before discharging into an "external" outfall. **Please provide your after-treatment test results in the units asked for on the application. Sampling shall be performed prior to mixing with any other waters.** For proposed facilities, estimates should be provided for any expected contaminants even though the facility is not in place yet. **Make additional copies for each process outfall.**

1. Outfall No. **301**

2. Outfall Location. Provide a description of the physical location for each outfall.
   (e.g., At the point of discharge from the treatment facility located on the southwest corner of the facility, prior to commingling with any other waters.)
   Located at the Wastewater Treatment Plant

3. Latitude/Longitude of Discharge:
   Latitude- 29 deg. 58 min. 53.97 sec. 0 thou.
   Longitude- -90 deg. 51 min. 40.25 sec. 0 thou.
   Method of Coordinate Determination: Google Earth
   (Quad Map, Previous Permit, website, GPS)

4. If a new discharge, when do you expect to begin discharging? N/A

5. Indicate how the wastewater reaches state waters (named water bodies). This will usually be either *directly*, by *open ditch* (if it is a highway ditch, indicate the highway), or by *pipe*. Please specifically name all of the minor water bodies that your wastewater will travel through on the the way to a major water body. This information can be obtained from U.S.G.S. Quadrangle Maps. Include river mile of discharge point if available. See Section VII.
   By Effluent pipe (effluent pipe, ditch, etc.);
   thence into ______ (parish drainage ditch, canal, etc.);
   thence into ______ (named bayou, creek, stream, etc.);
   thence into Mississippi River (lake, river, etc.).

6. Frequency of flow (check 1 box only).
   ☐ Continuous ☐ Batch ☒ Intermittent
   If this is not a continuous discharge, please give a detailed description of the frequency of flow.
   (e.g., number of months per year, number of days per week, number of hours per day, number of hours of discharge per batch, number of batches per day, etc.).
   The discharge frequency ranges from continuously to 4 days/week depending on mode of operation.

7. Treatment Method. Please be very specific (attach additional pages as necessary).
   Please refer to **Section 4** of the accompanying Supplemental Report.

D. Complete this section for each outfall (including internal outfalls) that contains <u>non-process and miscellaneous wastewaters</u>.

Non-process and miscellaneous wastewaters are wastewaters that do not include process wastewaters as defined in the definition section of LAC 33:IX.2313.A [e.g. hydrostatic test water, eye wash, safety shower water, condensates, stormwater (only if mixed with other waters), etc.]. Outfalls are discharge points. An external outfall is a discrete discharge point beyond which the wastestream receives no further mixing with other wastestreams prior to discharging into a receiving waterbody. An internal outfall is an outfall for a wastestream that combines with other wastestream(s) before discharging into an "external" outfall. **Please provide your after-treatment test results in the units asked for on the application. Sampling shall be performed prior to mixing with any other waters.** For proposed facilities, estimates should be provided for any expected contaminants even though the facility is not in place yet. **Make additional copies for each non-process and miscellaneous outfall.**

1. Outfall No. **201**

2. Outfall Location. Provide a description of the physical location for each outfall.
   (e.g., At the point of discharge from the treatment facility located on the southwest corner of the facility, prior to commingling with any other waters.)
   Located at the Blowdown Basin sample cabinet.

3. Latitude/Longitude of Discharge:
   Latitude- 29 deg. 58 min. 53.97 sec. 0 thou.
   Longitude- -90 deg. 51 min. 40.25 sec. 0 thou.
   Method of Coordinate Determination: Google Earth
   (Quad Map, Previous Permit, website, GPS)

4. If a new discharge, when do you expect to begin discharging? N/A

5. Indicate how the wastewater reaches state waters (named water bodies). This will usually be either *directly*, by *open ditch* (if it is a highway ditch, indicate the highway), or by *pipe*. Please specifically name all of the minor water bodies that your wastewater will travel through on the way to a major water body. This information can be obtained from U.S.G.S. Quadrangle Maps. Include river mile of discharge point if available. See Section VII.
   By Effluent pipe (effluent pipe, ditch, etc.);
   thence into ______ (parish drainage ditch, canal, etc.);
   thence into ______ (named bayou, creek, stream, etc.);
   thence into Mississippi River (lake, river, etc.).

6. Frequency of flow (check 1 box only).
   [X] Continuous [ ] Batch [ ] Intermittent

   If this is not a continuous discharge, please give a detailed description of the frequency of flow.
   (e.g., number of months per year, number of days per week, number of hours per day, number of hours of discharge per batch, number of batches per day, etc.).

7. Treatment Method. Please be specific.
   Treatment includes the addition of sodium bisulfite injection to aid in the reduction of total residual chlorine in the blowdown basin. Sodium hypochlorite is utilized in the cooling tower to aid in biological growth prevention.

E. Complete this section for each outfall (including internal outfalls) that contains <u>sanitary wastewaters</u>.

Sanitary wastewaters are wastewaters that include human metabolic and domestic wastes.

Outfalls are discharge points. An external outfall is a discrete discharge point beyond which the wastestream receives no further mixing with other wastestreams prior to discharging into a receiving waterbody. An internal outfall is an outfall for a wastestream that combines with other wastestream(s) before discharging into an "external" outfall. **Please provide your after-treatment test results in the units asked for on the application. Sampling shall be performed prior to mixing with any other waters.** For proposed facilities, estimates should be provided for any expected contaminants even though the facility is not in place yet. **Make additional copies for each sanitary outfall.**

1. Outfall No. **101**

2. Outfall Location. Provide a description of the physical location for each outfall.
(e.g., At the point of discharge from the treatment facility located on the southwest corner of the facility, prior to commingling with any other waters.)
At the point of discharge from the treatment facility into Pond 1.

3. Latitude/Longitude of Discharge:
Latitude- 29 deg. 58 min. 49.51 sec. 0 thou.
Longitude- -90 deg. 51 min. 45.67 sec. 0 thou.
Method of Coordinate Determination: Google Earth
(Quad Map, Previous Permit, website, GPS)

4. If a new discharge, when do you expect to begin discharging? N/A

5. Indicate how the wastewater reaches state waters (named water bodies). This will usually be either *directly*, by *open ditch* (if it is a highway ditch, indicate the highway), or by *pipe*. Please specifically name all of the minor water bodies that your wastewater will travel through on the way to a major water body. This information can be obtained from U.S.G.S. Quadrangle Maps. Include river mile of discharge point if available. See Section VII.
By Effluent pipe (effluent pipe, ditch, etc.);
thence into Pond 1 (parish drainage ditch, canal, etc.);
thence into Effluent pipe (named bayou, creek, stream, etc.);
thence into Mississippi River (lake, river, etc.).

6. Frequency of flow (check 1 box only).
[X] Continuous [ ] Batch [ ] Intermittent
If this is not a continuous discharge, please give a detailed description of the frequency of flow.
(e.g., number of months per year, number of days per week, number of hours per day, number of hours of discharge per batch, number of batches per day, etc.).
N/A

7. Treatment Method. Please be specific.
Separation or settling for particulates and biological wastewater treatment for organics as needed

8. Design Capacity. Report in gallons per day. 3,800 GPD

9. Is sanitary wastewater land applied or sent to a POTW or a sanitary drainage field?
[ ] Yes [X] No

F. Complete this section for each outfall that contains stormwater runoff ONLY. Do NOT include stormwater outfalls covered by an alternate LPDES permit.
Outfalls are discharge points. **Please provide your after-treatment test results in the units asked for on the application. Sampling shall be performed prior to mixing with any other waters.** For proposed facilities, estimates should be provided for any expected contaminants even though the facility is not in place yet. **Make additional copies for each stormwater outfall.**

1. Outfall No. **401**
2. Outfall Location. Provide a description of the physical location for each outfall.
   (e.g., At the point of discharge from the treatment facility located on the southwest corner of the facility, prior to commingling with any other waters.)
   At the point of discharge located near the control room into Pond 1
3. Latitude/Longitude of Discharge:
   Latitude- 29 deg. 58 min. 49.47 sec. 0 thou.
   Longitude- -90 deg. 51 min. 45.65 sec. 0 thou.
   Method of Coordinate Determination: Google Earth
   (Quad Map, Previous Permit, website, GPS)
4. If a new discharge, when do you expect to begin discharging? N/A
5. Indicate how the wastewater reaches state waters (named water bodies). This will usually be either *directly*, by *open ditch* (if it is a highway ditch, indicate the highway), or by *pipe*. Please specifically name all of the minor water bodies that your wastewater will travel through on the way to a major water body. This information can be obtained from U.S.G.S. Quadrangle Maps. Include river mile of discharge point if available. See Section VII.
   By Effluent pipe (effluent pipe, ditch, etc.);
   thence into Pond 1 (parish drainage ditch, canal, etc.);
   thence into Effluent pipe (named bayou, creek, stream, etc.);
   thence into Mississippi River (lake, river, etc.).
6. Treatment Method (if any). Please be specific.
   Limited solids settling via drainage system residence time. Potential to capture and retreat water in Pond 1 prior to discharge due to abnormal event.
7. Storm Event Data.
   This item must be completed for each stormwater outfall containing analytical data for a storm event. Please make additional copies as necessary.
   a. Outfall Number: 401
   b. Date of Storm Event: 10/25/2022
   c. Duration of Storm Event (in minutes): 480 minutes.
   d. Total Rain During Storm Event (in Inches) 5.5 inches.
   e. Number of hours between beginning of storm measured and end of previous measurable rain event: (8 days) 192 hours.
   f. Maximum Flow Rate During Rain Event: 2,994 gallons/minute.
   g. Total Storm Water Flow from Rain Event: 329,335 gallons.
   h. Provide a description of the method of flow measurement or estimate.
      Meteorological data obtained from Weather Underground website for NO Airport was used with formulae for Q total= Runoff Coef*Acreage*Inches of Rain and Q peak = Runoff Coeff*Acreage*Peak Rainfall Intensity

F. Complete this section for each outfall that contains <u>stormwater runoff ONLY</u>. Do NOT include stormwater outfalls covered by an alternate LPDES permit.
Outfalls are discharge points. **Please provide your after-treatment test results in the units asked for on the application. Sampling shall be performed prior to mixing with any other waters.** For proposed facilities, estimates should be provided for any expected contaminants even though the facility is not in place yet. **Make additional copies for each stormwater outfall.**

1. Outfall No. **002**

2. Outfall Location. Provide a description of the physical location for each outfall.
(e.g., At the point of discharge from the treatment facility located on the southwest corner of the facility, prior to commingling with any other waters.)
At the point of discharge northwest from the tank farm

3. Latitude/Longitude of Discharge:
Latitude- 29 deg. 59 min. 26.76 sec. 0 thou.
Longitude- -90 deg. 50 min. 37.25 sec. 0 thou.
Method of Coordinate Determination: Google Earth
(Quad Map, Previous Permit, website, GPS)

4. If a new discharge, when do you expect to begin discharging? N/A

5. Indicate how the wastewater reaches state waters (named water bodies). This will usually be either *directly*, by *open ditch* (if it is a highway ditch, indicate the highway), or by *pipe*. Please specifically name all of the minor water bodies that your wastewater will travel through on the way to a major water body. This information can be obtained from U.S.G.S. Quadrangle Maps. Include river mile of discharge point if available. See Section VII.
By Onsite drainage ditch (effluent pipe, ditch, etc.);
thence into Offsite drainage ditch (parish drainage ditch, canal, etc.);
thence into ______ (named bayou, creek, stream, etc.);
thence into St. James Canal (lake, river, etc.).

6. Treatment Method (if any). Please be specific.
Visual inspection and ability to control discharge by use of valves.

7. Storm Event Data.
This item must be completed for each stormwater outfall containing analytical data for a storm event. Please make additional copies as necessary.

a. Outfall Number: 002
b. Date of Storm Event: 10/29/2022
c. Duration of Storm Event (in minutes): 30 minutes.
d. Total Rain During Storm Event (in Inches) 0.6 inches.
e. Number of hours between beginning of storm measured and end of previous measurable rain event: (4 days) 96 hours.
f. Maximum Flow Rate During Rain Event: 3,621 gallons/minute.
g. Total Storm Water Flow from Rain Event: 97,762 gallons.
h. Provide a description of the method of flow measurement or estimate.
Meteorological data obtained from Weather Underground website for NO Airport was used with formulae for Q total = Runoff Coef*Acreage*Inches of Rain and Q peak = Runoff Coeff*Acreage*Peak Rainfall Intensity

F. Complete this section for each outfall that contains <u>stormwater runoff ONLY</u>. Do NOT include stormwater outfalls covered by an alternate LPDES permit.
Outfalls are discharge points. **Please provide your after-treatment test results in the units asked for on the application. Sampling shall be performed prior to mixing with any other waters.** For proposed facilities, estimates should be provided for any expected contaminants even though the facility is not in place yet. **Make additional copies for each stormwater outfall.**

1. Outfall No. **005**

2. Outfall Location. Provide a description of the physical location for each outfall.
(e.g., At the point of discharge from the treatment facility located on the southwest corner of the facility, prior to commingling with any other waters.)
At the point of discharge at the southeast corner of Pond 2.
*Outfalls 005, 006, 007, & 008 are being proposed to consolidate into Outfall 003 in this permit renewal.

3. Latitude/Longitude of Discharge:
Latitude- 29 deg. 58 min. 53.88 sec. 0 thou.
Longitude- -90 deg. 51 min. 48.76 sec. 0 thou.
Method of Coordinate Determination: Google Earth
(Quad Map, Previous Permit, website, GPS)

4. If a new discharge, when do you expect to begin discharging? N/A

5. Indicate how the wastewater reaches state waters (named water bodies). This will usually be either *directly*, by *open ditch* (if it is a highway ditch, indicate the highway), or by *pipe*. Please specifically name all of the minor water bodies that your wastewater will travel through on the way to a major water body. This information can be obtained from U.S.G.S. Quadrangle Maps. Include river mile of discharge point if available. See Section VII.
By Pond 2 (effluent pipe, ditch, etc.);
thence into Onsite drainage ditch (parish drainage ditch, canal, etc.);
thence into Onsite drainage ditch (named bayou, creek, stream, etc.);
thence into St. James Canal (lake, river, etc.).

6. Treatment Method (if any). Please be specific.
Limited solids settling via drainage system residence time

7. Storm Event Data.
This item must be completed for each stormwater outfall containing analytical data for a storm event. Please make additional copies as necessary.

a. Outfall Number: 005
b. Date of Storm Event: 10/29/2022
c. Duration of Storm Event (in minutes): 30 minutes.
d. Total Rain During Storm Event (in Inches) 0.6 inches.
e. Number of hours between beginning of storm measured and end of previous measurable rain event: (4 days) 96 hours.
f. Maximum Flow Rate During Rain Event: 8,636 gallons/minute.
g. Total Storm Water Flow from Rain Event: 233,162 gallons.
h. Provide a description of the method of flow measurement or estimate.
Meteorological data obtained from weather underground website for NO Airport was used with formulae for Q total = Runoff Coef*Acreage*Inches of Rain and Q peak = Runoff Coeff*Acreage*Peak Rainfall Intensity

F. Complete this section for each outfall that contains stormwater runoff ONLY. Do NOT include stormwater outfalls covered by an alternate LPDES permit.
Outfalls are discharge points. Please provide your after-treatment test results in the units asked for on the application. Sampling shall be performed prior to mixing with any other waters. For proposed facilities, estimates should be provided for any expected contaminants even though the facility is not in place yet. Make additional copies for each stormwater outfall.

1. Outfall No. **006**

2. Outfall Location. Provide a description of the physical location for each outfall.
   (e.g., At the point of discharge from the treatment facility located on the southwest corner of the facility, prior to commingling with any other waters.)
   At the point of discharge on the northeast corner of Pond 2.
   *Outfalls 005, 006, 007, & 008 are being proposed to consolidate into Outfall 003 in this permit renewal.

3. Latitude/Longitude of Discharge:
   Latitude- 29 deg. 58 min. 50.96 sec. 0 thou.
   Longitude- -90 deg. 51 min. 46.66 sec. 0 thou.
   Method of Coordinate Determination: Google Earth
   (Quad Map, Previous Permit, website, GPS)

4. If a new discharge, when do you expect to begin discharging? N/A

5. Indicate how the wastewater reaches state waters (named water bodies). This will usually be either *directly*, by *open ditch* (if it is a highway ditch, indicate the highway), or by *pipe*. Please specifically name all of the minor water bodies that your wastewater will travel through on the way to a major water body. This information can be obtained from U.S.G.S. Quadrangle Maps. Include river mile of discharge point if available. See Section VII.
   By Pond 2 (effluent pipe, ditch, etc.);
   thence into Onsite drainage ditch (parish drainage ditch, canal, etc.);
   thence into Onsite drainage ditch (named bayou, creek, stream, etc.);
   thence into St. James Canal (lake, river, etc.).

6. Treatment Method (if any). Please be specific.
   Limited solids settling via drainage system residence time

7. Storm Event Data.
   This item must be completed for each stormwater outfall containing analytical data for a storm event. Please make additional copies as necessary.

   a. Outfall Number: 006
   b. Date of Storm Event: 10/29/2022
   c. Duration of Storm Event (in minutes): 30 minutes.
   d. Total Rain During Storm Event (in Inches) 0.6 inches.
   e. Number of hours between beginning of storm measured and end of previous measurable rain event: (4 days) 96 hours.
   f. Maximum Flow Rate During Rain Event: 8,636 gallons/minute.
   g. Total Storm Water Flow from Rain Event: 233,162 gallons.
   h. Provide a description of the method of flow measurement or estimate.
      Meteorological data obtained from weather underground website for NO Airport was used with formulae for Q total = Runoff Coef*Acreage*Inches of Rain and Q peak = Runoff Coeff*Acreage*Peak Rainfall Intensity

F. Complete this section for each outfall that contains stormwater runoff ONLY. Do NOT include stormwater outfalls covered by an alternate LPDES permit.
Outfalls are discharge points. Please provide your after-treatment test results in the units asked for on the application. Sampling shall be performed prior to mixing with any other waters. For proposed facilities, estimates should be provided for any expected contaminants even though the facility is not in place yet. Make additional copies for each stormwater outfall.

1. Outfall No. **007**

2. Outfall Location. Provide a description of the physical location for each outfall.
(e.g., At the point of discharge from the treatment facility located on the southwest corner of the facility, prior to commingling with any other waters.)
At the point of discharge southeast of Pond 1.
*Outfalls 005, 006, 007, & 008 are being proposed to consolidate into Outfall 003 in this permit renewal.

3. Latitude/Longitude of Discharge:
Latitude- 29 deg. 58 min. 47.83 sec. 0 thou.
Longitude- -90 deg. 51 min. 44.24 sec. 0 thou.
Method of Coordinate Determination: Google Earth
(Quad Map, Previous Permit, website, GPS)

4. If a new discharge, when do you expect to begin discharging? N/A

5. Indicate how the wastewater reaches state waters (named water bodies). This will usually be either *directly*, by *open ditch* (if it is a highway ditch, indicate the highway), or by *pipe*. Please specifically name all of the minor water bodies that your wastewater will travel through on the way to a major water body. This information can be obtained from U.S.G.S. Quadrangle Maps. Include river mile of discharge point if available. See Section VII.

By Onsite drainage ditch (effluent pipe, ditch, etc.);
thence into Offsite drainage ditch (parish drainage ditch, canal, etc.);
thence into ____ (named bayou, creek, stream, etc.);
thence into St. James Canal (lake, river, etc.).

6. Treatment Method (if any). Please be specific.
Limited solids settling via drainage system residence time

7. Storm Event Data.
This item must be completed for each stormwater outfall containing analytical data for a storm event. Please make additional copies as necessary.

a. Outfall Number: 007
b. Date of Storm Event: 10/25/2022
c. Duration of Storm Event (in minutes): 90 minutes.
d. Total Rain During Storm Event (in Inches) 0.32 inches.
e. Number of hours between beginning of storm measured and end of previous measurable rain event: (11 days) 264 hours.
f. Maximum Flow Rate During Rain Event: 10,392 gallons/minute.
g. Total Storm Water Flow from Rain Event: 997,604 gallons.
h. Provide a description of the method of flow measurement or estimate.
Meteorological data obtained from weather underground website for NO Airport was used with formulae for Q total = Runoff Coef*Acreage*Inches of Rain and Q peak = Runoff Coeff*Acreage*Peak Rainfall Intensity

F. Complete this section for each outfall that contains stormwater runoff ONLY. Do NOT include stormwater outfalls covered by an alternate LPDES permit.
Outfalls are discharge points. Please provide your after-treatment test results in the units asked for on the application. Sampling shall be performed prior to mixing with any other waters. For proposed facilities, estimates should be provided for any expected contaminants even though the facility is not in place yet. Make additional copies for each stormwater outfall.

1. Outfall No. **008**

2. Outfall Location. Provide a description of the physical location for each outfall.
(e.g., At the point of discharge from the treatment facility located on the southwest corner of the facility, prior to commingling with any other waters.)
At the point of discharge near the northwest corner of Pond 2.
*Outfalls 005, 006, 007, & 008 are being proposed to consolidate into Outfall 003 in this permit renewal.

3. Latitude/Longitude of Discharge:
Latitude- 29 deg. 58 min. 52.96 sec. 0 thou.
Longitude- -90 deg. 51 min. 55.98 sec. 0 thou.
Method of Coordinate Determination: Google Earth
(Quad Map, Previous Permit, website, GPS)

4. If a new discharge, when do you expect to begin discharging? N/A

5. Indicate how the wastewater reaches state waters (named water bodies). This will usually be either *directly*, by *open ditch* (if it is a highway ditch, indicate the highway), or by *pipe*. Please specifically name all of the minor water bodies that your wastewater will travel through on the way to a major water body. This information can be obtained from U.S.G.S. Quadrangle Maps. Include river mile of discharge point if available. See Section VII.

By Onsite drainage ditch (effluent pipe, ditch, etc.);
thence into Offsite drainage ditch (parish drainage ditch, canal, etc.);
thence into ______ (named bayou, creek, stream, etc.);
thence into St. James Canal (lake, river, etc.).

6. Treatment Method (if any). Please be specific.
Limited solids settling via drainage system residence time

7. Storm Event Data.
This item must be completed for each stormwater outfall containing analytical data for a storm event. Please make additional copies as necessary.

a. Outfall Number: 008
b. Date of Storm Event: 11/14/2022
c. Duration of Storm Event (in minutes): 480 minutes.
d. Total Rain During Storm Event (in Inches) 5.5 inches.
e. Number of hours between beginning of storm measured and end of previous measurable rain event: (8 days) 192 hours.
f. Maximum Flow Rate During Rain Event: 155,876 gallons/minute.
g. Total Storm Water Flow from Rain Event: 17,146,317 gallons.
h. Provide a description of the method of flow measurement or estimate.
Meteorological data obtained from weather underground website for NO Airport was used with formulae for Q total = Runoff Coef*Acreage*Inches of Rain and Q peak = Runoff Coeff*Acreage*Peak Rainfall Intensity

F. Complete this section for each outfall that contains <u>stormwater runoff ONLY</u>. Do NOT include stormwater outfalls covered by an alternate LPDES permit.

Outfalls are discharge points. **Please provide your after-treatment test results in the units asked for on the application. Sampling shall be performed prior to mixing with any other waters.** For proposed facilities, estimates should be provided for any expected contaminants even though the facility is not in place yet. **Make additional copies for each stormwater outfall.**

1. Outfall No. **009**

2. Outfall Location. Provide a description of the physical location for each outfall.
   (e.g., At the point of discharge from the treatment facility located on the southwest corner of the facility, prior to commingling with any other waters.)
   At the point of discharge at the ditch located northwest of Pond 2
   Proposing to rename "Outfall 004"

3. Latitude/Longitude of Discharge:
   Latitude- 29 deg. 58 min. 53.64 sec. 0 thou.
   Longitude- -90 deg. 51 min. 56.05 sec. ___ thou.
   Method of Coordinate Determination: Google Earth
   (Quad Map, Previous Permit, website, GPS)

4. If a new discharge, when do you expect to begin discharging? N/A

5. Indicate how the wastewater reaches state waters (named water bodies). This will usually be either *directly*, by *open ditch* (if it is a highway ditch, indicate the highway), or by *pipe*. Please specifically name all of the minor water bodies that your wastewater will travel through on the way to a major water body. This information can be obtained from U.S.G.S. Quadrangle Maps. Include river mile of discharge point if available. See Section VII.
   By Onsite drainage ditch (effluent pipe, ditch, etc.);
   thence into Offsite drainage ditch (parish drainage ditch, canal, etc.);
   thence into ___________ (named bayou, creek, stream, etc.);
   thence into St. James Canal (lake, river, etc.).

6. Treatment Method (if any). Please be specific.
   Limited solids settling via drainage system residence time

7. Storm Event Data.
   This item must be completed for each stormwater outfall containing analytical data for a storm event. Please make additional copies as necessary.
   a. Outfall Number: 009 (Proposed Revision to Outfall 004)
   b. Date of Storm Event: 11/14/2022
   c. Duration of Storm Event (in minutes): 480 minutes.
   d. Total Rain During Storm Event (in Inches) 5.5 inches.
   e. Number of hours between beginning of storm measured and end of previous measurable rain event: (8 days) 192 hours.
   f. Maximum Flow Rate During Rain Event: 175,971 gallons/minute.
   g. Total Storm Water Flow from Rain Event: 19,356,818 gallons.
   h. Provide a description of the method of flow measurement or estimate.
   Meteorological data obtained from weather underground website for NO Airport was used with formulae for Q total = Runoff Coef*Acreage*Inches of Rain and Q peak = Runoff Coeff*Acreage*Peak Rainfall Intensity

F. Complete this section for each outfall that contains <u>stormwater runoff ONLY</u>. Do NOT include stormwater outfalls covered by an alternate LPDES permit.

Outfalls are discharge points. **Please provide your after-treatment test results in the units asked for on the application. Sampling shall be performed prior to mixing with any other waters.** For proposed facilities, estimates should be provided for any expected contaminants even though the facility is not in place yet. **Make additional copies for each stormwater outfall.**

1. Outfall No. **003* (Proposed)**

2. Outfall Location. Provide a description of the physical location for each outfall.
(e.g., At the point of discharge from the treatment facility located on the southwest corner of the facility, prior to commingling with any other waters.)
At the point of discharge from the ditch located north of Heavy Haul Road (Previously known as Sidney Road).
*Outfall 003 is a proposed outfall change being requested in this permit renewal.

3. Latitude/Longitude of Discharge:
Latitude- 29 deg. 58 min. 37.50 sec. 0 thou.
Longitude- -90 deg. 51 min. 49.97 sec. 0 thou.
Method of Coordinate Determination: Google Earth
(Quad Map, Previous Permit, website, GPS)

4. If a new discharge, when do you expect to begin discharging? N/A

5. Indicate how the wastewater reaches state waters (named water bodies). This will usually be either *directly*, by *open ditch* (if it is a highway ditch, indicate the highway), or by *pipe*. Please specifically name all of the minor water bodies that your wastewater will travel through on the way to a major water body. This information can be obtained from U.S.G.S. Quadrangle Maps. Include river mile of discharge point if available. See Section VII.

By Onsite drainage ditch (effluent pipe, ditch, etc.);
thence into Offsite drainage ditch (parish drainage ditch, canal, etc.);
thence into ______ (named bayou, creek, stream, etc.);
thence into St. James Canal (lake, river, etc.).

6. Treatment Method (if any). Please be specific.
Limited solids settling via drainage system residence time

7. Storm Event Data.
This item must be completed for each stormwater outfall containing analytical data for a storm event. Please make additional copies as necessary.

a. Outfall Number: 003
b. Date of Storm Event: N/A*
c. Duration of Storm Event (in minutes): N/A* minutes.
d. Total Rain During Storm Event (in Inches) N/A* inches.
e. Number of hours between beginning of storm measured and end of previous measurable rain event: N/A* hours.
f. Maximum Flow Rate During Rain Event: N/A* gallons/minute.
g. Total Storm Water Flow from Rain Event: N/A* gallons.
h. Provide a description of the method of flow measurement or estimate.
N/A*

G. Additional Information for Stormwater Outfalls

1. Outfall Number **401**

2. Acreage
For all outfalls that convey storm water only or that include storm water combined with other waste steams, give the area drained by the outfall in acreage, extent of impervious surfaces (paved areas, rooftops), and describe the activities that occur in that area.

Please see **Table 5-2** of accompanying Supplemental Report.

This watershed includes low contamination potential water and post-first flush ISBL surfaces.

3. List of Stored Chemicals and Products
List all chemicals and petroleum products stored outside and provide a description of the containment area.

All chemicals are either stored indoors or under covered areas.

4. Significant Materials
Describe all significant materials that are currently or have in the past three years been treated, stored, or disposed of in a manner to allow exposure to storm water. List the method of treatment, storage, or disposal; past and present materials management practices employed to minimize contact by these materials with stormwater runoff; materials loading and access areas; and the location, manner, and frequency in which pesticides, herbicides, soil conditioners, and fertilizers are applied.

Please see **Section 6** of the accompanying Supplemental Report

5. History of Leaks and Spills
Provide information regarding the history of significant leaks or spills of toxic or hazardous pollutants at the facility in the last three years, including the approximate date and location of the spill or leak and the type and amount of material released.

Please see **Section 6.6** of the accompanying Supplemental Report.

6. Non-Stormwater Discharge Determination
Describe the evaluation method(s) for determining the presence of non-storm water discharges in storm water outfalls named in this application. For any storm water outfall covered by this application, the signature on page 37 constitutes certification that the outfalls have been tested or evaluated for the presence of non-stormwater discharges, and that all non-stormwater discharges from these outfall(s) are identified in this application. Refer to LAC 33:IX.2511.C.1.a.iii.

The facility is designed to segregate process wastewaters from stormwater via dedicated infrastructure. Commingled process area stormwater and non-stormwater effluents are routed for treatment prior to discharge.

H. Alternate Permit Information

1. Are storm water discharges covered by the Multi-Sector Storm Water General Permit?
☐ Yes ☒ No
If **yes**, provide the permit number: ____________

2. Does this facility have a Stormwater Pollution Prevention Plan (SWPPP)?
☒ Yes ☐ No

G. Additional Information for Stormwater Outfalls

1. Outfall Number **002**

2. Acreage
For all outfalls that convey storm water only or that include storm water combined with other waste steams, give the area drained by the outfall in acreage, extent of impervious surfaces (paved areas, rooftops), and describe the activities that occur in that area.

Please see **Section 5** of accompanying Supplemental Report.

3. List of Stored Chemicals and Products
List all chemicals and petroleum products stored outside and provide a description of the containment area.

Methanol is stored within enclosed tanks. An earthen berm is in place to contain any spills within this area, and accumulated stormwater is visually inspected prior to discharge via Outfall 002.

4. Significant Materials
Describe all significant materials that are currently or have in the past three years been treated, stored, or disposed of in a manner to allow exposure to storm water. List the method of treatment, storage, or disposal; past and present materials management practices employed to minimize contact by these materials with stormwater runoff; materials loading and access areas; and the location, manner, and frequency in which pesticides, herbicides, soil conditioners, and fertilizers are applied.

Please see **Section 6** of the accompanying Supplemental Report

5. History of Leaks and Spills
Provide information regarding the history of significant leaks or spills of toxic or hazardous pollutants at the facility in the last three years, including the approximate date and location of the spill or leak and the type and amount of material released.

Please see **Section 6.6** of the accompanying Supplemental Report

6. Non-Stormwater Discharge Determination
Describe the evaluation method(s) for determining the presence of non-storm water discharges in storm water outfalls named in this application. For any storm water outfall covered by this application, the signature on page 37 constitutes certification that the outfalls have been tested or evaluated for the presence of non-stormwater discharges, and that all non-stormwater discharges from these outfall(s) are identified in this application. Refer to LAC 33:IX.2511.C.1.a.iii.

The facility is designed to segregate process wastewaters from stormwater via dedicated infrastructure. Commingled process area stormwater and non-stormwater effluents are routed for treatment prior to discharge.

H. Alternate Permit Information

1. Are storm water discharges covered by the Multi-Sector Storm Water General Permit?
[ ] Yes [X] No

If **yes**, provide the permit number: ______

2. Does this facility have a Stormwater Pollution Prevention Plan (SWPPP)?
[X] Yes [ ] No

G. Additional Information for Stormwater Outfalls

1. Outfall Number **005**

2. Acreage
For all outfalls that convey storm water only or that include storm water combined with other waste steams, give the area drained by the outfall in acreage, extent of impervious surfaces (paved areas, rooftops), and describe the activities that occur in that area.

Please see **Section 5** of accompanying Supplemental Report.

3. List of Stored Chemicals and Products
List all chemicals and petroleum products stored outside and provide a description of the containment area.

All chemicals are either stored indoors or under covered areas.

4. Significant Materials
Describe all significant materials that are currently or have in the past three years been treated, stored, or disposed of in a manner to allow exposure to storm water. List the method of treatment, storage, or disposal; past and present materials management practices employed to minimize contact by these materials with stormwater runoff; materials loading and access areas; and the location, manner, and frequency in which pesticides, herbicides, soil conditioners, and fertilizers are applied.

Please see **Section 6** of the accompanying Supplemental Report

5. History of Leaks and Spills
Provide information regarding the history of significant leaks or spills of toxic or hazardous pollutants at the facility in the last three years, including the approximate date and location of the spill or leak and the type and amount of material released.

Please see **Section 6.6** of the accompanying Supplemental Report

6. Non-Stormwater Discharge Determination
Describe the evaluation method(s) for determining the presence of non-storm water discharges in storm water outfalls named in this application. For any storm water outfall covered by this application, the signature on page 37 constitutes certification that the outfalls have been tested or evaluated for the presence of non-stormwater discharges, and that all non-stormwater discharges from these outfall(s) are identified in this application. Refer to LAC 33:IX.2511.C.1.a.iii.

The facility is designed to segregate process wastewaters from stormwater via dedicated infrastructure. Commingled process area stormwater and non-stormwater effluents are routed for treatment prior to discharge.

H. Alternate Permit Information

1. Are storm water discharges covered by the Multi-Sector Storm Water General Permit?
[ ] Yes [X] No
If **yes**, provide the permit number: ____________

2. Does this facility have a Stormwater Pollution Prevention Plan (SWPPP)?
[X] Yes [ ] No

G. Additional Information for Stormwater Outfalls

1. Outfall Number **006**

2. Acreage
For all outfalls that convey storm water only or that include storm water combined with other waste steams, give the area drained by the outfall in acreage, extent of impervious surfaces (paved areas, rooftops), and describe the activities that occur in that area.

Please see **Section 5** of accompanying Supplemental Report.

3. List of Stored Chemicals and Products
List all chemicals and petroleum products stored outside and provide a description of the containment area.

All chemicals are either stored indoors or under covered areas.

4. Significant Materials
Describe all significant materials that are currently or have in the past three years been treated, stored, or disposed of in a manner to allow exposure to storm water. List the method of treatment, storage, or disposal; past and present materials management practices employed to minimize contact by these materials with stormwater runoff; materials loading and access areas; and the location, manner, and frequency in which pesticides, herbicides, soil conditioners, and fertilizers are applied.

Please see **Section 6** of the accompanying Supplemental Report

5. History of Leaks and Spills
Provide information regarding the history of significant leaks or spills of toxic or hazardous pollutants at the facility in the last three years, including the approximate date and location of the spill or leak and the type and amount of material released.

Please see **Section 6.6** of the accompanying Supplemental Report

6. Non-Stormwater Discharge Determination
Describe the evaluation method(s) for determining the presence of non-storm water discharges in storm water outfalls named in this application. For any storm water outfall covered by this application, the signature on page 37 constitutes certification that the outfalls have been tested or evaluated for the presence of non-stormwater discharges, and that all non-stormwater discharges from these outfall(s) are identified in this application. Refer to LAC 33:IX.2511.C.1.a.iii.

The facility is designed to segregate process wastewaters from stormwater via dedicated infrastructure. Commingled process area stormwater and non-stormwater effluents are routed for treatment prior to discharge.

H. Alternate Permit Information

1. Are storm water discharges covered by the Multi-Sector Storm Water General Permit?
[ ] Yes [X] No
If **yes**, provide the permit number: ________

2. Does this facility have a Stormwater Pollution Prevention Plan (SWPPP)?
[X] Yes [ ] No

G. Additional Information for Stormwater Outfalls

1. Outfall Number **007**

2. Acreage
For all outfalls that convey storm water only or that include storm water combined with other waste steams, give the area drained by the outfall in acreage, extent of impervious surfaces (paved areas, rooftops), and describe the activities that occur in that area.

Please see **Section 5** of accompanying Supplemental Report.

3. List of Stored Chemicals and Products
List all chemicals and petroleum products stored outside and provide a description of the containment area.

All chemicals are either stored indoors or under covered areas.

4. Significant Materials
Describe all significant materials that are currently or have in the past three years been treated, stored, or disposed of in a manner to allow exposure to storm water. List the method of treatment, storage, or disposal; past and present materials management practices employed to minimize contact by these materials with stormwater runoff; materials loading and access areas; and the location, manner, and frequency in which pesticides, herbicides, soil conditioners, and fertilizers are applied.

Please see **Section 6** of the accompanying Supplemental Report

5. History of Leaks and Spills
Provide information regarding the history of significant leaks or spills of toxic or hazardous pollutants at the facility in the last three years, including the approximate date and location of the spill or leak and the type and amount of material released.

Please see **Section 6.6** of the accompanying Supplemental Report

6. Non-Stormwater Discharge Determination
Describe the evaluation method(s) for determining the presence of non-storm water discharges in storm water outfalls named in this application. For any storm water outfall covered by this application, the signature on page 37 constitutes certification that the outfalls have been tested or evaluated for the presence of non-stormwater discharges, and that all non-stormwater discharges from these outfall(s) are identified in this application. Refer to LAC 33:IX.2511.C.1.a.iii.

The facility is designed to segregate process wastewaters from stormwater via dedicated infrastructure. Commingled process area stormwater and non-stormwater effluents are routed for treatment prior to discharge.

H. Alternate Permit Information

1. Are storm water discharges covered by the Multi-Sector Storm Water General Permit?
[ ] Yes [X] No

If **yes**, provide the permit number: ____________________

2. Does this facility have a Stormwater Pollution Prevention Plan (SWPPP)?
[X] Yes [ ] No

G. Additional Information for Stormwater Outfalls

1. Outfall Number **008**

2. Acreage
For all outfalls that convey storm water only or that include storm water combined with other waste steams, give the area drained by the outfall in acreage, extent of impervious surfaces (paved areas, rooftops), and describe the activities that occur in that area.

Please see **Section 5** of accompanying Supplemental Report.

3. List of Stored Chemicals and Products
List all chemicals and petroleum products stored outside and provide a description of the containment area.

All chemicals are either stored indoors or under covered areas.

4. Significant Materials
Describe all significant materials that are currently or have in the past three years been treated, stored, or disposed of in a manner to allow exposure to storm water. List the method of treatment, storage, or disposal; past and present materials management practices employed to minimize contact by these materials with stormwater runoff; materials loading and access areas; and the location, manner, and frequency in which pesticides, herbicides, soil conditioners, and fertilizers are applied.

Please see **Section 6** of the accompanying Supplemental Report

5. History of Leaks and Spills
Provide information regarding the history of significant leaks or spills of toxic or hazardous pollutants at the facility in the last three years, including the approximate date and location of the spill or leak and the type and amount of material released.

Please see **Section 6.6** of the accompanying Supplemental Report

6. Non-Stormwater Discharge Determination
Describe the evaluation method(s) for determining the presence of non-storm water discharges in storm water outfalls named in this application. For any storm water outfall covered by this application, the signature on page 37 constitutes certification that the outfalls have been tested or evaluated for the presence of non-stormwater discharges, and that all non-stormwater discharges from these outfall(s) are identified in this application. Refer to LAC 33:IX.2511.C.1.a.iii.

The facility is designed to segregate process wastewaters from stormwater via dedicated infrastructure. Commingled process area stormwater and non-stormwater effluents are routed for treatment prior to discharge.

H. Alternate Permit Information

1. Are storm water discharges covered by the Multi-Sector Storm Water General Permit?
[ ] Yes [X] No
If **yes**, provide the permit number: ______

2. Does this facility have a Stormwater Pollution Prevention Plan (SWPPP)?
[X] Yes [ ] No

G. Additional Information for Stormwater Outfalls

1. Outfall Number **009**

2. Acreage
For all outfalls that convey storm water only or that include storm water combined with other waste steams, give the area drained by the outfall in acreage, extent of impervious surfaces (paved areas, rooftops), and describe the activities that occur in that area.

Please see **Section 5** of accompanying Supplemental Report.

Proposing to rename as "Outfall 004"

3. List of Stored Chemicals and Products
List all chemicals and petroleum products stored outside and provide a description of the containment area.

All chemicals are either stored indoors or under covered areas.

4. Significant Materials
Describe all significant materials that are currently or have in the past three years been treated, stored, or disposed of in a manner to allow exposure to storm water. List the method of treatment, storage, or disposal; past and present materials management practices employed to minimize contact by these materials with stormwater runoff; materials loading and access areas; and the location, manner, and frequency in which pesticides, herbicides, soil conditioners, and fertilizers are applied.

Please see **Section 6** of the accompanying Supplemental Report

5. History of Leaks and Spills
Provide information regarding the history of significant leaks or spills of toxic or hazardous pollutants at the facility in the last three years, including the approximate date and location of the spill or leak and the type and amount of material released.

Please see **Section 6.6** of the accompanying Supplemental Report.

6. Non-Stormwater Discharge Determination
Describe the evaluation method(s) for determining the presence of non-storm water discharges in storm water outfalls named in this application. For any storm water outfall covered by this application, the signature on page 37 constitutes certification that the outfalls have been tested or evaluated for the presence of non-stormwater discharges, and that all non-stormwater discharges from these outfall(s) are identified in this application. Refer to LAC 33:IX.2511.C.1.a.iii.

The facility is designed to segregate process wastewaters from stormwater via dedicated infrastructure. Commingled process area stormwater and non-stormwater effluents are routed for treatment prior to discharge.

H. Alternate Permit Information

1. Are storm water discharges covered by the Multi-Sector Storm Water General Permit?
[ ] Yes [X] No

If **yes**, provide the permit number:

2. Does this facility have a Stormwater Pollution Prevention Plan (SWPPP)?
[X] Yes [ ] No

SECTION III – LABORATORY ANALYSIS

A. Lab Analysis.

Complete this section for **each** outfall. Make additional copies of the attached tables as necessary.

Sampling and analytical protocols must conform to the requirements in LAC 33:IX.Chapters 25, LAC 33:IX.7107, and 40 CFR Part 136. When no analytical method is approved, the applicant may use any suitable method but must provide a description of the method.

Analytical Tables Attached in this Application

I Conventional and Nonconventional Pollutants
II Other Toxic Pollutants (Metals and Cyanide) and Total Phenols
III Organic Toxic Pollutants in Each of the Four Fractions in Analysis by Gas Chromatography/Mass Spectroscopy (GS/MS)
IV Additional Conventional and Nonconventional Pollutants
V Toxic Pollutants and Hazardous Substances
VI Dioxins
VII Other (as Needed)

Laboratory procedures and analyses performed by commercial laboratories shall be conducted in accordance with the requirements set forth under LAC 33:I.Subpart 3, Chapters 49-55.

Laboratory data generated by commercial laboratories that are not accredited under LAC 33:I.Subpart 3, Chapters 47-57, will not be accepted by the department. Retesting of analysis will be required by an accredited commercial laboratory.

Are you requesting a waiver for any Table I parameters in accordance with LAC 33:IX.2501.G.7.d, LAC 33:IX.2501.K.5.a or LAC 33:IX.H.2501.4.b (for facilities that discharge only non-process wastewater)?

[ ] Yes [X] No

If you are requesting a waiver, please provide a list of parameters and the justification for each.

N/A

Analytical Requirements Per LAC 33:IX.2501.G.7 and LAC 33:IX.2511.C.1

SECTION III – LABORATORY ANALYSIS

For all wastestreams excluding stormwater: Grab samples must be used for pH, temperature, cyanide, total phenols, residual chlorine, oil and grease, fecal coliform, and fecal streptococcus. For all other pollutants 24-hour composite samples must be used.

For stormwater: Grab sample taken in first 30 minutes of flow for all parameters. Additionally, composite samples are required for all parameters except: pH, temperature, cyanide, total phenols, oil & grease, fecal coliform and fecal streptococcus. Indicate grab sample or composite on each table. Make additional copies as needed.

B. Manufacturing, Commercial, Mining, and Silvicultural Facilities With Operations Included on the Primary Industrial Category List Located at Section II.A

1. Outfalls Containing Process Wastewater
   a. Tables I & II – Quantitative data is **REQUIRED** for **ALL** Pollutants in these tables.
   b. Table III - Quantitative data is **REQUIRED** for **ALL** Pollutants under the appropriate fractions as listed in the table under Section II.A.
   c. Tables IV & VI – Permittee must indicate whether it knows or has reason to believe that any of the pollutants in these tables are present. If believed present, then quantitative data is required to be submitted.
   d. Table V – Permittee must indicate whether it knows or has reason to believe that any of the pollutants in this table are present. If believed present, you must briefly describe the reasons the pollutant is expected to be discharged and you must report any quantitative data available.
   e. Table VII – Not Required

2. Outfalls Containing Non-Process and Miscellaneous Discharges That Are Not Commingled with Stormwater Runoff
   a. Table I – Quantitative data is **REQUIRED** for **ALL** Pollutants in this table.
   b. Table IV - Quantitative data is Required for Total Residual Chlorine (if noncontact cooling water is or will be discharged). Additionally, the permittee must indicate whether it knows or has reason to believe that any of the pollutants in this table are present. If believed present, then quantitative data is required to be submitted.
   c. Tables II, III, V, VI, & VII – Not Required

3. Outfalls Containing Sanitary Wastewater
   a. Table I - Quantitative data is **REQUIRED** for **ALL** Pollutants in this table.
   b. Table IV – Quantitative data is Required for Fecal Coliform.
   c. Tables II, III, V, VI, & VII – Not Required

4. Outfalls Containing Stormwater Runoff, Including Those Outfalls Mixed With Other Non-Process Wastewaters and/or Miscellaneous Discharges
   a. Tables I – Quantitative data is **REQUIRED** for **ALL** Pollutants in this table.
   b. Table IV - Quantitative data is Required for Total Phosphorus, Total Kjeldahl Nitrogen, Nitrate-Nitrite, and Total Residual Chlorine (if noncontact cooling water is or will be discharged). Additionally, the permittee must indicate whether it knows or has reason to believe that any of the pollutants in this table are present. If believed present, then quantitative data is required to be submitted.
   c. Tables II, III, & VI – Permittee must indicate whether it knows or has reason to believe that any of the pollutants in these tables are present. If believed present, then quantitative data is required to be submitted.
   d. Table V – Permittee must indicate whether it knows or has reason to believe that any of the pollutants in this table are present. If believed present, you must briefly describe the reasons the pollutant is expected to be discharged and you must report any quantitative data available.
   e. Table VII – As Needed (*)

      (*) The permittee is required to submit quantitative data for any pollutant limited in an effluent guideline to which the facility is subject and/or any pollutant listed in the facility's LPDES permit for its process wastewater (if operating under an existing permit) and not already listed in Tables I-VI.

SECTION III – LABORATORY ANALYSIS

<u>Analytical Requirements Per LAC 33:IX.2501.H.4 and LAC 33:IX.2511.C.1</u>

For all wastestreams excluding stormwater: Grab samples must be used for pH, temperature, cyanide, total phenols, residual chlorine, oil and grease, fecal coliform, and fecal streptococcus. For all other pollutants 24-hour composite samples must be used.

For stormwater: Grab sample taken in first 30 minutes of flow for all parameters. Additionally, composite samples are required for all parameters except: pH, temperature, cyanide, total phenols, oil & grease, fecal coliform and fecal streptococcus. Indicate grab sample or composite on each table. Make additional copies as needed.

C. Existing Manufacturing, Commercial, Mining, and Silvicultural Facilities That DO NOT Have 1 or More Operations Identified in the Primary Industrial Category List Located at Section II.A

1. <u>Outfalls Containing Process Wastewater</u>
   - a. Table I - Quantitative data is **REQUIRED** for **ALL** Pollutants in this table.
   - b. Tables II, III, IV, & VI – Permittee must indicate whether it knows or has reason to believe that any of the pollutants in these tables are present. If believed present, then quantitative data is required to be submitted.
   - c. Table V – Permittee must indicate whether it knows or has reason to believe that any of the pollutants in this table are present. If believed present, you must briefly describe the reasons the pollutant is expected to be discharged and you must report any quantitative data available.
   - d. Table VII – Not Required

2. <u>Outfalls Containing Non-Process and Miscellaneous Discharges That Are Not Commingled with Stormwater Runoff</u>
   - a. Table I - Quantitative data is **REQUIRED** for **ALL** Pollutants in this table.
   - b. Table IV - Quantitative data is Required for Total Residual Chlorine (if noncontact cooling water is or will be discharged). Permittee must also indicate whether it knows or has reason to believe that any of the other pollutants in this table are present. If believed present, then quantitative data is required to be submitted.
   - c. Tables II, III, V, VI, & VII – Not Required

3. <u>Outfalls Containing Sanitary Wastewater</u>
   - a. Table I - Quantitative data is **REQUIRED** for **ALL** Pollutants in this table.
   - b. Table IV - Quantitative data is Required for Fecal Coliform.
   - c. Tables II, III, V, VI, & VII – Not Required

4. <u>Outfalls Containing Stormwater Runoff, Including Those Outfalls Mixed With Other Non-Process Wastewaters and/or Miscellaneous Discharges</u>
   - a. Table I - Quantitative data is **REQUIRED** for **ALL** Pollutants in this table.
   - b. Table IV - Quantitative data is Required for Total Phosphorus, Total Kjeldahl Nitrogen, Nitrate-Nitrite, and Total Residual Chlorine (if noncontact cooling water is or will be discharged). Additionally, the permittee must indicate whether it knows or has reason to believe that any of the other pollutants in this table are present. If believed present, then quantitative data is required to be submitted.
   - c. Tables II, III, & VI – Permittee must indicate whether it knows or has reason to believe that any of the pollutants in these tables are present. If believed present, then quantitative data is required to be submitted.
   - d. Table V – Permittee must indicate whether it knows or has reason to believe that any of the pollutants in this table are present. If believed present, you must briefly describe the reasons the pollutant is expected to be discharged and you must report any quantitative data available.
   - e. Table VII – As Needed (*)
     - (*) The permittee is required to submit quantitative data for any pollutant limited in an effluent guideline to which the facility is subject and/or any pollutant listed in the facility's LPDES permit for its process wastewater (if operating under an existing permit) and not already included in Tables I-VI.

SECTION III – LABORATORY ANALYSIS

D. New Source Discharger - Manufacturing, Commercial, Mining, and Silvicultural Facilities That DO NOT Have 1 or More Operations Identified in the Primary Industrial Category List Located at Section II.A

For all wastestreams excluding stormwater: Grab samples must be used for pH, temperature, cyanide, total phenols, residual chlorine, oil and grease, fecal coliform, and fecal streptococcus. For all other pollutants 24-hour composite samples must be used.

For stormwater: Grab sample taken in first 30 minutes of flow for all parameters. Additionally, composite samples are required for all parameters except: pH, temperature, cyanide, total phenols, oil & grease, fecal coliform and fecal streptococcus. Indicate grab sample or composite on each table. Make additional copies as needed.

<u>ALL OUTFALLS</u>

a. Table I - Quantitative data or estimated data using Best Engineering Judgment is **REQUIRED** for **ALL** Pollutants in this table.

b. Tables II, III, IV, V, VI & VII – Not Required

Additional Information for New Source Dischargers discharging process wastewater.

1. **Engineering Report.**
Are there any technical evaluations concerning your wastewater treatment system, including engineering reports or pilot plant studies?
N/A

2. **Similar Operations.**
Provide the name and location of any existing plant(s) which, to the best of your knowledge, resembles this facility with respect to processes, wastewater constituents, or wastewater treatment.
N/A

SECTION III – LABORATORY ANALYSIS

TABLE I:

CONVENTIONAL AND NONCONVENTIONAL POLLUTANTS

OUTFALL NUMBER

001

[X] Grab [ ] Composite

POLLUTANT	EFFLUENT ANALYSIS						UNITS	
	MAXIMUM DAILY VALUE		MAXIMUM 30 DAY VALUE		LONG TERM AVERAGE VALUE			
	CONCENTRATION	MASS	CONCENTRATION	MASS	CONCENTRATION	MASS	CONCENTRATION	MASS
BOD_5	**<3**	----	----	----	----	----	mg/L	----
COD	**50**	----	----	----	----	----	mg/L	----
TOC	**9.5**	----	----	----	----	----	mg/L	----
Oil & Grease	**<5**	----	----	----	----	----	mg/L	----
Ammonia (as N)	**<0.1**	----	----	----	----	----	mg/L	----
Total Suspended Solids (TSS)	**120**	----	----	----	----	----	mg/L	----
Total Dissolved Solids (TDS) [1]	----	----	----	----	----	----	----	----
Hardness as $CaCo_3$[1]	----	----	----	----	----	----	----	----
Flow	Value **4.14**		Value ----		Value ----		MGD	
Temperature (winter) °F	Value **83.2**		Value ----		Value ----		DEGREES FAHRENHEIT	
Temperature (summer) °F	Value ----		Value ----		Value ----		DEGREES FAHRENHEIT	
pH (SU)	Minimum **4.0**	Maximum	Minimum	Maximum			STANDARD UNITS	

[1] TDS and Hardness are required for discharges of cooling tower blowdown.

Outfall 001 sampled on October 13, 2022.

SECTION III – LABORATORY ANALYSIS

TABLE I:

CONVENTIONAL AND NONCONVENTIONAL POLLUTANTS

OUTFALL NUMBER

101

☐ Grab ☐ Composite

POLLUTANT	**EFFLUENT ANALYSIS**						**UNITS**	
	MAXIMUM DAILY VALUE		MAXIMUM 30 DAY VALUE		LONG TERM AVERAGE VALUE		CONCENTRATION	MASS
	CONCENTRATION	MASS	CONCENTRATION	MASS	CONCENTRATION	MASS		
BOD_5	----	----	----	----	----	----	----	----
COD	----	----	----	----	----	----	----	----
TOC	----	----	----	----	----	----	----	----
Oil & Grease	----	----	----	----	----	----	----	----
Ammonia (as N)	----	----	----	----	----	----	----	----
Total Suspended Solids (TSS)	----	----	----	----	----	----	----	----
Total Dissolved Solids (TDS) [1]	----	----	----	----	----	----	----	----
Hardness as $CaCo_3$[1]	----	----	----	----	----	----	----	----
Flow	Value ----		Value ----		Value ----			
Temperature (winter) °F	Value ----		Value ----		Value ----		DEGREES FAHRENHEIT	
Temperature (summer) °F	Value ----		Value ----		Value ----		DEGREES FAHRENHEIT	
pH (SU)	Minimum ----	Maximum ----	Minimum	Maximum			STANDARD UNITS	

[1] TDS and Hardness are required for discharges of cooling tower blowdown.

Outfall 101 has no discharge.

SECTION III – LABORATORY ANALYSIS

TABLE I:

CONVENTIONAL AND NONCONVENTIONAL POLLUTANTS

OUTFALL NUMBER

201

☐ Grab ☒ Composite

POLLUTANT	EFFLUENT ANALYSIS						UNITS	
	MAXIMUM DAILY VALUE		MAXIMUM 30 DAY VALUE		LONG TERM AVERAGE VALUE			
	CONCENTRATION	MASS	CONCENTRATION	MASS	CONCENTRATION	MASS	CONCENTRATION	MASS
BOD_5	**4***	----	----	----	----	----	mg/L	----
COD	**23***	----	----	----	----	----	mg/L	----
TOC	**9.85***	----	----	----	----	----	mg/L	----
Oil & Grease	**2.43****	----	----	----	----	----	mg/L	----
Ammonia (as N)	**0.16***	----	----	----	----	----	mg/L	----
Total Suspended Solids (TSS)	**ND***	----	----	----	----	----	mg/L	----
Total Dissolved Solids (TDS) [1]	**700***	----	----	----	----	----	mg/L	----
Hardness as $CaCo_3$[1]	**285***	----	----	----	----	----	mg/L	----
Flow	Value **1.92****		Value ----		Value ----		MGD	
Temperature (winter) °F	Value **87.2****		Value ----		Value ----		DEGREES FAHRENHEIT	
Temperature (summer) °F	Value ----		Value ----		Value ----		DEGREES FAHRENHEIT	
pH (SU)	Minimum **8.1*****	Maximum	Minimum	Maximum			STANDARD UNITS	

[1] TDS and Hardness are required for discharges of cooling tower blowdown.

*Outfall 201 sampled March 9, 2023. The BOD5 value represented in the table above is a calculated flow-weighted average over a 24-hr period.

**Outfall 201 data from DMR monitoring period end date of January 31, 2023.

***Outfall 201 pH value collected from sampling event on October 13, 2022.

SECTION III – LABORATORY ANALYSIS

TABLE I:

CONVENTIONAL AND NONCONVENTIONAL POLLUTANTS

OUTFALL NUMBER

301

☐ Grab ☒ Composite

POLLUTANT	EFFLUENT ANALYSIS						UNITS	
	MAXIMUM DAILY VALUE		MAXIMUM 30 DAY VALUE		LONG TERM AVERAGE VALUE			
	CONCENTRATION	MASS	CONCENTRATION	MASS	CONCENTRATION	MASS	CONCENTRATION	MASS
BOD_5	----	**23*** **	----	----	----	----	----	lb/d
COD	**50.0****	----	----	----	----	----	mg/L	----
TOC	**8.8****	----	----	----	----	----	mg/L	----
Oil & Grease	**ND****	----	----	----	----	----	mg/L	----
Ammonia (as N)	**0.21****	----	----	----	----	----	mg/L	----
Total Suspended Solids (TSS)	----	**29*** **	----	----	----	----	----	lb/d
Total Dissolved Solids (TDS) [1]	**6,220***	----	----	----	----	----	mg/L	----
Hardness as $CaCo_3$[1]	**509***	----	----	----	----	----	mg/L	----
Flow	Value **0.3*** **		Value ----		Value ----		MGD	
Temperature (winter) °F	Value **81.32****		Value ----		Value ----		DEGREES FAHRENHEIT	
Temperature (summer) °F	Value ----		Value ----		Value ----		DEGREES FAHRENHEIT	
pH (SU)	Minimum **8.1**	Maximum	Minimum	Maximum			STANDARD UNITS	

[1] TDS and Hardness are required for discharges of cooling tower blowdown.

*Outfall 301 sampled on March 9, 2023

**Outfall 301 sampled on October 21, 2022

***Outfall 301 data from DMR monitoring period end date of February 28, 2023.

SECTION III – LABORATORY ANALYSIS

TABLE I:

CONVENTIONAL AND NONCONVENTIONAL POLLUTANTS

OUTFALL NUMBER

401

X Grab ☐ Composite

POLLUTANT	EFFLUENT ANALYSIS						UNITS	
	MAXIMUM DAILY VALUE		MAXIMUM 30 DAY VALUE		LONG TERM AVERAGE VALUE			
	CONCENTRATION	MASS	CONCENTRATION	MASS	CONCENTRATION	MASS	CONCENTRATION	MASS
BOD_5	**10.5****	----	----	----	----	----	mg/L	----
COD	**39.0****	----	----	----	----	----	mg/L	----
TOC	**1.3***	----	----	----	----	----	mg/L	----
Oil & Grease	**12.1***	----	----	----	----	----	mg/L	----
Ammonia (as N)	**0.38****	----	----	----	----	----	mg/L	----
Total Suspended Solids (TSS)	**26.0****	----	----	----	----	----	mg/L	----
Total Dissolved Solids (TDS) [1]	----	----	----	----	----	----	----	----
Hardness as $CaCo_3$[1]	----	----	----	----	----	----	----	----
Flow	Value **0.15***		Value ----		Value ----		MGD	----
Temperature (winter) °F	Value **62.7****		Value ----		Value ----		DEGREES FAHRENHEIT	
Temperature (summer) °F	Value ----		Value ----		Value ----		DEGREES FAHRENHEIT	
pH (SU)	Minimum **8.07****	Maximum **8.07****	Minimum	Maximum			STANDARD UNITS	

[1] TDS and Hardness are required for discharges of cooling tower blowdown.

*Outfall 401 data from DMR monitoring period end date of December 31, 2022.

**Outfall 401 sampled November 14, 2022.

SECTION III – LABORATORY ANALYSIS

TABLE I:

CONVENTIONAL AND NONCONVENTIONAL POLLUTANTS

OUTFALL NUMBER

002

[X] Grab [ ] Composite

POLLUTANT	EFFLUENT ANALYSIS						UNITS	
	MAXIMUM DAILY VALUE		MAXIMUM 30 DAY VALUE		LONG TERM AVERAGE VALUE			
	CONCENTRATION	MASS	CONCENTRATION	MASS	CONCENTRATION	MASS	CONCENTRATION	MASS
BOD_5	**ND***	----	----	----	----	----	mg/L	----
COD	**25****	----	----	----	----	----	mg/L	----
TOC	**3.1****	----	----	----	----	----	mg/L	----
Oil & Grease	**5****	----	----	----	----	----	mg/L	----
Ammonia (as N)	**ND***	----	----	----	----	----	mg/L	----
Total Suspended Solids (TSS)	**34.0***	----	----	----	----	----	mg/L	----
Total Dissolved Solids (TDS) [1]	----	----	----	----	----	----	----	----
Hardness as $CaCo_3$[1]	----	----	----	----	----	----	----	----
Flow	Value **1.13****		Value ----		Value ----		MGD	----
Temperature (winter) °F	Value **74.66***		Value ----		Value ----		DEGREES FAHRENHEIT	
Temperature (summer) °F	Value ----		Value ----		Value ----		DEGREES FAHRENHEIT	
pH (SU)	Minimum **7.6****	Maximum	Minimum	Maximum			STANDARD UNITS	

[1] TDS and Hardness are required for discharges of cooling tower blowdown.

*Outfall 002 sampled on October 29, 2022

**Outfall 002 data from DMR monitoring period end date of December 31, 2022.

SECTION III – LABORATORY ANALYSIS

TABLE I:

CONVENTIONAL AND NONCONVENTIONAL POLLUTANTS

OUTFALL NUMBER

005

☒ Grab ☐ Composite

POLLUTANT	EFFLUENT ANALYSIS						UNITS	
	MAXIMUM DAILY VALUE		MAXIMUM 30 DAY VALUE		LONG TERM AVERAGE VALUE			
	CONCENTRATION	MASS	CONCENTRATION	MASS	CONCENTRATION	MASS	CONCENTRATION	MASS
BOD_5	**3.7****	----	----	----	----	----	mg/L	----
COD	**14.0****	----	----	----	----	----	mg/L	----
TOC	**6***	----	----	----	----	----	mg/L	----
Oil & Grease	**5***	----	----	----	----	----	mg/L	----
Ammonia (as N)	**ND****	----	----	----	----	----	mg/L	----
Total Suspended Solids (TSS)	**64.0****	----	----	----	----	----	mg/L	----
Total Dissolved Solids (TDS) [1]	----	----	----	----	----	----	----	----
Hardness as $CaCo_3$[1]	----	----	----	----	----	----	----	----
Flow	Value **0.68***		Value ----		Value ----		MGD	----
Temperature (winter) °F	Value **71.42****		Value ----		Value ----		DEGREES FAHRENHEIT	
Temperature (summer) °F	Value ----		Value ----		Value ----		DEGREES FAHRENHEIT	
pH (SU)	Minimum **7.7**	Maximum	Minimum	Maximum			STANDARD UNITS	

[1] TDS and Hardness are required for discharges of cooling tower blowdown.

*Outfall 005 data from DMR monitoring period end date of December 31, 2022.

**Outfall 005 sampled on October 29, 2022.

SECTION III – LABORATORY ANALYSIS

TABLE I:

CONVENTIONAL AND NONCONVENTIONAL POLLUTANTS

OUTFALL NUMBER

006

[X] Grab   [ ] Composite

POLLUTANT	EFFLUENT ANALYSIS						UNITS	
	MAXIMUM DAILY VALUE		MAXIMUM 30 DAY VALUE		LONG TERM AVERAGE VALUE			
	CONCENTRATION	MASS	CONCENTRATION	MASS	CONCENTRATION	MASS	CONCENTRATION	MASS
BOD_5	**6.4****	----	----	----	----	----	mg/L	----
COD	**20.0****	----	----	----	----	----	mg/L	----
TOC	**2***	----	----	----	----	----	mg/L	----
Oil & Grease	**5***	----	----	----	----	----	mg/L	----
Ammonia (as N)	**ND****	----	----	----	----	----	mg/L	----
Total Suspended Solids (TSS)	**60.0****	----	----	----	----	----	mg/L	----
Total Dissolved Solids (TDS) [1]	----	----	----	----	----	----	----	----
Hardness as $CaCo_3$[1]	----	----	----	----	----	----	----	----
Flow	Value **0.51***		Value ----		Value ----		MGD	----
Temperature (winter) °F	Value **72.86****		Value ----		Value ----		DEGREES FAHRENHEIT	
Temperature (summer) °F	Value ----		Value ----		Value ----		DEGREES FAHRENHEIT	
pH (SU)	Minimum **7.6***	Maximum	Minimum	Maximum			STANDARD UNITS	

[1] TDS and Hardness are required for discharges of cooling tower blowdown.

*Outfall 006 data from DMR monitoring period end date of December 31, 2022.

**Outfall 006 sampled October 29, 2022.

SECTION III – LABORATORY ANALYSIS

TABLE I:

OUTFALL NUMBER

007

CONVENTIONAL AND NONCONVENTIONAL POLLUTANTS

X Grab ☐ Composite

POLLUTANT	EFFLUENT ANALYSIS						UNITS	
	MAXIMUM DAILY VALUE		MAXIMUM 30 DAY VALUE		LONG TERM AVERAGE VALUE			
	CONCENTRATION	MASS	CONCENTRATION	MASS	CONCENTRATION	MASS	CONCENTRATION	MASS
BOD_5	**3.7***	----	----	----	----	----	mg/L	----
COD	**41.0***	----	----	----	----	----	mg/L	----
TOC	**15.3****	----	----	----	----	----	mg/L	----
Oil & Grease	**5****	----	----	----	----	----	mg/L	----
Ammonia (as N)	**ND***	----	----	----	----	----	mg/L	----
Total Suspended Solids (TSS)	**27.0***	----	----	----	----	----	mg/L	----
Total Dissolved Solids (TDS) [1]	----	----	----	----	----	----	----	----
Hardness as $CaCo_3$[1]	----	----	----	----	----	----	----	----
Flow	Value **3.74****		Value ----		Value ----		MGD	----
Temperature (winter) °F	Value **72.86***		Value ----		Value ----		DEGREES FAHRENHEIT	
Temperature (summer) °F	Value ----		Value ----		Value ----		DEGREES FAHRENHEIT	
pH (SU)	Minimum 7.8**	Maximum	Minimum	Maximum			STANDARD UNITS	

[1] TDS and Hardness are required for discharges of cooling tower blowdown.

*Outfall 007 sampled on October 25, 2022

**Outfall 007 data from DMR monitoring period end date of December 31, 2022.

SECTION III – LABORATORY ANALYSIS

TABLE I:

CONVENTIONAL AND NONCONVENTIONAL POLLUTANTS

OUTFALL NUMBER

008

X Grab ☐ Composite

POLLUTANT	EFFLUENT ANALYSIS						UNITS	
	MAXIMUM DAILY VALUE		MAXIMUM 30 DAY VALUE		LONG TERM AVERAGE VALUE			
	CONCENTRATION	MASS	CONCENTRATION	MASS	CONCENTRATION	MASS	CONCENTRATION	MASS
BOD_5	**ND****	----	----	----	----	----	mg/L	----
COD	**28.0****	----	----	----	----	----	mg/L	----
TOC	**5.7***	----	----	----	----	----	mg/L	----
Oil & Grease	**5***	----	----	----	----	----	mg/L	----
Ammonia (as N)	**0.15****	----	----	----	----	----	mg/L	----
Total Suspended Solids (TSS)	**65.0****	----	----	----	----	----	mg/L	----
Total Dissolved Solids (TDS) [1]	----	----	----	----	----	----	----	----
Hardness as $CaCo_3$[1]	----	----	----	----	----	----	----	----
Flow	Value **3.74***		Value ----		Value ----		MGD	----
Temperature (winter) °F	Value **64.8****		Value ----		Value ----		DEGREES FAHRENHEIT	
Temperature (summer) °F	Value ----		Value ----		Value ----		DEGREES FAHRENHEIT	
pH (SU)	Minimum **8***	Maximum	Minimum	Maximum			STANDARD UNITS	

[1] TDS and Hardness are required for discharges of cooling tower blowdown.

*Outfall 008 data from DMR monitoring period end date of December 31, 2022.

**Outfall 008 sampled November 14, 2022.

SECTION III – LABORATORY ANALYSIS

TABLE I:

CONVENTIONAL AND NONCONVENTIONAL POLLUTANTS

OUTFALL NUMBER

009

[X] Grab [ ] Composite

POLLUTANT	EFFLUENT ANALYSIS						UNITS	
	MAXIMUM DAILY VALUE		MAXIMUM 30 DAY VALUE		LONG TERM AVERAGE VALUE			
	CONCENTRATION	MASS	CONCENTRATION	MASS	CONCENTRATION	MASS	CONCENTRATION	MASS
BOD_5	**6.2****	----	----	----	----	----	mg/L	----
COD	**51.0****	----	----	----	----	----	mg/L	----
TOC	**7.9***	----	----	----	----	----	mg/L	----
Oil & Grease	**5***	----	----	----	----	----	mg/L	----
Ammonia (as N)	**0.27****	----	----	----	----	----	mg/L	----
Total Suspended Solids (TSS)	**16.0****	----	----	----	----	----	mg/L	----
Total Dissolved Solids (TDS) [1]	----	----	----	----	----	----	----	----
Hardness as $CaCo_3$[1]	----	----	----	----	----	----	----	----
Flow	Value **3.42***		Value ----		Value ----		MGD	----
Temperature (winter) °F	Value **65.6****		Value ----		Value ----		DEGREES FAHRENHEIT	
Temperature (summer) °F	Value ----		Value ----		Value ----		DEGREES FAHRENHEIT	
pH (SU)	Minimum **7.9***	Maximum	Minimum	Maximum			STANDARD UNITS	

[1] TDS and Hardness are required for discharges of cooling tower blowdown.

*Outfall 009 data from DMR monitoring period end date of December 31, 2022.

**Outfall 009 sampled on November 14, 2022.

SECTION III – LABORATORY ANALYSIS

TABLE II:

OTHER TOXIC POLLUTANTS (METALS AND CYANIDE) AND TOTAL PHENOLS

OUTFALL NUMBER

301

[X] Grab [ ] Composite

POLLUTANT	MARK X			MQL (*) µg/L	EFFLUENT ANALYSIS						UNITS	
	TESTING REQUIRED	BELIEVED PRESENT	BELIEVED ABSENT		MAXIMUM DAILY VALUE		MAXIMUM 30 DAY VALUE		LONG TERM AVERAGE VALUE		CONCEN-TRATION	MASS
					CONCENTRATION	MASS	CONCENTRATION	MASS	CONCENTRATION	MASS		
Antimony, Total	X			60	**ND**[1]	----	----	----	----	----	ug/L	----
Arsenic, Total	X			5	**ND**[1]	----	----	----	----	----	ug/L	----
Beryllium, Total	X			0.5	**ND**[1]	----	----	----	----	----	ug/L	----
Cadmium, Total	X			1	**ND**[1]	----	----	----	----	----	ug/L	----
Chromium, Total	X			10	**19.0**[1]	----	----	----	----	----	ug/L	----
Copper, Total	X			3	**0.02**[2]	----	----	----	----	----	ug/L	----
Lead, Total	X			2	**ND**[1]	----	----	----	----	----	ug/L	----
Mercury, Total	X			0.005	**2.36**[1]	----	----	----	----	----	ug/L	----
Nickel, Total [Marine]	X			5	**----**	----	----	----	----	----	ug/L	----
Nickel, Total [Freshwater]	X			5	**0.01**[2]	----	----	----	----	----	ug/L	----
Selenium, Total	X			5	**ND**[1]	----	----	----	----	----	ug/L	----
Silver, Total	X			0.5	**ND**[1]	----	----	----	----	----	ug/L	----
Thallium, Total	X			0.5	**ND**[1]	----	----	----	----	----	ug/L	----
Zinc, Total	X			20	**0.03**[2]	----	----	----	----	----	ug/L	----
Cyanide, Total	X			10	**ND**[1]	----	----	----	----	----	ug/L	----
Phenols, Total	X			5	**0.054**[1]	----	----	----	----	----	ug/L	----

(*) Minimum Quantification Level (MQL)

[1] Outfall 301 sampled on October 21, 2022

[2]Outfall 301 data from DMR monitoring period end date of February 28, 2023.

SECTION III – LABORATORY ANALYSIS

TABLE II:

OTHER TOXIC POLLUTANTS (METALS AND CYANIDE) AND TOTAL PHENOLS

OUTFALL NUMBER

401

☐ Grab ☐ Composite

POLLUTANT	MARK X			MQL (*) µg/L	EFFLUENT ANALYSIS						UNITS	
	TESTING REQUIRED	BELIEVED PRESENT	BELIEVED ABSENT		MAXIMUM DAILY VALUE		MAXIMUM 30 DAY VALUE		LONG TERM AVERAGE VALUE		CONCEN-TRATION	MASS
					CONCENTRATION	MASS	CONCENTRATION	MASS	CONCENTRATION	MASS		
Antimony, Total			X	60	----	----	----	----	----	----	----	----
Arsenic, Total			X	5	----	----	----	----	----	----	----	----
Beryllium, Total			X	0.5	----	----	----	----	----	----	----	----
Cadmium, Total			X	1	----	----	----	----	----	----	----	----
Chromium, Total			X	10	----	----	----	----	----	----	----	----
Copper, Total			X	3	----	----	----	----	----	----	----	----
Lead, Total			X	2	----	----	----	----	----	----	----	----
Mercury, Total			X	0.005	----	----	----	----	----	----	----	----
Nickel, Total [Marine]			X	5	----	----	----	----	----	----	----	----
Nickel, Total [Freshwater]			X	5	----	----	----	----	----	----	----	----
Selenium, Total			X	5	----	----	----	----	----	----	----	----
Silver, Total			X	0.5	----	----	----	----	----	----	----	----
Thallium, Total			X	0.5	----	----	----	----	----	----	----	----
Zinc, Total			X	20	----	----	----	----	----	----	----	----
Cyanide, Total			X	10	----	----	----	----	----	----	----	----
Phenols, Total			X	5	----	----	----	----	----	----	----	----

(*) Minimum Quantification Level (MQL)

SECTION III – LABORATORY ANALYSIS

TABLE II:

OTHER TOXIC POLLUTANTS (METALS AND CYANIDE) AND TOTAL PHENOLS

OUTFALL NUMBER

002

[X] Grab [ ] Composite

POLLUTANT	MARK X			MQL (*) µg/L	EFFLUENT ANALYSIS						UNITS	
	TESTING REQUIRED	BELIEVED PRESENT	BELIEVED ABSENT		MAXIMUM DAILY VALUE		MAXIMUM 30 DAY VALUE		LONG TERM AVERAGE VALUE		CONCEN-TRATION	MASS
					CONCENTRATION	MASS	CONCENTRATION	MASS	CONCENTRATION	MASS		
Antimony, Total			X	60	----	----	----	----	----	----	----	----
Arsenic, Total			X	5	----	----	----	----	----	----	----	----
Beryllium, Total			X	0.5	----	----	----	----	----	----	----	----
Cadmium, Total			X	1	----	----	----	----	----	----	----	----
Chromium, Total			X	10	----	----	----	----	----	----	----	----
Copper, Total			X	3	----	----	----	----	----	----	----	----
Lead, Total			X	2	----	----	----	----	----	----	----	----
Mercury, Total			X	0.005	----	----	----	----	----	----	----	----
Nickel, Total [Marine]			X	5	----	----	----	----	----	----	----	----
Nickel, Total [Freshwater]			X	5	----	----	----	----	----	----	----	----
Selenium, Total			X	5	----	----	----	----	----	----	----	----
Silver, Total			X	0.5	----	----	----	----	----	----	----	----
Thallium, Total			X	0.5	----	----	----	----	----	----	----	----
Zinc, Total			X	20	----	----	----	----	----	----	----	----
Cyanide, Total			X	10	----	----	----	----	----	----	----	----
Phenols, Total			X	5	----	----	----	----	----	----	----	----

(*) Minimum Quantification Level (MQL)

SECTION III – LABORATORY ANALYSIS

TABLE II:

OTHER TOXIC POLLUTANTS (METALS AND CYANIDE) AND TOTAL PHENOLS

OUTFALL NUMBER

005

☐ Grab ☐ Composite

POLLUTANT	**MARK X**			**MQL (*) µg/L**	**EFFLUENT ANALYSIS**						**UNITS**	
	TESTING REQUIRED	BELIEVED PRESENT	BELIEVED ABSENT		MAXIMUM DAILY VALUE		MAXIMUM 30 DAY VALUE		LONG TERM AVERAGE VALUE		CONCEN-TRATION	MASS
					CONCENTRATION	MASS	CONCENTRATION	MASS	CONCENTRATION	MASS		
Antimony, Total			X	60	----	----	----	----	----	----	----	----
Arsenic, Total			X	5	----	----	----	----	----	----	----	----
Beryllium, Total			X	0.5	----	----	----	----	----	----	----	----
Cadmium, Total			X	1	----	----	----	----	----	----	----	----
Chromium, Total			X	10	----	----	----	----	----	----	----	----
Copper, Total			X	3	----	----	----	----	----	----	----	----
Lead, Total			X	2	----	----	----	----	----	----	----	----
Mercury, Total			X	0.005	----	----	----	----	----	----	----	----
Nickel, Total [Marine]			X	5	----	----	----	----	----	----	----	----
Nickel, Total [Freshwater]			X	5	----	----	----	----	----	----	----	----
Selenium, Total			X	5	----	----	----	----	----	----	----	----
Silver, Total			X	0.5	----	----	----	----	----	----	----	----
Thallium, Total			X	0.5	----	----	----	----	----	----	----	----
Zinc, Total			X	20	----	----	----	----	----	----	----	----
Cyanide, Total			X	10	----	----	----	----	----	----	----	----
Phenols, Total			X	5	----	----	----	----	----	----	----	----

(*) Minimum Quantification Level (MQL)

SECTION III – LABORATORY ANALYSIS

TABLE II:

OTHER TOXIC POLLUTANTS (METALS AND CYANIDE) AND TOTAL PHENOLS

OUTFALL NUMBER

006

☐ Grab ☐ Composite

POLLUTANT	MARK X			MQL (*) µg/L	EFFLUENT ANALYSIS						UNITS	
					MAXIMUM DAILY VALUE		MAXIMUM 30 DAY VALUE		LONG TERM AVERAGE VALUE		CONCEN-TRATION	MASS
	TESTING REQUIRED	BELIEVED PRESENT	BELIEVED ABSENT		CONCENTRATION	MASS	CONCENTRATION	MASS	CONCENTRATION	MASS		
Antimony, Total			X	60	----	----	----	----	----	----	----	----
Arsenic, Total			X	5	----	----	----	----	----	----	----	----
Beryllium, Total			X	0.5	----	----	----	----	----	----	----	----
Cadmium, Total			X	1	----	----	----	----	----	----	----	----
Chromium, Total			X	10	----	----	----	----	----	----	----	----
Copper, Total			X	3	----	----	----	----	----	----	----	----
Lead, Total			X	2	----	----	----	----	----	----	----	----
Mercury, Total			X	0.005	----	----	----	----	----	----	----	----
Nickel, Total [Marine]			X	5	----	----	----	----	----	----	----	----
Nickel, Total [Freshwater]			X	5	----	----	----	----	----	----	----	----
Selenium, Total			X	5	----	----	----	----	----	----	----	----
Silver, Total			X	0.5	----	----	----	----	----	----	----	----
Thallium, Total			X	0.5	----	----	----	----	----	----	----	----
Zinc, Total			X	20	----	----	----	----	----	----	----	----
Cyanide, Total			X	10	----	----	----	----	----	----	----	----
Phenols, Total			X	5	----	----	----	----	----	----	----	----

(*) Minimum Quantification Level (MQL)

SECTION III – LABORATORY ANALYSIS

TABLE II:

OTHER TOXIC POLLUTANTS (METALS AND CYANIDE) AND TOTAL PHENOLS

OUTFALL NUMBER

007

☐ Grab ☐ Composite

POLLUTANT	MARK X			MQL (*) µg/L	EFFLUENT ANALYSIS						UNITS	
	TESTING REQUIRED	BELIEVED PRESENT	BELIEVED ABSENT		MAXIMUM DAILY VALUE		MAXIMUM 30 DAY VALUE		LONG TERM AVERAGE VALUE		CONCEN-TRATION	MASS
					CONCENTRATION	MASS	CONCENTRATION	MASS	CONCENTRATION	MASS		
Antimony, Total			X	60	----	----	----	----	----	----	----	----
Arsenic, Total			X	5	----	----	----	----	----	----	----	----
Beryllium, Total			X	0.5	----	----	----	----	----	----	----	----
Cadmium, Total			X	1	----	----	----	----	----	----	----	----
Chromium, Total			X	10	----	----	----	----	----	----	----	----
Copper, Total			X	3	----	----	----	----	----	----	----	----
Lead, Total			X	2	----	----	----	----	----	----	----	----
Mercury, Total			X	0.005	----	----	----	----	----	----	----	----
Nickel, Total [Marine]			X	5	----	----	----	----	----	----	----	----
Nickel, Total [Freshwater]			X	5	----	----	----	----	----	----	----	----
Selenium, Total			X	5	----	----	----	----	----	----	----	----
Silver, Total			X	0.5	----	----	----	----	----	----	----	----
Thallium, Total			X	0.5	----	----	----	----	----	----	----	----
Zinc, Total			X	20	----	----	----	----	----	----	----	----
Cyanide, Total			X	10	----	----	----	----	----	----	----	----
Phenols, Total			X	5	----	----	----	----	----	----	----	----

(*) Minimum Quantification Level (MQL)

SECTION III – LABORATORY ANALYSIS

TABLE II:

OTHER TOXIC POLLUTANTS (METALS AND CYANIDE) AND TOTAL PHENOLS

OUTFALL NUMBER

008

☐ Grab ☐ Composite

POLLUTANT	MARK X			MQL (*) µg/L	EFFLUENT ANALYSIS						UNITS	
	TESTING REQUIRED	BELIEVED PRESENT	BELIEVED ABSENT		MAXIMUM DAILY VALUE		MAXIMUM 30 DAY VALUE		LONG TERM AVERAGE VALUE		CONCEN-TRATION	MASS
					CONCENTRATION	MASS	CONCENTRATION	MASS	CONCENTRATION	MASS		
Antimony, Total			X	60	----	----	----	----	----	----	----	----
Arsenic, Total			X	5	----	----	----	----	----	----	----	----
Beryllium, Total			X	0.5	----	----	----	----	----	----	----	----
Cadmium, Total			X	1	----	----	----	----	----	----	----	----
Chromium, Total			X	10	----	----	----	----	----	----	----	----
Copper, Total			X	3	----	----	----	----	----	----	----	----
Lead, Total			X	2	----	----	----	----	----	----	----	----
Mercury, Total			X	0.005	----	----	----	----	----	----	----	----
Nickel, Total [Marine]			X	5	----	----	----	----	----	----	----	----
Nickel, Total [Freshwater]			X	5	----	----	----	----	----	----	----	----
Selenium, Total			X	5	----	----	----	----	----	----	----	----
Silver, Total			X	0.5	----	----	----	----	----	----	----	----
Thallium, Total			X	0.5	----	----	----	----	----	----	----	----
Zinc, Total			X	20	----	----	----	----	----	----	----	----
Cyanide, Total			X	10	----	----	----	----	----	----	----	----
Phenols, Total			X	5	----	----	----	----	----	----	----	----

(*) Minimum Quantification Level (MQL)

SECTION III – LABORATORY ANALYSIS

TABLE II:

OTHER TOXIC POLLUTANTS (METALS AND CYANIDE) AND TOTAL PHENOLS

OUTFALL NUMBER

009

☐ Grab ☐ Composite

POLLUTANT	MARK X			MQL (*) µg/L	EFFLUENT ANALYSIS						UNITS	
	TESTING REQUIRED	BELIEVED PRESENT	BELIEVED ABSENT		MAXIMUM DAILY VALUE		MAXIMUM 30 DAY VALUE		LONG TERM AVERAGE VALUE		CONCEN-TRATION	MASS
					CONCENTRATION	MASS	CONCENTRATION	MASS	CONCENTRATION	MASS		
Antimony, Total			X	60	----	----	----	----	----	----	----	----
Arsenic, Total			X	5	----	----	----	----	----	----	----	----
Beryllium, Total			X	0.5	----	----	----	----	----	----	----	----
Cadmium, Total			X	1	----	----	----	----	----	----	----	----
Chromium, Total			X	10	----	----	----	----	----	----	----	----
Copper, Total			X	3	----	----	----	----	----	----	----	----
Lead, Total			X	2	----	----	----	----	----	----	----	----
Mercury, Total			X	0.005	----	----	----	----	----	----	----	----
Nickel, Total [Marine]			X	5	----	----	----	----	----	----	----	----
Nickel, Total [Freshwater]			X	5	----	----	----	----	----	----	----	----
Selenium, Total			X	5	----	----	----	----	----	----	----	----
Silver, Total			X	0.5	----	----	----	----	----	----	----	----
Thallium, Total			X	0.5	----	----	----	----	----	----	----	----
Zinc, Total			X	20	----	----	----	----	----	----	----	----
Cyanide, Total			X	10	----	----	----	----	----	----	----	----
Phenols, Total			X	5	----	----	----	----	----	----	----	----

(*) Minimum Quantification Level (MQL)

SECTION III – LABORATORY ANALYSIS

TABLE III:

OUTFALL NUMBER

301

ORGANIC TOXIC POLLUTANTS IN EACH OF THE FOUR FRACTIONS IN ANALYSIS BY GAS CHROMATOGRAPHY/MASS SPECTROSCOPY (GS/MS)

☐ Grab ☒ Composite

POLLUTANT	MARK X			MQL (*) µg/L	EFFLUENT ANALYSIS						UNITS	
	TESTING REQUIRED	BELIEVED PRESENT	BELIEVED ABSENT		MAXIMUM DAILY VALUE		MAXIMUM 30 DAY VALUE		LONG TERM AVERAGE VALUE		CONCEN-TRATION	MASS
					CONCENTRATION	MASS	CONCENTRATION	MASS	CONCENTRATION	MASS		
VOLATILE ORGANIC CHEMICALS – EPA METHOD 624 SUGGESTED												
acrolein	X			50	**ND[1]**	----	----	----	----	----	ug/L	----
acrylonitrile	X			20	**ND[1]**	----	----	----	----	----	ug/L	----
benzene	X			10	**ND[1]**	----	----	----	----	----	ug/L	----
bromoform	X			10	**ND[1]**	----	----	----	----	----	ug/L	----
carbon tetrachloride	X			2	**ND[1]**	----	----	----	----	----	ug/L	----
chlorobenzene	X			10	**ND[1]**	----	----	----	----	----	ug/L	----
chlorodibromomethane	X			10	**ND[1]**	----	----	----	----	----	ug/L	----
chloroethane	X			50	**ND[1]**	----	----	----	----	----	ug/L	----
2-chloroethylvinyl ether	X			10	**ND[1]**	----	----	----	----	----	ug/L	----
1,2-dichlorobenzene	X			10	**ND[1]**	----	----	----	----	----	ug/L	----
1,3-dichlorobenzene	X			10	**ND[1]**	----	----	----	----	----	ug/L	----
1,4-dichlorobenzene	X			10	**ND[1]**	----	----	----	----	----	ug/L	----
chloroform	X			10	**3.0[1]**	----	----	----	----	----	ug/L	----
dichlorobromomethane	X			10	**ND[1]**	----	----	----	----	----	ug/L	----
1,1-dichloroethane	X			10	**ND[1]**	----	----	----	----	----	ug/L	----
1,2-dichloroethane	X			10	**ND[1]**	----	----	----	----	----	ug/L	----
1,1-dichloroethylene	X			10	**ND[1]**	----	----	----	----	----	ug/L	----
1,2-dichloropropane	X			10	**ND[1]**	----	----	----	----	----	ug/L	----
1,3-Dichloropropylene	X			10	**ND[1]**	----	----	----	----	----	ug/L	----
ethylbenzene	X			10	**ND[1]**	----	----	----	----	----	ug/L	----
methyl bromide	X			50	**ND[1]**	----	----	----	----	----	ug/L	----
methyl chloride	X			50	**ND[1]**	----	----	----	----	----	ug/L	----
methylene chloride	X			20	**ND[1]**	----	----	----	----	----	ug/L	----
1,1,2,2-tetrachloroethane	X			10	**ND[1]**	----	----	----	----	----	ug/L	----
tetrachloroethylene	X			10	**ND[1]**	----	----	----	----	----	ug/L	----
toluene	X			10	**ND[1]**	----	----	----	----	----	ug/L	----

SECTION III – LABORATORY ANALYSIS

TABLE III:

OUTFALL NUMBER

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ORGANIC TOXIC POLLUTANTS IN EACH OF THE FOUR FRACTIONS IN ANALYSIS BY GAS CHROMATOGRAPHY/MASS SPECTROSCOPY (GS/MS)

☐ Grab ☒ Composite

POLLUTANT	MARK X			MQL (*) µg/L	EFFLUENT ANALYSIS						UNITS	
	TESTING REQUIRED	BELIEVED PRESENT	BELIEVED ABSENT		MAXIMUM DAILY VALUE		MAXIMUM 30 DAY VALUE		LONG TERM AVERAGE VALUE		CONCEN-TRATION	MASS
					CONCENTRATION	MASS	CONCENTRATION	MASS	CONCENTRATION	MASS		
1,2-trans-dichloroethylene	X			10	**ND**[1]	----	----	----	----	----	ug/L	----
1,1,1-trichloroethane	X			10	**ND**[1]	----	----	----	----	----	ug/L	----
1,1,2-trichloroethane	X			10	**ND**[1]	----	----	----	----	----	ug/L	----
trichloroethene (trichloroethylene)	X			10	**ND**[1]	----	----	----	----	----	ug/L	----
vinyl chloride (chloroethylene)	X			10	**ND**[1]	----	----	----	----	----	ug/L	----
ACID EXTRACTABLE ORGANIC CHEMICAL – EPA METHOD 625 SUGGESTED												
2-chlorophenol	X			10	**ND**[1]	----	----	----	----	----	ug/L	----
2,4-dichlorophenol	X			10	**ND**[1]	----	----	----	----	----	ug/L	----
2,4-dimethylphenol	X			10	**ND**[1]	----	----	----	----	----	ug/L	----
2,4-dinitrophenol	X			50	**ND**[1]	----	----	----	----	----	ug/L	----
2-methyl 4,6-dinitrophenol (4,6-dinitro-o-cresol)	X			50	**ND**[1]	----	----	----	----	----	ug/L	----
2-nitrophenol	X			20	**ND**[1]	----	----	----	----	----	ug/L	----
4-nitrophenol	X			50	**ND**[1]	----	----	----	----	----	ug/L	----
4-chloro-3-methylphenol (p-chloro-m-cresol)	X			10	**ND**[1]	----	----	----	----	----	ug/L	----
pentachlorophenol	X			5	**ND**[1]	----	----	----	----	----	ug/L	----
phenol	X			10	**ND**[1]	----	----	----	----	----	ug/L	----
2,4,6-trichlorophenol	X			10	**ND**[1]	----	----	----	----	----	ug/L	----
BASE/NEUTRAL EXTRACTABLE ORGANIC CHEMICALS – EPA METHOD 625 SUGGESTED												
acenaphthene	X			10	**ND**[1]	----	----	----	----	----	ug/L	----
acenaphthylene	X			10	**ND**[1]	----	----	----	----	----	ug/L	----
anthracene	X			10	**ND**[1]	----	----	----	----	----	ug/L	----
benzidine	X			50	**ND**[1]	----	----	----	----	----	ug/L	----
benzo(a)anthracene	X			5	**ND**[1]	----	----	----	----	----	ug/L	----
benzo(a)pyrene	X			5	**ND**[1]	----	----	----	----	----	ug/L	----

SECTION III – LABORATORY ANALYSIS

TABLE III:

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ORGANIC TOXIC POLLUTANTS IN EACH OF THE FOUR FRACTIONS IN ANALYSIS BY GAS CHROMATOGRAPHY/MASS SPECTROSCOPY (GS/MS)

[ ] Grab [X] Composite

POLLUTANT	MARK X			MQL (*) µg/L	EFFLUENT ANALYSIS						UNITS	
	TESTING REQUIRED	BELIEVED PRESENT	BELIEVED ABSENT		MAXIMUM DAILY VALUE		MAXIMUM 30 DAY VALUE		LONG TERM AVERAGE VALUE		CONCEN-TRATION	MASS
					CONCENTRATION	MASS	CONCENTRATION	MASS	CONCENTRATION	MASS		
3,4-benzo fluoranthene	X			10	**ND**[1]	----	----	----	----	----	ug/L	----
benzo(ghi)perylene	X			20	**ND**[1]	----	----	----	----	----	ug/L	----
benzo(k)fluoranthene	X			5	**ND**[1]	----	----	----	----	----	ug/L	----
bis(2-chloroethoxy)methane	X			10	**ND**[1]	----	----	----	----	----	ug/L	----
bis(2-chloroethyl)ether	X			10	**ND**[1]	----	----	----	----	----	ug/L	----
bis(2-chloroisopropyl)ether	X			10	**ND**[1]	----	----	----	----	----	ug/L	----
bis(2-ethylhexyl)phthalate	X			10	**ND**[1]	----	----	----	----	----	ug/L	----
4-bromophenyl phenyl ether	X			10	**ND**[1]	----	----	----	----	----	ug/L	----
butylbenzyl phthalate	X			10	**ND**[1]	----	----	----	----	----	ug/L	----
2-chloronaphthalene	X			10	**ND**[1]	----	----	----	----	----	ug/L	----
4-chlorophenyl phenyl ether	X			10	**ND**[1]	----	----	----	----	----	ug/L	----
chrysene	X			5	**ND**[1]	----	----	----	----	----	ug/L	----
dibenzo(a,h)anthracene	X			5	**ND**[1]	----	----	----	----	----	ug/L	----
3,3'-dichlorobenzidine	X			5	**ND**[1]	----	----	----	----	----	ug/L	----
diethyl phthalate	X			10	**ND**[1]	----	----	----	----	----	ug/L	----
dimethyl phthalate	X			10	**ND**[1]	----	----	----	----	----	ug/L	----
di-n-butyl phthalate	X			10	**ND**[1]	----	----	----	----	----	ug/L	----
2,4-dinitrotoluene	X			10	**ND**[1]	----	----	----	----	----	ug/L	----
2,6-dinitrotoluene	X			10	**ND**[1]	----	----	----	----	----	ug/L	----
di-n-octyl phthalate	X			10	**ND**[1]	----	----	----	----	----	ug/L	----
1,2-diphenylhydrazine (as azobenzene)	X			20	**ND**[1]	----	----	----	----	----	ug/L	----
fluoranthene	X			10	**ND**[1]	----	----	----	----	----	ug/L	----
fluorene	X			10	**ND**[1]	----	----	----	----	----	ug/L	----
hexachlorobenzene	X			5	**ND**[1]	----	----	----	----	----	ug/L	----
hexachlorobutadiene	X			10	**ND**[1]	----	----	----	----	----	ug/L	----
hexachlorocyclopentadiene	X			10	**ND**[1]	----	----	----	----	----	ug/L	----

SECTION III – LABORATORY ANALYSIS

TABLE III:

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ORGANIC TOXIC POLLUTANTS IN EACH OF THE FOUR FRACTIONS IN ANALYSIS BY GAS CHROMATOGRAPHY/MASS SPECTROSCOPY (GS/MS)

☐ Grab X Composite

POLLUTANT	MARK X			MQL (*) µg/L	EFFLUENT ANALYSIS						UNITS	
	TESTING REQUIRED	BELIEVED PRESENT	BELIEVED ABSENT		MAXIMUM DAILY VALUE		MAXIMUM 30 DAY VALUE		LONG TERM AVERAGE VALUE		CONCEN-TRATION	MASS
					CONCENTRATION	MASS	CONCENTRATION	MASS	CONCENTRATION	MASS		
hexachloroethane	X			20	**ND[1]**	----	----	----	----	----	ug/L	----
indeno(1,2,3-cd)pyrene	X			5	**ND[1]**	----	----	----	----	----	ug/L	----
isophorone	X			10	**ND[1]**	----	----	----	----	----	ug/L	----
naphthalene	X			10	**ND[1]**	----	----	----	----	----	ug/L	----
nitrobenzene	X			10	**ND[1]**	----	----	----	----	----	ug/L	----
N-nitrosodimethylamine	X			50	**ND[1]**	----	----	----	----	----	ug/L	----
N-nitrosodi-n-propylamine	X			20	**ND[1]**	----	----	----	----	----	ug/L	----
N-nitrosodiphenylamine	X			20	**ND[1]**	----	----	----	----	----	ug/L	----
phenanthrene	X			10	**ND[1]**	----	----	----	----	----	ug/L	----
pyrene	X			10	**ND[1]**	----	----	----	----	----	ug/L	----
1,2,4-trichlorobenzene	X			10	**ND[1]**	----	----	----	----	----	ug/L	----
PESTICIDES & PCBs – EPA METHOD 608 REQUIRED												
aldrin	X			0.01	**<0.01[2]**	----	----	----	----	----	ug/L	----
Aroclor 1016 (PCB-1016)	X			0.2	**<0.2[2]**	----	----	----	----	----	ug/L	----
Aroclor 1221 (PCB-1221)	X			0.2	**<0.2[2]**	----	----	----	----	----	ug/L	----
Aroclor 1232 (PCB-1232)	X			0.2	**<0.2[2]**	----	----	----	----	----	ug/L	----
Aroclor 1242 (PCB-1242)	X			0.2	**<0.2[2]**	----	----	----	----	----	ug/L	----
Aroclor 1248 (PCB-1248)	X			0.2	**<0.2[2]**	----	----	----	----	----	ug/L	----
Aroclor 1254 (PCB-1254)	X			0.2	**<0.2[2]**	----	----	----	----	----	ug/L	----
Aroclor 1260 (PCB-1260)	X			0.2	**<0.2[2]**	----	----	----	----	----	ug/L	----
alpha-BHC	X			0.05	**<0.05[2]**	----	----	----	----	----	ug/L	----
beta-BHC	X			0.05	**<0.05[2]**	----	----	----	----	----	ug/L	----

SECTION III – LABORATORY ANALYSIS

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ORGANIC TOXIC POLLUTANTS IN EACH OF THE FOUR FRACTIONS IN ANALYSIS BY GAS CHROMATOGRAPHY/MASS SPECTROSCOPY (GS/MS)

☐ Grab ☒ Composite

POLLUTANT	MARK X			MQL (*) µg/L	EFFLUENT ANALYSIS						UNITS	
	TESTING REQUIRED	BELIEVED PRESENT	BELIEVED ABSENT		MAXIMUM DAILY VALUE		MAXIMUM 30 DAY VALUE		LONG TERM AVERAGE VALUE		CONCEN-TRATION	MASS
					CONCENTRATION	MASS	CONCENTRATION	MASS	CONCENTRATION	MASS		
delta-BHC	X			0.05	**<0.05**[2]	----	----	----	----	----	ug/L	----
gamma-BHC	X			0.05	**<0.05**[2]	----	----	----	----	----	ug/L	----
chlordane	X			0.2	**<0.2**[2]	----	----	----	----	----	ug/L	----
4,4'DDT	X			0.02	**<0.02**[2]	----	----	----	----	----	ug/L	----
4,4'DDE	X			0.1	**<0.1**[2]	----	----	----	----	----	ug/L	----
4,4'DDD	X			0.1	**<0.1**[2]	----	----	----	----	----	ug/L	----
dieldrin	X			0.02	**<0.02**[2]	----	----	----	----	----	ug/L	----
alpha-endosulfan	X			0.01	**<0.01**[2]	----	----	----	----	----	ug/L	----
beta-endosulfan	X			0.02	**<0.02**[2]	----	----	----	----	----	ug/L	----
endosulfan sulfate	X			0.1	**<0.1**[2]	----	----	----	----	----	ug/L	----
endrin	X			0.02	**<0.02**[2]	----	----	----	----	----	ug/L	----
endrin aldehyde	X			0.1	**<0.1**[2]	----	----	----	----	----	ug/L	----
heptachlor	X			0.01	**<0.01**[2]	----	----	----	----	----	ug/L	----
heptachlor epoxide	X			0.01	**<0.01**[2]	----	----	----	----	----	ug/L	----
Toxaphene	X			0.3	**<0.3**[2]	----	----	----	----	----	ug/L	----

(*) Minimum Quantification Level (MQL)

[1] Outfall 301 sampled on March 9, 2023

[2] Outfall 301 sampled on October 21, 2022.

SECTION III – LABORATORY ANALYSIS

TABLE III:

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ORGANIC TOXIC POLLUTANTS IN EACH OF THE FOUR FRACTIONS IN ANALYSIS BY GAS CHROMATOGRAPHY/MASS SPECTROSCOPY (GS/MS)

☐ Grab ☐ Composite

POLLUTANT	MARK X			MQL (*) µg/L	EFFLUENT ANALYSIS						UNITS	
	TESTING REQUIRED	BELIEVED PRESENT	BELIEVED ABSENT		MAXIMUM DAILY VALUE		MAXIMUM 30 DAY VALUE		LONG TERM AVERAGE VALUE		CONCEN-TRATION	MASS
					CONCENTRATION	MASS	CONCENTRATION	MASS	CONCENTRATION	MASS		
VOLATILE ORGANIC CHEMICALS – EPA METHOD 624 SUGGESTED												
acrolein			X	50	----	----	----	----	----	----	----	----
acrylonitrile			X	20	----	----	----	----	----	----	----	----
benzene			X	10	----	----	----	----	----	----	----	----
bromoform			X	10	----	----	----	----	----	----	----	----
carbon tetrachloride			X	2	----	----	----	----	----	----	----	----
chlorobenzene			X	10	----	----	----	----	----	----	----	----
chlorodibromomethane			X	10	----	----	----	----	----	----	----	----
chloroethane			X	50	----	----	----	----	----	----	----	----
2-chloroethylvinyl ether			X	10	----	----	----	----	----	----	----	----
1,2-dichlorobenzene			X	10	----	----	----	----	----	----	----	----
1,3-dichlorobenzene			X	10	----	----	----	----	----	----	----	----
1,4-dichlorobenzene			X	10	----	----	----	----	----	----	----	----
chloroform			X	10	----	----	----	----	----	----	----	----
dichlorobromomethane			X	10	----	----	----	----	----	----	----	----
1,1-dichloroethane			X	10	----	----	----	----	----	----	----	----
1,2-dichloroethane			X	10	----	----	----	----	----	----	----	----
1,1-dichloroethylene			X	10	----	----	----	----	----	----	----	----
1,2-dichloropropane			X	10	----	----	----	----	----	----	----	----
1,3-Dichloropropylene			X	10	----	----	----	----	----	----	----	----
ethylbenzene			X	10	----	----	----	----	----	----	----	----
methyl bromide			X	50	----	----	----	----	----	----	----	----
methyl chloride			X	50	----	----	----	----	----	----	----	----
methylene chloride			X	20	----	----	----	----	----	----	----	----
1,1,2,2-tetrachloroethane			X	10	----	----	----	----	----	----	----	----
tetrachloroethylene			X	10	----	----	----	----	----	----	----	----
toluene			X	10	----	----	----	----	----	----	----	----

SECTION III – LABORATORY ANALYSIS

TABLE III:

ORGANIC TOXIC POLLUTANTS IN EACH OF THE FOUR FRACTIONS IN ANALYSIS BY GAS CHROMATOGRAPHY/MASS SPECTROSCOPY (GS/MS)

OUTFALL NUMBER

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☐ Grab ☐ Composite

POLLUTANT	MARK X			MQL (*) µg/L	EFFLUENT ANALYSIS						UNITS	
	TESTING REQUIRED	BELIEVED PRESENT	BELIEVED ABSENT		MAXIMUM DAILY VALUE		MAXIMUM 30 DAY VALUE		LONG TERM AVERAGE VALUE		CONCEN-TRATION	MASS
					CONCENTRATION	MASS	CONCENTRATION	MASS	CONCENTRATION	MASS		
1,2-trans-dichloroethylene			X	10	----	----	----	----	----	----	----	----
1,1,1-trichloroethane			X	10	----	----	----	----	----	----	----	----
1,1,2-trichloroethane			X	10	----	----	----	----	----	----	----	----
trichloroethene (trichloroethylene)			X	10	----	----	----	----	----	----	----	----
vinyl chloride (chloroethylene)			X	10	----	----	----	----	----	----	----	----
ACID EXTRACTABLE ORGANIC CHEMICAL – EPA METHOD 625 SUGGESTED												
2-chlorophenol			X	10	----	----	----	----	----	----	----	----
2,4-dichlorophenol			X	10	----	----	----	----	----	----	----	----
2,4-dimethylphenol			X	10	----	----	----	----	----	----	----	----
2,4-dinitrophenol			X	50	----	----	----	----	----	----	----	----
2-methyl 4,6-dinitrophenol (4,6-dinitro-o-cresol)			X	50	----	----	----	----	----	----	----	----
2-nitrophenol			X	20	----	----	----	----	----	----	----	----
4-nitrophenol			X	50	----	----	----	----	----	----	----	----
4-chloro-3-methylphenol (p-chloro-m-cresol)			X	10	----	----	----	----	----	----	----	----
pentachlorophenol			X	5	----	----	----	----	----	----	----	----
phenol			X	10	----	----	----	----	----	----	----	----
2,4,6-trichlorophenol			X	10	----	----	----	----	----	----	----	----
BASE/NEUTRAL EXTRACTABLE ORGANIC CHEMICALS – EPA METHOD 625 SUGGESTED												
acenaphthene			X	10	----	----	----	----	----	----	----	----
acenaphthylene			X	10	----	----	----	----	----	----	----	----
anthracene			X	10	----	----	----	----	----	----	----	----
benzidine			X	50	----	----	----	----	----	----	----	----
benzo(a)anthracene			X	5	----	----	----	----	----	----	----	----
benzo(a)pyrene			X	5	----	----	----	----	----	----	----	----

SECTION III – LABORATORY ANALYSIS

TABLE III:

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ORGANIC TOXIC POLLUTANTS IN EACH OF THE FOUR FRACTIONS IN ANALYSIS BY GAS CHROMATOGRAPHY/MASS SPECTROSCOPY (GS/MS)

☐ Grab ☐ Composite

POLLUTANT	MARK X			MQL (*) µg/L	EFFLUENT ANALYSIS						UNITS	
	TESTING REQUIRED	BELIEVED PRESENT	BELIEVED ABSENT		MAXIMUM DAILY VALUE		MAXIMUM 30 DAY VALUE		LONG TERM AVERAGE VALUE		CONCEN-TRATION	MASS
					CONCENTRATION	MASS	CONCENTRATION	MASS	CONCENTRATION	MASS		
3,4-benzo fluoranthene			X	10	----	----	----	----	----	----	----	----
benzo(ghi)perylene			X	20	----	----	----	----	----	----	----	----
benzo(k)fluoranthene			X	5	----	----	----	----	----	----	----	----
bis(2-chloroethoxy)methane			X	10	----	----	----	----	----	----	----	----
bis(2-chloroethyl)ether			X	10	----	----	----	----	----	----	----	----
bis(2-chloroisopropyl)ether			X	10	----	----	----	----	----	----	----	----
bis(2-ethylhexyl)phthalate			X	10	----	----	----	----	----	----	----	----
4-bromophenyl phenyl ether			X	10	----	----	----	----	----	----	----	----
butylbenzyl phthalate			X	10	----	----	----	----	----	----	----	----
2-chloronaphthalene			X	10	----	----	----	----	----	----	----	----
4-chlorophenyl phenyl ether			X	10	----	----	----	----	----	----	----	----
chrysene			X	5	----	----	----	----	----	----	----	----
dibenzo(a,h)anthracene			X	5	----	----	----	----	----	----	----	----
3,3'-dichlorobenzidine			X	5	----	----	----	----	----	----	----	----
diethyl phthalate			X	10	----	----	----	----	----	----	----	----
dimethyl phthalate			X	10	----	----	----	----	----	----	----	----
di-n-butyl phthalate			X	10	----	----	----	----	----	----	----	----
2,4-dinitrotoluene			X	10	----	----	----	----	----	----	----	----
2,6-dinitrotoluene			X	10	----	----	----	----	----	----	----	----
di-n-octyl phthalate			X	10	----	----	----	----	----	----	----	----
1,2-diphenylhydrazine (as azobenzene)			X	20	----	----	----	----	----	----	----	----
fluoranthene			X	10	----	----	----	----	----	----	----	----
fluorene			X	10	----	----	----	----	----	----	----	----
hexachlorobenzene			X	5	----	----	----	----	----	----	----	----
hexachlorobutadiene			X	10	----	----	----	----	----	----	----	----
hexachlorocyclopentadiene			X	10	----	----	----	----	----	----	----	----

SECTION III – LABORATORY ANALYSIS

TABLE III:

OUTFALL NUMBER

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ORGANIC TOXIC POLLUTANTS IN EACH OF THE FOUR FRACTIONS IN ANALYSIS BY GAS CHROMATOGRAPHY/MASS SPECTROSCOPY (GS/MS)

☐ Grab ☐ Composite

POLLUTANT	MARK X			MQL (*) µg/L	EFFLUENT ANALYSIS						UNITS	
	TESTING REQUIRED	BELIEVED PRESENT	BELIEVED ABSENT		MAXIMUM DAILY VALUE		MAXIMUM 30 DAY VALUE		LONG TERM AVERAGE VALUE		CONCEN-TRATION	MASS
					CONCENTRATION	MASS	CONCENTRATION	MASS	CONCENTRATION	MASS		
hexachloroethane			X	20	----	----	----	----	----	----	----	----
indeno(1,2,3-cd)pyrene			X	5	----	----	----	----	----	----	----	----
isophorone			X	10	----	----	----	----	----	----	----	----
naphthalene			X	10	----	----	----	----	----	----	----	----
nitrobenzene			X	10	----	----	----	----	----	----	----	----
N-nitrosodimethylamine			X	50	----	----	----	----	----	----	----	----
N-nitrosodi-n-propylamine			X	20	----	----	----	----	----	----	----	----
N-nitrosodiphenylamine			X	20	----	----	----	----	----	----	----	----
phenanthrene			X	10	----	----	----	----	----	----	----	----
pyrene			X	10	----	----	----	----	----	----	----	----
1,2,4-trichlorobenzene			X	10	----	----	----	----	----	----	----	----
PESTICIDES & PCBs – EPA METHOD 608 REQUIRED												
aldrin			X	0.01	----	----	----	----	----	----	----	----
Aroclor 1016 (PCB-1016)			X	0.2	----	----	----	----	----	----	----	----
Aroclor 1221 (PCB-1221)			X	0.2	----	----	----	----	----	----	----	----
Aroclor 1232 (PCB-1232)			X	0.2	----	----	----	----	----	----	----	----
Aroclor 1242 (PCB-1242)			X	0.2	----	----	----	----	----	----	----	----
Aroclor 1248 (PCB-1248)			X	0.2	----	----	----	----	----	----	----	----
Aroclor 1254 (PCB-1254)			X	0.2	----	----	----	----	----	----	----	----
Aroclor 1260 (PCB-1260)			X	0.2	----	----	----	----	----	----	----	----
alpha-BHC			X	0.05	----	----	----	----	----	----	----	----
beta-BHC			X	0.05	----	----	----	----	----	----	----	----

SECTION III – LABORATORY ANALYSIS

TABLE III:

OUTFALL NUMBER

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ORGANIC TOXIC POLLUTANTS IN EACH OF THE FOUR FRACTIONS IN ANALYSIS BY GAS CHROMATOGRAPHY/MASS SPECTROSCOPY (GS/MS)

☐ Grab ☐ Composite

POLLUTANT	MARK X			MQL (*) µg/L	EFFLUENT ANALYSIS						UNITS	
	TESTING REQUIRED	BELIEVED PRESENT	BELIEVED ABSENT		MAXIMUM DAILY VALUE		MAXIMUM 30 DAY VALUE		LONG TERM AVERAGE VALUE		CONCEN-TRATION	MASS
					CONCENTRATION	MASS	CONCENTRATION	MASS	CONCENTRATION	MASS		
delta-BHC			X	0.05	----	----	----	----	----	----	----	----
gamma-BHC			X	0.05	----	----	----	----	----	----	----	----
chlordane			X	0.2	----	----	----	----	----	----	----	----
4,4'DDT			X	0.02	----	----	----	----	----	----	----	----
4,4'DDE			X	0.1	----	----	----	----	----	----	----	----
4,4'DDD			X	0.1	----	----	----	----	----	----	----	----
dieldrin			X	0.02	----	----	----	----	----	----	----	----
alpha-endosulfan			X	0.01	----	----	----	----	----	----	----	----
beta-endosulfan			X	0.02	----	----	----	----	----	----	----	----
endosulfan sulfate			X	0.1	----	----	----	----	----	----	----	----
endrin			X	0.02	----	----	----	----	----	----	----	----
endrin aldehyde			X	0.1	----	----	----	----	----	----	----	----
heptachlor			X	0.01	----	----	----	----	----	----	----	----
heptachlor epoxide			X	0.01	----	----	----	----	----	----	----	----
Toxaphene			X	0.3	----	----	----	----	----	----	----	----

(*) Minimum Quantification Level (MQL)

SECTION III – LABORATORY ANALYSIS

TABLE III:

OUTFALL NUMBER

002

ORGANIC TOXIC POLLUTANTS IN EACH OF THE FOUR FRACTIONS IN ANALYSIS BY GAS CHROMATOGRAPHY/MASS SPECTROSCOPY (GS/MS)

☐ Grab ☐ Composite

POLLUTANT	MARK X			MQL (*) µg/L	EFFLUENT ANALYSIS						UNITS	
	TESTING REQUIRED	BELIEVED PRESENT	BELIEVED ABSENT		MAXIMUM DAILY VALUE		MAXIMUM 30 DAY VALUE		LONG TERM AVERAGE VALUE		CONCEN-TRATION	MASS
					CONCENTRATION	MASS	CONCENTRATION	MASS	CONCENTRATION	MASS		
VOLATILE ORGANIC CHEMICALS – EPA METHOD 624 SUGGESTED												
acrolein			X	50	----	----	----	----	----	----	----	----
acrylonitrile			X	20	----	----	----	----	----	----	----	----
benzene			X	10	----	----	----	----	----	----	----	----
bromoform			X	10	----	----	----	----	----	----	----	----
carbon tetrachloride			X	2	----	----	----	----	----	----	----	----
chlorobenzene			X	10	----	----	----	----	----	----	----	----
chlorodibromomethane			X	10	----	----	----	----	----	----	----	----
chloroethane			X	50	----	----	----	----	----	----	----	----
2-chloroethylvinyl ether			X	10	----	----	----	----	----	----	----	----
1,2-dichlorobenzene			X	10	----	----	----	----	----	----	----	----
1,3-dichlorobenzene			X	10	----	----	----	----	----	----	----	----
1,4-dichlorobenzene			X	10	----	----	----	----	----	----	----	----
chloroform			X	10	----	----	----	----	----	----	----	----
dichlorobromomethane			X	10	----	----	----	----	----	----	----	----
1,1-dichloroethane			X	10	----	----	----	----	----	----	----	----
1,2-dichloroethane			X	10	----	----	----	----	----	----	----	----
1,1-dichloroethylene			X	10	----	----	----	----	----	----	----	----
1,2-dichloropropane			X	10	----	----	----	----	----	----	----	----
1,3-Dichloropropylene			X	10	----	----	----	----	----	----	----	----
ethylbenzene			X	10	----	----	----	----	----	----	----	----
methyl bromide			X	50	----	----	----	----	----	----	----	----
methyl chloride			X	50	----	----	----	----	----	----	----	----
methylene chloride			X	20	----	----	----	----	----	----	----	----
1,1,2,2-tetrachloroethane			X	10	----	----	----	----	----	----	----	----
tetrachloroethylene			X	10	----	----	----	----	----	----	----	----
toluene			X	10	----	----	----	----	----	----	----	----

SECTION III – LABORATORY ANALYSIS

TABLE III:

OUTFALL NUMBER

002

ORGANIC TOXIC POLLUTANTS IN EACH OF THE FOUR FRACTIONS IN ANALYSIS BY GAS CHROMATOGRAPHY/MASS SPECTROSCOPY (GS/MS)

☐ Grab ☐ Composite

POLLUTANT	MARK X			MQL (*) µg/L	EFFLUENT ANALYSIS						UNITS	
	TESTING REQUIRED	BELIEVED PRESENT	BELIEVED ABSENT		MAXIMUM DAILY VALUE		MAXIMUM 30 DAY VALUE		LONG TERM AVERAGE VALUE		CONCEN-TRATION	MASS
					CONCENTRATION	MASS	CONCENTRATION	MASS	CONCENTRATION	MASS		
1,2-trans-dichloroethylene			X	10	----	----	----	----	----	----	----	----
1,1,1-trichloroethane			X	10	----	----	----	----	----	----	----	----
1,1,2-trichloroethane			X	10	----	----	----	----	----	----	----	----
trichloroethene (trichloroethylene)			X	10	----	----	----	----	----	----	----	----
vinyl chloride (chloroethylene)			X	10	----	----	----	----	----	----	----	----
ACID EXTRACTABLE ORGANIC CHEMICAL – EPA METHOD 625 SUGGESTED												
2-chlorophenol			X	10	----	----	----	----	----	----	----	----
2,4-dichlorophenol			X	10	----	----	----	----	----	----	----	----
2,4-dimethylphenol			X	10	----	----	----	----	----	----	----	----
2,4-dinitrophenol			X	50	----	----	----	----	----	----	----	----
2-methyl 4,6-dinitrophenol (4,6-dinitro-o-cresol)			X	50	----	----	----	----	----	----	----	----
2-nitrophenol			X	20	----	----	----	----	----	----	----	----
4-nitrophenol			X	50	----	----	----	----	----	----	----	----
4-chloro-3-methylphenol (p-chloro-m-cresol)			X	10	----	----	----	----	----	----	----	----
pentachlorophenol			X	5	----	----	----	----	----	----	----	----
phenol			X	10	----	----	----	----	----	----	----	----
2,4,6-trichlorophenol			X	10	----	----	----	----	----	----	----	----
BASE/NEUTRAL EXTRACTABLE ORGANIC CHEMICALS – EPA METHOD 625 SUGGESTED												
acenaphthene			X	10	----	----	----	----	----	----	----	----
acenaphthylene			X	10	----	----	----	----	----	----	----	----
anthracene			X	10	----	----	----	----	----	----	----	----
benzidine			X	50	----	----	----	----	----	----	----	----
benzo(a)anthracene			X	5	----	----	----	----	----	----	----	----
benzo(a)pyrene			X	5	----	----	----	----	----	----	----	----

SECTION III – LABORATORY ANALYSIS

TABLE III:

OUTFALL NUMBER

002

ORGANIC TOXIC POLLUTANTS IN EACH OF THE FOUR FRACTIONS IN ANALYSIS BY GAS CHROMATOGRAPHY/MASS SPECTROSCOPY (GS/MS)

☐ Grab ☐ Composite

POLLUTANT	MARK X			MQL (*) µg/L	EFFLUENT ANALYSIS						UNITS	
	TESTING REQUIRED	BELIEVED PRESENT	BELIEVED ABSENT		MAXIMUM DAILY VALUE		MAXIMUM 30 DAY VALUE		LONG TERM AVERAGE VALUE		CONCEN-TRATION	MASS
					CONCENTRATION	MASS	CONCENTRATION	MASS	CONCENTRATION	MASS		
3,4-benzo fluoranthene			X	10	----	----	----	----	----	----	----	----
benzo(ghi)perylene			X	20	----	----	----	----	----	----	----	----
benzo(k)fluoranthene			X	5	----	----	----	----	----	----	----	----
bis(2-chloroethoxy)methane			X	10	----	----	----	----	----	----	----	----
bis(2-chloroethyl)ether			X	10	----	----	----	----	----	----	----	----
bis(2-chloroisopropyl)ether			X	10	----	----	----	----	----	----	----	----
bis(2-ethylhexyl)phthalate			X	10	----	----	----	----	----	----	----	----
4-bromophenyl phenyl ether			X	10	----	----	----	----	----	----	----	----
butylbenzyl phthalate			X	10	----	----	----	----	----	----	----	----
2-chloronaphthalene			X	10	----	----	----	----	----	----	----	----
4-chlorophenyl phenyl ether			X	10	----	----	----	----	----	----	----	----
chrysene			X	5	----	----	----	----	----	----	----	----
dibenzo(a,h)anthracene			X	5	----	----	----	----	----	----	----	----
3,3'-dichlorobenzidine			X	5	----	----	----	----	----	----	----	----
diethyl phthalate			X	10	----	----	----	----	----	----	----	----
dimethyl phthalate			X	10	----	----	----	----	----	----	----	----
di-n-butyl phthalate			X	10	----	----	----	----	----	----	----	----
2,4-dinitrotoluene			X	10	----	----	----	----	----	----	----	----
2,6-dinitrotoluene			X	10	----	----	----	----	----	----	----	----
di-n-octyl phthalate			X	10	----	----	----	----	----	----	----	----
1,2-diphenylhydrazine (as azobenzene)			X	20	----	----	----	----	----	----	----	----
fluoranthene			X	10	----	----	----	----	----	----	----	----
fluorene			X	10	----	----	----	----	----	----	----	----
hexachlorobenzene			X	5	----	----	----	----	----	----	----	----
hexachlorobutadiene			X	10	----	----	----	----	----	----	----	----
hexachlorocyclopentadiene			X	10	----	----	----	----	----	----	----	----

SECTION III – LABORATORY ANALYSIS

TABLE III:

OUTFALL NUMBER

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ORGANIC TOXIC POLLUTANTS IN EACH OF THE FOUR FRACTIONS IN ANALYSIS BY GAS CHROMATOGRAPHY/MASS SPECTROSCOPY (GS/MS)

☐ Grab ☐ Composite

POLLUTANT	MARK X			MQL (*) µg/L	EFFLUENT ANALYSIS						UNITS	
	TESTING REQUIRED	BELIEVED PRESENT	BELIEVED ABSENT		MAXIMUM DAILY VALUE		MAXIMUM 30 DAY VALUE		LONG TERM AVERAGE VALUE		CONCEN-TRATION	MASS
					CONCENTRATION	MASS	CONCENTRATION	MASS	CONCENTRATION	MASS		
hexachloroethane			X	20	----	----	----	----	----	----	----	----
indeno(1,2,3-cd)pyrene			X	5	----	----	----	----	----	----	----	----
isophorone			X	10	----	----	----	----	----	----	----	----
naphthalene			X	10	----	----	----	----	----	----	----	----
nitrobenzene			X	10	----	----	----	----	----	----	----	----
N-nitrosodimethylamine			X	50	----	----	----	----	----	----	----	----
N-nitrosodi-n-propylamine			X	20	----	----	----	----	----	----	----	----
N-nitrosodiphenylamine			X	20	----	----	----	----	----	----	----	----
phenanthrene			X	10	----	----	----	----	----	----	----	----
pyrene			X	10	----	----	----	----	----	----	----	----
1,2,4-trichlorobenzene			X	10	----	----	----	----	----	----	----	----
PESTICIDES & PCBs – EPA METHOD 608 REQUIRED												
aldrin			X	0.01	----	----	----	----	----	----	----	----
Aroclor 1016 (PCB-1016)			X	0.2	----	----	----	----	----	----	----	----
Aroclor 1221 (PCB-1221)			X	0.2	----	----	----	----	----	----	----	----
Aroclor 1232 (PCB-1232)			X	0.2	----	----	----	----	----	----	----	----
Aroclor 1242 (PCB-1242)			X	0.2	----	----	----	----	----	----	----	----
Aroclor 1248 (PCB-1248)			X	0.2	----	----	----	----	----	----	----	----
Aroclor 1254 (PCB-1254)			X	0.2	----	----	----	----	----	----	----	----
Aroclor 1260 (PCB-1260)			X	0.2	----	----	----	----	----	----	----	----
alpha-BHC			X	0.05	----	----	----	----	----	----	----	----
beta-BHC			X	0.05	----	----	----	----	----	----	----	----

SECTION III – LABORATORY ANALYSIS

TABLE III:

OUTFALL NUMBER

002

ORGANIC TOXIC POLLUTANTS IN EACH OF THE FOUR FRACTIONS IN ANALYSIS BY GAS CHROMATOGRAPHY/MASS SPECTROSCOPY (GS/MS)

☐ Grab ☐ Composite

POLLUTANT	MARK X			MQL (*) µg/L	EFFLUENT ANALYSIS						UNITS	
	TESTING REQUIRED	BELIEVED PRESENT	BELIEVED ABSENT		MAXIMUM DAILY VALUE		MAXIMUM 30 DAY VALUE		LONG TERM AVERAGE VALUE		CONCEN-TRATION	MASS
					CONCENTRATION	MASS	CONCENTRATION	MASS	CONCENTRATION	MASS		
delta-BHC			X	0.05	----	----	----	----	----	----	----	----
gamma-BHC			X	0.05	----	----	----	----	----	----	----	----
chlordane			X	0.2	----	----	----	----	----	----	----	----
4,4'DDT			X	0.02	----	----	----	----	----	----	----	----
4,4'DDE			X	0.1	----	----	----	----	----	----	----	----
4,4'DDD			X	0.1	----	----	----	----	----	----	----	----
dieldrin			X	0.02	----	----	----	----	----	----	----	----
alpha-endosulfan			X	0.01	----	----	----	----	----	----	----	----
beta-endosulfan			X	0.02	----	----	----	----	----	----	----	----
endosulfan sulfate			X	0.1	----	----	----	----	----	----	----	----
endrin			X	0.02	----	----	----	----	----	----	----	----
endrin aldehyde			X	0.1	----	----	----	----	----	----	----	----
heptachlor			X	0.01	----	----	----	----	----	----	----	----
heptachlor epoxide			X	0.01	----	----	----	----	----	----	----	----
Toxaphene			X	0.3	----	----	----	----	----	----	----	----

(*) Minimum Quantification Level (MQL)

SECTION III – LABORATORY ANALYSIS

TABLE III:

ORGANIC TOXIC POLLUTANTS IN EACH OF THE FOUR FRACTIONS IN ANALYSIS BY GAS CHROMATOGRAPHY/MASS SPECTROSCOPY (GS/MS)

OUTFALL NUMBER

005

☐ Grab ☐ Composite

POLLUTANT	MARK X			MQL (*) µg/L	EFFLUENT ANALYSIS						UNITS	
	TESTING REQUIRED	BELIEVED PRESENT	BELIEVED ABSENT		MAXIMUM DAILY VALUE		MAXIMUM 30 DAY VALUE		LONG TERM AVERAGE VALUE		CONCEN-TRATION	MASS
					CONCENTRATION	MASS	CONCENTRATION	MASS	CONCENTRATION	MASS		
VOLATILE ORGANIC CHEMICALS – EPA METHOD 624 SUGGESTED												
acrolein			X	50	----	----	----	----	----	----	----	----
acrylonitrile			X	20	----	----	----	----	----	----	----	----
benzene			X	10	----	----	----	----	----	----	----	----
bromoform			X	10	----	----	----	----	----	----	----	----
carbon tetrachloride			X	2	----	----	----	----	----	----	----	----
chlorobenzene			X	10	----	----	----	----	----	----	----	----
chlorodibromomethane			X	10	----	----	----	----	----	----	----	----
chloroethane			X	50	----	----	----	----	----	----	----	----
2-chloroethylvinyl ether			X	10	----	----	----	----	----	----	----	----
1,2-dichlorobenzene			X	10	----	----	----	----	----	----	----	----
1,3-dichlorobenzene			X	10	----	----	----	----	----	----	----	----
1,4-dichlorobenzene			X	10	----	----	----	----	----	----	----	----
chloroform			X	10	----	----	----	----	----	----	----	----
dichlorobromomethane			X	10	----	----	----	----	----	----	----	----
1,1-dichloroethane			X	10	----	----	----	----	----	----	----	----
1,2-dichloroethane			X	10	----	----	----	----	----	----	----	----
1,1-dichloroethylene			X	10	----	----	----	----	----	----	----	----
1,2-dichloropropane			X	10	----	----	----	----	----	----	----	----
1,3-Dichloropropylene			X	10	----	----	----	----	----	----	----	----
ethylbenzene			X	10	----	----	----	----	----	----	----	----
methyl bromide			X	50	----	----	----	----	----	----	----	----
methyl chloride			X	50	----	----	----	----	----	----	----	----
methylene chloride			X	20	----	----	----	----	----	----	----	----
1,1,2,2-tetrachloroethane			X	10	----	----	----	----	----	----	----	----
tetrachloroethylene			X	10	----	----	----	----	----	----	----	----
toluene			X	10	----	----	----	----	----	----	----	----

SECTION III – LABORATORY ANALYSIS

TABLE III:

OUTFALL NUMBER

005

ORGANIC TOXIC POLLUTANTS IN EACH OF THE FOUR FRACTIONS IN ANALYSIS BY GAS CHROMATOGRAPHY/MASS SPECTROSCOPY (GS/MS)

☐ Grab ☐ Composite

POLLUTANT	MARK X			MQL (*) µg/L	EFFLUENT ANALYSIS						UNITS	
	TESTING REQUIRED	BELIEVED PRESENT	BELIEVED ABSENT		MAXIMUM DAILY VALUE		MAXIMUM 30 DAY VALUE		LONG TERM AVERAGE VALUE		CONCEN-TRATION	MASS
					CONCENTRATION	MASS	CONCENTRATION	MASS	CONCENTRATION	MASS		
1,2-trans-dichloroethylene			X	10	----	----	----	----	----	----	----	----
1,1,1-trichloroethane			X	10	----	----	----	----	----	----	----	----
1,1,2-trichloroethane			X	10	----	----	----	----	----	----	----	----
trichloroethene (trichloroethylene)			X	10	----	----	----	----	----	----	----	----
vinyl chloride (chloroethylene)			X	10	----	----	----	----	----	----	----	----
ACID EXTRACTABLE ORGANIC CHEMICAL – EPA METHOD 625 SUGGESTED												
2-chlorophenol			X	10	----	----	----	----	----	----	----	----
2,4-dichlorophenol			X	10	----	----	----	----	----	----	----	----
2,4-dimethylphenol			X	10	----	----	----	----	----	----	----	----
2,4-dinitrophenol			X	50	----	----	----	----	----	----	----	----
2-methyl 4,6-dinitrophenol (4,6-dinitro-o-cresol)			X	50	----	----	----	----	----	----	----	----
2-nitrophenol			X	20	----	----	----	----	----	----	----	----
4-nitrophenol			X	50	----	----	----	----	----	----	----	----
4-chloro-3-methylphenol (p-chloro-m-cresol)			X	10	----	----	----	----	----	----	----	----
pentachlorophenol			X	5	----	----	----	----	----	----	----	----
phenol			X	10	----	----	----	----	----	----	----	----
2,4,6-trichlorophenol			X	10	----	----	----	----	----	----	----	----
BASE/NEUTRAL EXTRACTABLE ORGANIC CHEMICALS – EPA METHOD 625 SUGGESTED												
acenaphthene			X	10	----	----	----	----	----	----	----	----
acenaphthylene			X	10	----	----	----	----	----	----	----	----
anthracene			X	10	----	----	----	----	----	----	----	----
benzidine			X	50	----	----	----	----	----	----	----	----
benzo(a)anthracene			X	5	----	----	----	----	----	----	----	----
benzo(a)pyrene			X	5	----	----	----	----	----	----	----	----

SECTION III – LABORATORY ANALYSIS

TABLE III:

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ORGANIC TOXIC POLLUTANTS IN EACH OF THE FOUR FRACTIONS IN ANALYSIS BY GAS CHROMATOGRAPHY/MASS SPECTROSCOPY (GS/MS)

☐ Grab ☐ Composite

POLLUTANT	MARK X			MQL (*) µg/L	EFFLUENT ANALYSIS						UNITS	
	TESTING REQUIRED	BELIEVED PRESENT	BELIEVED ABSENT		MAXIMUM DAILY VALUE		MAXIMUM 30 DAY VALUE		LONG TERM AVERAGE VALUE		CONCEN-TRATION	MASS
					CONCENTRATION	MASS	CONCENTRATION	MASS	CONCENTRATION	MASS		
3,4-benzo fluoranthene			X	10	----	----	----	----	----	----	----	----
benzo(ghi)perylene			X	20	----	----	----	----	----	----	----	----
benzo(k)fluoranthene			X	5	----	----	----	----	----	----	----	----
bis(2-chloroethoxy)methane			X	10	----	----	----	----	----	----	----	----
bis(2-chloroethyl)ether			X	10	----	----	----	----	----	----	----	----
bis(2-chloroisopropyl)ether			X	10	----	----	----	----	----	----	----	----
bis(2-ethylhexyl)phthalate			X	10	----	----	----	----	----	----	----	----
4-bromophenyl phenyl ether			X	10	----	----	----	----	----	----	----	----
butylbenzyl phthalate			X	10	----	----	----	----	----	----	----	----
2-chloronaphthalene			X	10	----	----	----	----	----	----	----	----
4-chlorophenyl phenyl ether			X	10	----	----	----	----	----	----	----	----
chrysene			X	5	----	----	----	----	----	----	----	----
dibenzo(a,h)anthracene			X	5	----	----	----	----	----	----	----	----
3,3'-dichlorobenzidine			X	5	----	----	----	----	----	----	----	----
diethyl phthalate			X	10	----	----	----	----	----	----	----	----
dimethyl phthalate			X	10	----	----	----	----	----	----	----	----
di-n-butyl phthalate			X	10	----	----	----	----	----	----	----	----
2,4-dinitrotoluene			X	10	----	----	----	----	----	----	----	----
2,6-dinitrotoluene			X	10	----	----	----	----	----	----	----	----
di-n-octyl phthalate			X	10	----	----	----	----	----	----	----	----
1,2-diphenylhydrazine (as azobenzene)			X	20	----	----	----	----	----	----	----	----
fluoranthene			X	10	----	----	----	----	----	----	----	----
fluorene			X	10	----	----	----	----	----	----	----	----
hexachlorobenzene			X	5	----	----	----	----	----	----	----	----
hexachlorobutadiene			X	10	----	----	----	----	----	----	----	----
hexachlorocyclopentadiene			X	10	----	----	----	----	----	----	----	----

SECTION III – LABORATORY ANALYSIS

TABLE III:

OUTFALL NUMBER

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ORGANIC TOXIC POLLUTANTS IN EACH OF THE FOUR FRACTIONS IN ANALYSIS BY GAS CHROMATOGRAPHY/MASS SPECTROSCOPY (GS/MS)

☐ Grab ☐ Composite

POLLUTANT	MARK X			MQL (*) µg/L	EFFLUENT ANALYSIS						UNITS	
	TESTING REQUIRED	BELIEVED PRESENT	BELIEVED ABSENT		MAXIMUM DAILY VALUE		MAXIMUM 30 DAY VALUE		LONG TERM AVERAGE VALUE		CONCEN-TRATION	MASS
					CONCENTRATION	MASS	CONCENTRATION	MASS	CONCENTRATION	MASS		
hexachloroethane			X	20	----	----	----	----	----	----	----	----
indeno(1,2,3-cd)pyrene			X	5	----	----	----	----	----	----	----	----
isophorone			X	10	----	----	----	----	----	----	----	----
naphthalene			X	10	----	----	----	----	----	----	----	----
nitrobenzene			X	10	----	----	----	----	----	----	----	----
N-nitrosodimethylamine			X	50	----	----	----	----	----	----	----	----
N-nitrosodi-n-propylamine			X	20	----	----	----	----	----	----	----	----
N-nitrosodiphenylamine			X	20	----	----	----	----	----	----	----	----
phenanthrene			X	10	----	----	----	----	----	----	----	----
pyrene			X	10	----	----	----	----	----	----	----	----
1,2,4-trichlorobenzene			X	10	----	----	----	----	----	----	----	----
PESTICIDES & PCBs – EPA METHOD 608 REQUIRED												
aldrin			X	0.01	----	----	----	----	----	----	----	----
Aroclor 1016 (PCB-1016)			X	0.2	----	----	----	----	----	----	----	----
Aroclor 1221 (PCB-1221)			X	0.2	----	----	----	----	----	----	----	----
Aroclor 1232 (PCB-1232)			X	0.2	----	----	----	----	----	----	----	----
Aroclor 1242 (PCB-1242)			X	0.2	----	----	----	----	----	----	----	----
Aroclor 1248 (PCB-1248)			X	0.2	----	----	----	----	----	----	----	----
Aroclor 1254 (PCB-1254)			X	0.2	----	----	----	----	----	----	----	----
Aroclor 1260 (PCB-1260)			X	0.2	----	----	----	----	----	----	----	----
alpha-BHC			X	0.05	----	----	----	----	----	----	----	----
beta-BHC			X	0.05	----	----	----	----	----	----	----	----

SECTION III – LABORATORY ANALYSIS

TABLE III:

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ORGANIC TOXIC POLLUTANTS IN EACH OF THE FOUR FRACTIONS IN ANALYSIS BY GAS CHROMATOGRAPHY/MASS SPECTROSCOPY (GS/MS)

☐ Grab ☐ Composite

POLLUTANT	MARK X			MQL (*) µg/L	EFFLUENT ANALYSIS						UNITS	
	TESTING REQUIRED	BELIEVED PRESENT	BELIEVED ABSENT		MAXIMUM DAILY VALUE		MAXIMUM 30 DAY VALUE		LONG TERM AVERAGE VALUE		CONCEN-TRATION	MASS
					CONCENTRATION	MASS	CONCENTRATION	MASS	CONCENTRATION	MASS		
delta-BHC			X	0.05	----	----	----	----	----	----	----	----
gamma-BHC			X	0.05	----	----	----	----	----	----	----	----
chlordane			X	0.2	----	----	----	----	----	----	----	----
4,4'DDT			X	0.02	----	----	----	----	----	----	----	----
4,4'DDE			X	0.1	----	----	----	----	----	----	----	----
4,4'DDD			X	0.1	----	----	----	----	----	----	----	----
dieldrin			X	0.02	----	----	----	----	----	----	----	----
alpha-endosulfan			X	0.01	----	----	----	----	----	----	----	----
beta-endosulfan			X	0.02	----	----	----	----	----	----	----	----
endosulfan sulfate			X	0.1	----	----	----	----	----	----	----	----
endrin			X	0.02	----	----	----	----	----	----	----	----
endrin aldehyde			X	0.1	----	----	----	----	----	----	----	----
heptachlor			X	0.01	----	----	----	----	----	----	----	----
heptachlor epoxide			X	0.01	----	----	----	----	----	----	----	----
Toxaphene			X	0.3	----	----	----	----	----	----	----	----

(*) Minimum Quantification Level (MQL)

SECTION III – LABORATORY ANALYSIS

TABLE III:

ORGANIC TOXIC POLLUTANTS IN EACH OF THE FOUR FRACTIONS IN ANALYSIS BY GAS CHROMATOGRAPHY/MASS SPECTROSCOPY (GS/MS)

OUTFALL NUMBER

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☐ Grab ☐ Composite

POLLUTANT	MARK X			MQL (*) µg/L	EFFLUENT ANALYSIS						UNITS	
	TESTING REQUIRED	BELIEVED PRESENT	BELIEVED ABSENT		MAXIMUM DAILY VALUE		MAXIMUM 30 DAY VALUE		LONG TERM AVERAGE VALUE		CONCEN-TRATION	MASS
					CONCENTRATION	MASS	CONCENTRATION	MASS	CONCENTRATION	MASS		
VOLATILE ORGANIC CHEMICALS – EPA METHOD 624 SUGGESTED												
acrolein			X	50	----	----	----	----	----	----	----	----
acrylonitrile			X	20	----	----	----	----	----	----	----	----
benzene			X	10	----	----	----	----	----	----	----	----
bromoform			X	10	----	----	----	----	----	----	----	----
carbon tetrachloride			X	2	----	----	----	----	----	----	----	----
chlorobenzene			X	10	----	----	----	----	----	----	----	----
chlorodibromomethane			X	10	----	----	----	----	----	----	----	----
chloroethane			X	50	----	----	----	----	----	----	----	----
2-chloroethylvinyl ether			X	10	----	----	----	----	----	----	----	----
1,2-dichlorobenzene			X	10	----	----	----	----	----	----	----	----
1,3-dichlorobenzene			X	10	----	----	----	----	----	----	----	----
1,4-dichlorobenzene			X	10	----	----	----	----	----	----	----	----
chloroform			X	10	----	----	----	----	----	----	----	----
dichlorobromomethane			X	10	----	----	----	----	----	----	----	----
1,1-dichloroethane			X	10	----	----	----	----	----	----	----	----
1,2-dichloroethane			X	10	----	----	----	----	----	----	----	----
1,1-dichloroethylene			X	10	----	----	----	----	----	----	----	----
1,2-dichloropropane			X	10	----	----	----	----	----	----	----	----
1,3-Dichloropropylene			X	10	----	----	----	----	----	----	----	----
ethylbenzene			X	10	----	----	----	----	----	----	----	----
methyl bromide			X	50	----	----	----	----	----	----	----	----
methyl chloride			X	50	----	----	----	----	----	----	----	----
methylene chloride			X	20	----	----	----	----	----	----	----	----
1,1,2,2-tetrachloroethane			X	10	----	----	----	----	----	----	----	----
tetrachloroethylene			X	10	----	----	----	----	----	----	----	----
toluene			X	10	----	----	----	----	----	----	----	----

SECTION III – LABORATORY ANALYSIS

TABLE III:

ORGANIC TOXIC POLLUTANTS IN EACH OF THE FOUR FRACTIONS IN ANALYSIS BY GAS CHROMATOGRAPHY/MASS SPECTROSCOPY (GS/MS)

OUTFALL NUMBER

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☐ Grab ☐ Composite

POLLUTANT	MARK X			MQL (*) µg/L	EFFLUENT ANALYSIS						UNITS	
	TESTING REQUIRED	BELIEVED PRESENT	BELIEVED ABSENT		MAXIMUM DAILY VALUE		MAXIMUM 30 DAY VALUE		LONG TERM AVERAGE VALUE		CONCEN-TRATION	MASS
					CONCENTRATION	MASS	CONCENTRATION	MASS	CONCENTRATION	MASS		
1,2-trans-dichloroethylene			X	10	----	----	----	----	----	----	----	----
1,1,1-trichloroethane			X	10	----	----	----	----	----	----	----	----
1,1,2-trichloroethane			X	10	----	----	----	----	----	----	----	----
trichloroethene (trichloroethylene)			X	10	----	----	----	----	----	----	----	----
vinyl chloride (chloroethylene)			X	10	----	----	----	----	----	----	----	----
ACID EXTRACTABLE ORGANIC CHEMICAL – EPA METHOD 625 SUGGESTED												
2-chlorophenol			X	10	----	----	----	----	----	----	----	----
2,4-dichlorophenol			X	10	----	----	----	----	----	----	----	----
2,4-dimethylphenol			X	10	----	----	----	----	----	----	----	----
2,4-dinitrophenol			X	50	----	----	----	----	----	----	----	----
2-methyl 4,6-dinitrophenol (4,6-dinitro-o-cresol)			X	50	----	----	----	----	----	----	----	----
2-nitrophenol			X	20	----	----	----	----	----	----	----	----
4-nitrophenol			X	50	----	----	----	----	----	----	----	----
4-chloro-3-methylphenol (p-chloro-m-cresol)			X	10	----	----	----	----	----	----	----	----
pentachlorophenol			X	5	----	----	----	----	----	----	----	----
phenol			X	10	----	----	----	----	----	----	----	----
2,4,6-trichlorophenol			X	10	----	----	----	----	----	----	----	----
BASE/NEUTRAL EXTRACTABLE ORGANIC CHEMICALS – EPA METHOD 625 SUGGESTED												
acenaphthene			X	10	----	----	----	----	----	----	----	----
acenaphthylene			X	10	----	----	----	----	----	----	----	----
anthracene			X	10	----	----	----	----	----	----	----	----
benzidine			X	50	----	----	----	----	----	----	----	----
benzo(a)anthracene			X	5	----	----	----	----	----	----	----	----
benzo(a)pyrene			X	5	----	----	----	----	----	----	----	----

SECTION III – LABORATORY ANALYSIS

TABLE III:

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ORGANIC TOXIC POLLUTANTS IN EACH OF THE FOUR FRACTIONS IN ANALYSIS BY GAS CHROMATOGRAPHY/MASS SPECTROSCOPY (GS/MS)

☐ Grab ☐ Composite

POLLUTANT	MARK X			MQL (*) µg/L	EFFLUENT ANALYSIS						UNITS	
	TESTING REQUIRED	BELIEVED PRESENT	BELIEVED ABSENT		MAXIMUM DAILY VALUE		MAXIMUM 30 DAY VALUE		LONG TERM AVERAGE VALUE		CONCEN-TRATION	MASS
					CONCENTRATION	MASS	CONCENTRATION	MASS	CONCENTRATION	MASS		
3,4-benzo fluoranthene			X	10	----	----	----	----	----	----	----	----
benzo(ghi)perylene			X	20	----	----	----	----	----	----	----	----
benzo(k)fluoranthene			X	5	----	----	----	----	----	----	----	----
bis(2-chloroethoxy)methane			X	10	----	----	----	----	----	----	----	----
bis(2-chloroethyl)ether			X	10	----	----	----	----	----	----	----	----
bis(2-chloroisopropyl)ether			X	10	----	----	----	----	----	----	----	----
bis(2-ethylhexyl)phthalate			X	10	----	----	----	----	----	----	----	----
4-bromophenyl phenyl ether			X	10	----	----	----	----	----	----	----	----
butylbenzyl phthalate			X	10	----	----	----	----	----	----	----	----
2-chloronaphthalene			X	10	----	----	----	----	----	----	----	----
4-chlorophenyl phenyl ether			X	10	----	----	----	----	----	----	----	----
chrysene			X	5	----	----	----	----	----	----	----	----
dibenzo(a,h)anthracene			X	5	----	----	----	----	----	----	----	----
3,3'-dichlorobenzidine			X	5	----	----	----	----	----	----	----	----
diethyl phthalate			X	10	----	----	----	----	----	----	----	----
dimethyl phthalate			X	10	----	----	----	----	----	----	----	----
di-n-butyl phthalate			X	10	----	----	----	----	----	----	----	----
2,4-dinitrotoluene			X	10	----	----	----	----	----	----	----	----
2,6-dinitrotoluene			X	10	----	----	----	----	----	----	----	----
di-n-octyl phthalate			X	10	----	----	----	----	----	----	----	----
1,2-diphenylhydrazine (as azobenzene)			X	20	----	----	----	----	----	----	----	----
fluoranthene			X	10	----	----	----	----	----	----	----	----
fluorene			X	10	----	----	----	----	----	----	----	----
hexachlorobenzene			X	5	----	----	----	----	----	----	----	----
hexachlorobutadiene			X	10	----	----	----	----	----	----	----	----
hexachlorocyclopentadiene			X	10	----	----	----	----	----	----	----	----

SECTION III – LABORATORY ANALYSIS

TABLE III:

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ORGANIC TOXIC POLLUTANTS IN EACH OF THE FOUR FRACTIONS IN ANALYSIS BY GAS CHROMATOGRAPHY/MASS SPECTROSCOPY (GS/MS)

☐ Grab ☐ Composite

POLLUTANT	MARK X			MQL (*) µg/L	EFFLUENT ANALYSIS						UNITS	
	TESTING REQUIRED	BELIEVED PRESENT	BELIEVED ABSENT		MAXIMUM DAILY VALUE		MAXIMUM 30 DAY VALUE		LONG TERM AVERAGE VALUE		CONCEN-TRATION	MASS
					CONCENTRATION	MASS	CONCENTRATION	MASS	CONCENTRATION	MASS		
hexachloroethane			X	20	----	----	----	----	----	----	----	----
indeno(1,2,3-cd)pyrene			X	5	----	----	----	----	----	----	----	----
isophorone			X	10	----	----	----	----	----	----	----	----
naphthalene			X	10	----	----	----	----	----	----	----	----
nitrobenzene			X	10	----	----	----	----	----	----	----	----
N-nitrosodimethylamine			X	50	----	----	----	----	----	----	----	----
N-nitrosodi-n-propylamine			X	20	----	----	----	----	----	----	----	----
N-nitrosodiphenylamine			X	20	----	----	----	----	----	----	----	----
phenanthrene			X	10	----	----	----	----	----	----	----	----
pyrene			X	10	----	----	----	----	----	----	----	----
1,2,4-trichlorobenzene			X	10	----	----	----	----	----	----	----	----
PESTICIDES & PCBs – EPA METHOD 608 REQUIRED												
aldrin			X	0.01	----	----	----	----	----	----	----	----
Aroclor 1016 (PCB-1016)			X	0.2	----	----	----	----	----	----	----	----
Aroclor 1221 (PCB-1221)			X	0.2	----	----	----	----	----	----	----	----
Aroclor 1232 (PCB-1232)			X	0.2	----	----	----	----	----	----	----	----
Aroclor 1242 (PCB-1242)			X	0.2	----	----	----	----	----	----	----	----
Aroclor 1248 (PCB-1248)			X	0.2	----	----	----	----	----	----	----	----
Aroclor 1254 (PCB-1254)			X	0.2	----	----	----	----	----	----	----	----
Aroclor 1260 (PCB-1260)			X	0.2	----	----	----	----	----	----	----	----
alpha-BHC			X	0.05	----	----	----	----	----	----	----	----
beta-BHC			X	0.05	----	----	----	----	----	----	----	----

SECTION III – LABORATORY ANALYSIS

TABLE III:

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ORGANIC TOXIC POLLUTANTS IN EACH OF THE FOUR FRACTIONS IN ANALYSIS BY GAS CHROMATOGRAPHY/MASS SPECTROSCOPY (GS/MS)

☐ Grab ☐ Composite

POLLUTANT	MARK X			MQL (*) µg/L	EFFLUENT ANALYSIS						UNITS	
	TESTING REQUIRED	BELIEVED PRESENT	BELIEVED ABSENT		MAXIMUM DAILY VALUE		MAXIMUM 30 DAY VALUE		LONG TERM AVERAGE VALUE		CONCEN-TRATION	MASS
					CONCENTRATION	MASS	CONCENTRATION	MASS	CONCENTRATION	MASS		
delta-BHC			X	0.05	----	----	----	----	----	----	----	----
gamma-BHC			X	0.05	----	----	----	----	----	----	----	----
chlordane			X	0.2	----	----	----	----	----	----	----	----
4,4'DDT			X	0.02	----	----	----	----	----	----	----	----
4,4'DDE			X	0.1	----	----	----	----	----	----	----	----
4,4'DDD			X	0.1	----	----	----	----	----	----	----	----
dieldrin			X	0.02	----	----	----	----	----	----	----	----
alpha-endosulfan			X	0.01	----	----	----	----	----	----	----	----
beta-endosulfan			X	0.02	----	----	----	----	----	----	----	----
endosulfan sulfate			X	0.1	----	----	----	----	----	----	----	----
endrin			X	0.02	----	----	----	----	----	----	----	----
endrin aldehyde			X	0.1	----	----	----	----	----	----	----	----
heptachlor			X	0.01	----	----	----	----	----	----	----	----
heptachlor epoxide			X	0.01	----	----	----	----	----	----	----	----
Toxaphene			X	0.3	----	----	----	----	----	----	----	----

(*) Minimum Quantification Level (MQL)

SECTION III – LABORATORY ANALYSIS

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ORGANIC TOXIC POLLUTANTS IN EACH OF THE FOUR FRACTIONS IN ANALYSIS BY GAS CHROMATOGRAPHY/MASS SPECTROSCOPY (GS/MS)

☐ Grab ☐ Composite

POLLUTANT	MARK X			MQL (*) µg/L	EFFLUENT ANALYSIS						UNITS	
	TESTING REQUIRED	BELIEVED PRESENT	BELIEVED ABSENT		MAXIMUM DAILY VALUE		MAXIMUM 30 DAY VALUE		LONG TERM AVERAGE VALUE		CONCEN-TRATION	MASS
					CONCENTRATION	MASS	CONCENTRATION	MASS	CONCENTRATION	MASS		
VOLATILE ORGANIC CHEMICALS – EPA METHOD 624 SUGGESTED												
acrolein			X	50	----	----	----	----	----	----	----	----
acrylonitrile			X	20	----	----	----	----	----	----	----	----
benzene			X	10	----	----	----	----	----	----	----	----
bromoform			X	10	----	----	----	----	----	----	----	----
carbon tetrachloride			X	2	----	----	----	----	----	----	----	----
chlorobenzene			X	10	----	----	----	----	----	----	----	----
chlorodibromomethane			X	10	----	----	----	----	----	----	----	----
chloroethane			X	50	----	----	----	----	----	----	----	----
2-chloroethylvinyl ether			X	10	----	----	----	----	----	----	----	----
1,2-dichlorobenzene			X	10	----	----	----	----	----	----	----	----
1,3-dichlorobenzene			X	10	----	----	----	----	----	----	----	----
1,4-dichlorobenzene			X	10	----	----	----	----	----	----	----	----
chloroform			X	10	----	----	----	----	----	----	----	----
dichlorobromomethane			X	10	----	----	----	----	----	----	----	----
1,1-dichloroethane			X	10	----	----	----	----	----	----	----	----
1,2-dichloroethane			X	10	----	----	----	----	----	----	----	----
1,1-dichloroethylene			X	10	----	----	----	----	----	----	----	----
1,2-dichloropropane			X	10	----	----	----	----	----	----	----	----
1,3-Dichloropropylene			X	10	----	----	----	----	----	----	----	----
ethylbenzene			X	10	----	----	----	----	----	----	----	----
methyl bromide			X	50	----	----	----	----	----	----	----	----
methyl chloride			X	50	----	----	----	----	----	----	----	----
methylene chloride			X	20	----	----	----	----	----	----	----	----
1,1,2,2-tetrachloroethane			X	10	----	----	----	----	----	----	----	----

SECTION III – LABORATORY ANALYSIS

TABLE III:

ORGANIC TOXIC POLLUTANTS IN EACH OF THE FOUR FRACTIONS IN ANALYSIS BY GAS CHROMATOGRAPHY/MASS SPECTROSCOPY (GS/MS)

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☐ Grab ☐ Composite

POLLUTANT	MARK X			MQL (*) µg/L	EFFLUENT ANALYSIS						UNITS	
	TESTING REQUIRED	BELIEVED PRESENT	BELIEVED ABSENT		MAXIMUM DAILY VALUE		MAXIMUM 30 DAY VALUE		LONG TERM AVERAGE VALUE		CONCEN-TRATION	MASS
					CONCENTRATION	MASS	CONCENTRATION	MASS	CONCENTRATION	MASS		
tetrachloroethylene			X	10	----	----	----	----	----	----	----	----
toluene			X	10	----	----	----	----	----	----	----	----
1,2-trans-dichloroethylene			X	10	----	----	----	----	----	----	----	----
1,1,1-trichloroethane			X	10	----	----	----	----	----	----	----	----
1,1,2-trichloroethane			X	10	----	----	----	----	----	----	----	----
trichloroethene (trichloroethylene)			X	10	----	----	----	----	----	----	----	----
vinyl chloride (chloroethylene)			X	10	----	----	----	----	----	----	----	----
ACID EXTRACTABLE ORGANIC CHEMICAL – EPA METHOD 625 SUGGESTED												
2-chlorophenol			X	10	----	----	----	----	----	----	----	----
2,4-dichlorophenol			X	10	----	----	----	----	----	----	----	----
2,4-dimethylphenol			X	10	----	----	----	----	----	----	----	----
2,4-dinitrophenol			X	50	----	----	----	----	----	----	----	----
2-methyl 4,6-dinitrophenol (4,6-dinitro-o-cresol)			X	50	----	----	----	----	----	----	----	----
2-nitrophenol			X	20	----	----	----	----	----	----	----	----
4-nitrophenol			X	50	----	----	----	----	----	----	----	----
4-chloro-3-methylphenol (p-chloro-m-cresol)			X	10	----	----	----	----	----	----	----	----
pentachlorophenol			X	5	----	----	----	----	----	----	----	----
phenol			X	10	----	----	----	----	----	----	----	----
2,4,6-trichlorophenol			X	10	----	----	----	----	----	----	----	----
BASE/NEUTRAL EXTRACTABLE ORGANIC CHEMICALS – EPA METHOD 625 SUGGESTED												
acenaphthene			X	10	----	----	----	----	----	----	----	----
acenaphthylene			X	10	----	----	----	----	----	----	----	----
anthracene			X	10	----	----	----	----	----	----	----	----
benzidine			X	50	----	----	----	----	----	----	----	----

SECTION III – LABORATORY ANALYSIS

TABLE III:

ORGANIC TOXIC POLLUTANTS IN EACH OF THE FOUR FRACTIONS IN ANALYSIS BY GAS CHROMATOGRAPHY/MASS SPECTROSCOPY (GS/MS)

OUTFALL NUMBER

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☐ Grab ☐ Composite

POLLUTANT	MARK X			MQL (*) µg/L	EFFLUENT ANALYSIS						UNITS	
	TESTING REQUIRED	BELIEVED PRESENT	BELIEVED ABSENT		MAXIMUM DAILY VALUE		MAXIMUM 30 DAY VALUE		LONG TERM AVERAGE VALUE		CONCEN-TRATION	MASS
					CONCENTRATION	MASS	CONCENTRATION	MASS	CONCENTRATION	MASS		
benzo(a)anthracene			X	5	----	----	----	----	----	----	----	----
benzo(a)pyrene			X	5	----	----	----	----	----	----	----	----
3,4-benzo fluoranthene			X	10	----	----	----	----	----	----	----	----
benzo(ghi)perylene			X	20	----	----	----	----	----	----	----	----
benzo(k)fluoranthene			X	5	----	----	----	----	----	----	----	----
bis(2-chloroethoxy)methane			X	10	----	----	----	----	----	----	----	----
bis(2-chloroethyl)ether			X	10	----	----	----	----	----	----	----	----
bis(2-chloroisopropyl)ether			X	10	----	----	----	----	----	----	----	----
bis(2-ethylhexyl)phthalate			X	10	----	----	----	----	----	----	----	----
4-bromophenyl phenyl ether			X	10	----	----	----	----	----	----	----	----
butylbenzyl phthalate			X	10	----	----	----	----	----	----	----	----
2-chloronaphthalene			X	10	----	----	----	----	----	----	----	----
4-chlorophenyl phenyl ether			X	10	----	----	----	----	----	----	----	----
chrysene			X	5	----	----	----	----	----	----	----	----
dibenzo(a,h)anthracene			X	5	----	----	----	----	----	----	----	----
3,3'-dichlorobenzidine			X	5	----	----	----	----	----	----	----	----
diethyl phthalate			X	10	----	----	----	----	----	----	----	----
dimethyl phthalate			X	10	----	----	----	----	----	----	----	----
di-n-butyl phthalate			X	10	----	----	----	----	----	----	----	----
2,4-dinitrotoluene			X	10	----	----	----	----	----	----	----	----
2,6-dinitrotoluene			X	10	----	----	----	----	----	----	----	----
di-n-octyl phthalate			X	10	----	----	----	----	----	----	----	----
1,2-diphenylhydrazine (as azobenzene)			X	20	----	----	----	----	----	----	----	----
fluoranthene			X	10	----	----	----	----	----	----	----	----
fluorene			X	10	----	----	----	----	----	----	----	----
hexachlorobenzene			X	5	----	----	----	----	----	----	----	----

SECTION III – LABORATORY ANALYSIS

TABLE III:

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ORGANIC TOXIC POLLUTANTS IN EACH OF THE FOUR FRACTIONS IN ANALYSIS BY GAS CHROMATOGRAPHY/MASS SPECTROSCOPY (GS/MS)

☐ Grab ☐ Composite

POLLUTANT	MARK X			MQL (*) µg/L	EFFLUENT ANALYSIS						UNITS	
	TESTING REQUIRED	BELIEVED PRESENT	BELIEVED ABSENT		MAXIMUM DAILY VALUE		MAXIMUM 30 DAY VALUE		LONG TERM AVERAGE VALUE		CONCEN-TRATION	MASS
					CONCENTRATION	MASS	CONCENTRATION	MASS	CONCENTRATION	MASS		
hexachlorobutadiene			X	10	----	----	----	----	----	----	----	----
hexachlorocyclopentadiene			X	10	----	----	----	----	----	----	----	----
hexachloroethane			X	20	----	----	----	----	----	----	----	----
indeno(1,2,3-cd)pyrene			X	5	----	----	----	----	----	----	----	----
isophorone			X	10	----	----	----	----	----	----	----	----
naphthalene			X	10	----	----	----	----	----	----	----	----
nitrobenzene			X	10	----	----	----	----	----	----	----	----
N-nitrosodimethylamine			X	50	----	----	----	----	----	----	----	----
N-nitrosodi-n-propylamine			X	20	----	----	----	----	----	----	----	----
N-nitrosodiphenylamine			X	20	----	----	----	----	----	----	----	----
phenanthrene			X	10	----	----	----	----	----	----	----	----
pyrene			X	10	----	----	----	----	----	----	----	----
1,2,4-trichlorobenzene			X	10	----	----	----	----	----	----	----	----
PESTICIDES & PCBs – EPA METHOD 608 REQUIRED												
aldrin			X	0.01	----	----	----	----	----	----	----	----
Aroclor 1016 (PCB-1016)			X	0.2	----	----	----	----	----	----	----	----
Aroclor 1221 (PCB-1221)			X	0.2	----	----	----	----	----	----	----	----
Aroclor 1232 (PCB-1232)			X	0.2	----	----	----	----	----	----	----	----
Aroclor 1242 (PCB-1242)			X	0.2	----	----	----	----	----	----	----	----
Aroclor 1248 (PCB-1248)			X	0.2	----	----	----	----	----	----	----	----
Aroclor 1254 (PCB-1254)			X	0.2	----	----	----	----	----	----	----	----
Aroclor 1260 (PCB-1260)			X	0.2	----	----	----	----	----	----	----	----

SECTION III – LABORATORY ANALYSIS

TABLE III:

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ORGANIC TOXIC POLLUTANTS IN EACH OF THE FOUR FRACTIONS IN ANALYSIS BY GAS CHROMATOGRAPHY/MASS SPECTROSCOPY (GS/MS)

☐ Grab ☐ Composite

POLLUTANT	MARK X			MQL (*) µg/L	EFFLUENT ANALYSIS						UNITS	
	TESTING REQUIRED	BELIEVED PRESENT	BELIEVED ABSENT		MAXIMUM DAILY VALUE		MAXIMUM 30 DAY VALUE		LONG TERM AVERAGE VALUE		CONCEN-TRATION	MASS
					CONCENTRATION	MASS	CONCENTRATION	MASS	CONCENTRATION	MASS		
alpha-BHC			X	0.05	---	---	---	---	---	---	---	---
beta-BHC			X	0.05	---	---	---	---	---	---	---	---
delta-BHC			X	0.05	---	---	---	---	---	---	---	---
gamma-BHC			X	0.05	---	---	---	---	---	---	---	---
chlordane			X	0.2	---	---	---	---	---	---	---	---
4,4'DDT			X	0.02	---	---	---	---	---	---	---	---
4,4'DDE			X	0.1	---	---	---	---	---	---	---	---
4,4'DDD			X	0.1	---	---	---	---	---	---	---	---
dieldrin			X	0.02	---	---	---	---	---	---	---	---
alpha-endosulfan			X	0.01	---	---	---	---	---	---	---	---
beta-endosulfan			X	0.02	---	---	---	---	---	---	---	---
endosulfan sulfate			X	0.1	---	---	---	---	---	---	---	---
endrin			X	0.02	---	---	---	---	---	---	---	---
endrin aldehyde			X	0.1	---	---	---	---	---	---	---	---
heptachlor			X	0.01	---	---	---	---	---	---	---	---
heptachlor epoxide			X	0.01	---	---	---	---	---	---	---	---
Toxaphene			X	0.3	---	---	---	---	---	---	---	---

(*) Minimum Quantification Level (MQL)

SECTION III – LABORATORY ANALYSIS

TABLE III:

OUTFALL NUMBER

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ORGANIC TOXIC POLLUTANTS IN EACH OF THE FOUR FRACTIONS IN ANALYSIS BY GAS CHROMATOGRAPHY/MASS SPECTROSCOPY (GS/MS)

☐ Grab ☐ Composite

POLLUTANT	MARK X			MQL (*) µg/L	EFFLUENT ANALYSIS						UNITS	
	TESTING REQUIRED	BELIEVED PRESENT	BELIEVED ABSENT		MAXIMUM DAILY VALUE		MAXIMUM 30 DAY VALUE		LONG TERM AVERAGE VALUE		CONCEN-TRATION	MASS
					CONCENTRATION	MASS	CONCENTRATION	MASS	CONCENTRATION	MASS		
VOLATILE ORGANIC CHEMICALS – EPA METHOD 624 SUGGESTED												
acrolein			X	50	---	---	---	---	---	---	---	---
acrylonitrile			X	20	---	---	---	---	---	---	---	---
benzene			X	10	---	---	---	---	---	---	---	---
bromoform			X	10	---	---	---	---	---	---	---	---
carbon tetrachloride			X	2	---	---	---	---	---	---	---	---
chlorobenzene			X	10	---	---	---	---	---	---	---	---
chlorodibromomethane			X	10	---	---	---	---	---	---	---	---
chloroethane			X	50	---	---	---	---	---	---	---	---
2-chloroethylvinyl ether			X	10	---	---	---	---	---	---	---	---
1,2-dichlorobenzene			X	10	---	---	---	---	---	---	---	---
1,3-dichlorobenzene			X	10	---	---	---	---	---	---	---	---
1,4-dichlorobenzene			X	10	---	---	---	---	---	---	---	---
chloroform			X	10	---	---	---	---	---	---	---	---
dichlorobromomethane			X	10	---	---	---	---	---	---	---	---
1,1-dichloroethane			X	10	---	---	---	---	---	---	---	---
1,2-dichloroethane			X	10	---	---	---	---	---	---	---	---
1,1-dichloroethylene			X	10	---	---	---	---	---	---	---	---
1,2-dichloropropane			X	10	---	---	---	---	---	---	---	---
1,3-Dichloropropylene			X	10	---	---	---	---	---	---	---	---
ethylbenzene			X	10	---	---	---	---	---	---	---	---
methyl bromide			X	50	---	---	---	---	---	---	---	---
methyl chloride			X	50	---	---	---	---	---	---	---	---
methylene chloride			X	20	---	---	---	---	---	---	---	---
1,1,2,2-tetrachloroethane			X	10	---	---	---	---	---	---	---	---

SECTION III – LABORATORY ANALYSIS

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ORGANIC TOXIC POLLUTANTS IN EACH OF THE FOUR FRACTIONS IN ANALYSIS BY GAS CHROMATOGRAPHY/MASS SPECTROSCOPY (GS/MS)

☐ Grab ☐ Composite

POLLUTANT	MARK X			MQL (*) µg/L	EFFLUENT ANALYSIS						UNITS	
	TESTING REQUIRED	BELIEVED PRESENT	BELIEVED ABSENT		MAXIMUM DAILY VALUE		MAXIMUM 30 DAY VALUE		LONG TERM AVERAGE VALUE		CONCEN-TRATION	MASS
					CONCENTRATION	MASS	CONCENTRATION	MASS	CONCENTRATION	MASS		
tetrachloroethylene			X	10	---	---	---	---	---	---	---	---
toluene			X	10	---	---	---	---	---	---	---	---
1,2-trans-dichloroethylene			X	10	---	---	---	---	---	---	---	---
1,1,1-trichloroethane			X	10	---	---	---	---	---	---	---	---
1,1,2-trichloroethane			X	10	---	---	---	---	---	---	---	---
trichloroethene (trichloroethylene)			X	10	---	---	---	---	---	---	---	---
vinyl chloride (chloroethylene)			X	10	---	---	---	---	---	---	---	---
ACID EXTRACTABLE ORGANIC CHEMICAL – EPA METHOD 625 SUGGESTED												
2-chlorophenol			X	10	---	---	---	---	---	---	---	---
2,4-dichlorophenol			X	10	---	---	---	---	---	---	---	---
2,4-dimethylphenol			X	10	---	---	---	---	---	---	---	---
2,4-dinitrophenol			X	50	---	---	---	---	---	---	---	---
2-methyl 4,6-dinitrophenol (4,6-dinitro-o-cresol)			X	50	---	---	---	---	---	---	---	---
2-nitrophenol			X	20	---	---	---	---	---	---	---	---
4-nitrophenol			X	50	---	---	---	---	---	---	---	---
4-chloro-3-methylphenol (p-chloro-m-cresol)			X	10	---	---	---	---	---	---	---	---
pentachlorophenol			X	5	---	---	---	---	---	---	---	---
phenol			X	10	---	---	---	---	---	---	---	---
2,4,6-trichlorophenol			X	10	---	---	---	---	---	---	---	---
BASE/NEUTRAL EXTRACTABLE ORGANIC CHEMICALS – EPA METHOD 625 SUGGESTED												
acenaphthene			X	10	---	---	---	---	---	---	---	---
acenaphthylene			X	10	---	---	---	---	---	---	---	---
anthracene			X	10	---	---	---	---	---	---	---	---
benzidine			X	50	---	---	---	---	---	---	---	---

SECTION III – LABORATORY ANALYSIS

TABLE III:

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ORGANIC TOXIC POLLUTANTS IN EACH OF THE FOUR FRACTIONS IN ANALYSIS BY GAS CHROMATOGRAPHY/MASS SPECTROSCOPY (GS/MS)

☐ Grab ☐ Composite

POLLUTANT	MARK X			MQL (*) µg/L	EFFLUENT ANALYSIS						UNITS	
	TESTING REQUIRED	BELIEVED PRESENT	BELIEVED ABSENT		MAXIMUM DAILY VALUE		MAXIMUM 30 DAY VALUE		LONG TERM AVERAGE VALUE		CONCEN-TRATION	MASS
					CONCENTRATION	MASS	CONCENTRATION	MASS	CONCENTRATION	MASS		
benzo(a)anthracene			X	5	---	---	---	---	---	---	---	---
benzo(a)pyrene			X	5	---	---	---	---	---	---	---	---
3,4-benzo fluoranthene			X	10	---	---	---	---	---	---	---	---
benzo(ghi)perylene			X	20	---	---	---	---	---	---	---	---
benzo(k)fluoranthene			X	5	---	---	---	---	---	---	---	---
bis(2-chloroethoxy)methane			X	10	---	---	---	---	---	---	---	---
bis(2-chloroethyl)ether			X	10	---	---	---	---	---	---	---	---
bis(2-chloroisopropyl)ether			X	10	---	---	---	---	---	---	---	---
bis(2-ethylhexyl)phthalate			X	10	---	---	---	---	---	---	---	---
4-bromophenyl phenyl ether			X	10	---	---	---	---	---	---	---	---
butylbenzyl phthalate			X	10	---	---	---	---	---	---	---	---
2-chloronaphthalene			X	10	---	---	---	---	---	---	---	---
4-chlorophenyl phenyl ether			X	10	---	---	---	---	---	---	---	---
chrysene			X	5	---	---	---	---	---	---	---	---
dibenzo(a,h)anthracene			X	5	---	---	---	---	---	---	---	---
3,3'-dichlorobenzidine			X	5	---	---	---	---	---	---	---	---
diethyl phthalate			X	10	---	---	---	---	---	---	---	---
dimethyl phthalate			X	10	---	---	---	---	---	---	---	---
di-n-butyl phthalate			X	10	---	---	---	---	---	---	---	---
2,4-dinitrotoluene			X	10	---	---	---	---	---	---	---	---
2,6-dinitrotoluene			X	10	---	---	---	---	---	---	---	---
di-n-octyl phthalate			X	10	---	---	---	---	---	---	---	---
1,2-diphenylhydrazine (as azobenzene)			X	20	---	---	---	---	---	---	---	---
fluoranthene			X	10	---	---	---	---	---	---	---	---
fluorene			X	10	---	---	---	---	---	---	---	---
hexachlorobenzene			X	5	---	---	---	---	---	---	---	---

SECTION III – LABORATORY ANALYSIS

TABLE III:

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ORGANIC TOXIC POLLUTANTS IN EACH OF THE FOUR FRACTIONS IN ANALYSIS BY GAS CHROMATOGRAPHY/MASS SPECTROSCOPY (GS/MS)

☐ Grab ☐ Composite

POLLUTANT	MARK X			MQL (*) µg/L	EFFLUENT ANALYSIS						UNITS	
	TESTING REQUIRED	BELIEVED PRESENT	BELIEVED ABSENT		MAXIMUM DAILY VALUE		MAXIMUM 30 DAY VALUE		LONG TERM AVERAGE VALUE		CONCEN-TRATION	MASS
					CONCENTRATION	MASS	CONCENTRATION	MASS	CONCENTRATION	MASS		
hexachlorobutadiene			X	10	---	---	---	---	---	---	---	---
hexachlorocyclopentadiene			X	10	---	---	---	---	---	---	---	---
hexachloroethane			X	20	---	---	---	---	---	---	---	---
indeno(1,2,3-cd)pyrene			X	5	---	---	---	---	---	---	---	---
isophorone			X	10	---	---	---	---	---	---	---	---
naphthalene			X	10	---	---	---	---	---	---	---	---
nitrobenzene			X	10	---	---	---	---	---	---	---	---
N-nitrosodimethylamine			X	50	---	---	---	---	---	---	---	---
N-nitrosodi-n-propylamine			X	20	---	---	---	---	---	---	---	---
N-nitrosodiphenylamine			X	20	---	---	---	---	---	---	---	---
phenanthrene			X	10	---	---	---	---	---	---	---	---
pyrene			X	10	---	---	---	---	---	---	---	---
1,2,4-trichlorobenzene			X	10	---	---	---	---	---	---	---	---
PESTICIDES & PCBs – EPA METHOD 608 REQUIRED												
aldrin			X	0.01	---	---	---	---	---	---	---	---
Aroclor 1016 (PCB-1016)			X	0.2	---	---	---	---	---	---	---	---
Aroclor 1221 (PCB-1221)			X	0.2	---	---	---	---	---	---	---	---
Aroclor 1232 (PCB-1232)			X	0.2	---	---	---	---	---	---	---	---
Aroclor 1242 (PCB-1242)			X	0.2	---	---	---	---	---	---	---	---
Aroclor 1248 (PCB-1248)			X	0.2	---	---	---	---	---	---	---	---
Aroclor 1254 (PCB-1254)			X	0.2	---	---	---	---	---	---	---	---
Aroclor 1260 (PCB-1260)			X	0.2	---	---	---	---	---	---	---	---

SECTION III – LABORATORY ANALYSIS

TABLE III:

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ORGANIC TOXIC POLLUTANTS IN EACH OF THE FOUR FRACTIONS IN ANALYSIS BY GAS CHROMATOGRAPHY/MASS SPECTROSCOPY (GS/MS)

☐ Grab ☐ Composite

POLLUTANT	MARK X			MQL (*) µg/L	EFFLUENT ANALYSIS						UNITS	
	TESTING REQUIRED	BELIEVED PRESENT	BELIEVED ABSENT		MAXIMUM DAILY VALUE		MAXIMUM 30 DAY VALUE		LONG TERM AVERAGE VALUE		CONCEN-TRATION	MASS
					CONCENTRATION	MASS	CONCENTRATION	MASS	CONCENTRATION	MASS		
alpha-BHC			X	0.05	---	---	---	---	---	---	---	---
beta-BHC			X	0.05	---	---	---	---	---	---	---	---
delta-BHC			X	0.05	---	---	---	---	---	---	---	---
gamma-BHC			X	0.05	---	---	---	---	---	---	---	---
chlordane			X	0.2	---	---	---	---	---	---	---	---
4,4'DDT			X	0.02	---	---	---	---	---	---	---	---
4,4'DDE			X	0.1	---	---	---	---	---	---	---	---
4,4'DDD			X	0.1	---	---	---	---	---	---	---	---
dieldrin			X	0.02	---	---	---	---	---	---	---	---
alpha-endosulfan			X	0.01	---	---	---	---	---	---	---	---
beta-endosulfan			X	0.02	---	---	---	---	---	---	---	---
endosulfan sulfate			X	0.1	---	---	---	---	---	---	---	---
endrin			X	0.02	---	---	---	---	---	---	---	---
endrin aldehyde			X	0.1	---	---	---	---	---	---	---	---
heptachlor			X	0.01	---	---	---	---	---	---	---	---
heptachlor epoxide			X	0.01	---	---	---	---	---	---	---	---
Toxaphene			X	0.3	---	---	---	---	---	---	---	---

(*) Minimum Quantification Level (MQL)

SECTION III – LABORATORY ANALYSIS

TABLE III:

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ORGANIC TOXIC POLLUTANTS IN EACH OF THE FOUR FRACTIONS IN ANALYSIS BY GAS CHROMATOGRAPHY/MASS SPECTROSCOPY (GS/MS)

☐ Grab ☐ Composite

POLLUTANT	MARK X			MQL (*) µg/L	EFFLUENT ANALYSIS						UNITS	
	TESTING REQUIRED	BELIEVED PRESENT	BELIEVED ABSENT		MAXIMUM DAILY VALUE		MAXIMUM 30 DAY VALUE		LONG TERM AVERAGE VALUE		CONCEN-TRATION	MASS
					CONCENTRATION	MASS	CONCENTRATION	MASS	CONCENTRATION	MASS		
VOLATILE ORGANIC CHEMICALS – EPA METHOD 624 SUGGESTED												
acrolein			X	50	----	----	----	----	----	----	----	----
acrylonitrile			X	20	----	----	----	----	----	----	----	----
benzene			X	10	----	----	----	----	----	----	----	----
bromoform			X	10	----	----	----	----	----	----	----	----
carbon tetrachloride			X	2	----	----	----	----	----	----	----	----
chlorobenzene			X	10	----	----	----	----	----	----	----	----
chlorodibromomethane			X	10	----	----	----	----	----	----	----	----
chloroethane			X	50	----	----	----	----	----	----	----	----
2-chloroethylvinyl ether			X	10	----	----	----	----	----	----	----	----
1,2-dichlorobenzene			X	10	----	----	----	----	----	----	----	----
1,3-dichlorobenzene			X	10	----	----	----	----	----	----	----	----
1,4-dichlorobenzene			X	10	----	----	----	----	----	----	----	----
chloroform			X	10	----	----	----	----	----	----	----	----
dichlorobromomethane			X	10	----	----	----	----	----	----	----	----
1,1-dichloroethane			X	10	----	----	----	----	----	----	----	----
1,2-dichloroethane			X	10	----	----	----	----	----	----	----	----
1,1-dichloroethylene			X	10	----	----	----	----	----	----	----	----
1,2-dichloropropane			X	10	----	----	----	----	----	----	----	----
1,3-Dichloropropylene			X	10	----	----	----	----	----	----	----	----
ethylbenzene			X	10	----	----	----	----	----	----	----	----
methyl bromide			X	50	----	----	----	----	----	----	----	----
methyl chloride			X	50	----	----	----	----	----	----	----	----
methylene chloride			X	20	----	----	----	----	----	----	----	----
1,1,2,2-tetrachloroethane			X	10	----	----	----	----	----	----	----	----
tetrachloroethylene			X	10	----	----	----	----	----	----	----	----
toluene			X	10	----	----	----	----	----	----	----	----

SECTION III – LABORATORY ANALYSIS

TABLE III:

OUTFALL NUMBER

009

ORGANIC TOXIC POLLUTANTS IN EACH OF THE FOUR FRACTIONS IN ANALYSIS BY GAS CHROMATOGRAPHY/MASS SPECTROSCOPY (GS/MS)

☐ Grab ☐ Composite

POLLUTANT	MARK X			MQL (*) µg/L	EFFLUENT ANALYSIS						UNITS	
	TESTING REQUIRED	BELIEVED PRESENT	BELIEVED ABSENT		MAXIMUM DAILY VALUE		MAXIMUM 30 DAY VALUE		LONG TERM AVERAGE VALUE		CONCEN-TRATION	MASS
					CONCENTRATION	MASS	CONCENTRATION	MASS	CONCENTRATION	MASS		
1,2-trans-dichloroethylene			X	10	----	----	----	----	----	----	----	----
1,1,1-trichloroethane			X	10	----	----	----	----	----	----	----	----
1,1,2-trichloroethane			X	10	----	----	----	----	----	----	----	----
trichloroethene (trichloroethylene)			X	10	----	----	----	----	----	----	----	----
vinyl chloride (chloroethylene)			X	10	----	----	----	----	----	----	----	----
ACID EXTRACTABLE ORGANIC CHEMICAL – EPA METHOD 625 SUGGESTED												
2-chlorophenol			X	10	----	----	----	----	----	----	----	----
2,4-dichlorophenol			X	10	----	----	----	----	----	----	----	----
2,4-dimethylphenol			X	10	----	----	----	----	----	----	----	----
2,4-dinitrophenol			X	50	----	----	----	----	----	----	----	----
2-methyl 4,6-dinitrophenol (4,6-dinitro-o-cresol)			X	50	----	----	----	----	----	----	----	----
2-nitrophenol			X	20	----	----	----	----	----	----	----	----
4-nitrophenol			X	50	----	----	----	----	----	----	----	----
4-chloro-3-methylphenol (p-chloro-m-cresol)			X	10	----	----	----	----	----	----	----	----
pentachlorophenol			X	5	----	----	----	----	----	----	----	----
phenol			X	10	----	----	----	----	----	----	----	----
2,4,6-trichlorophenol			X	10	----	----	----	----	----	----	----	----
BASE/NEUTRAL EXTRACTABLE ORGANIC CHEMICALS – EPA METHOD 625 SUGGESTED												
acenaphthene			X	10	----	----	----	----	----	----	----	----
acenaphthylene			X	10	----	----	----	----	----	----	----	----
anthracene			X	10	----	----	----	----	----	----	----	----
benzidine			X	50	----	----	----	----	----	----	----	----
benzo(a)anthracene			X	5	----	----	----	----	----	----	----	----
benzo(a)pyrene			X	5	----	----	----	----	----	----	----	----

SECTION III – LABORATORY ANALYSIS

TABLE III:

ORGANIC TOXIC POLLUTANTS IN EACH OF THE FOUR FRACTIONS IN ANALYSIS BY GAS CHROMATOGRAPHY/MASS SPECTROSCOPY (GS/MS)

OUTFALL NUMBER

009

☐ Grab ☐ Composite

POLLUTANT	MARK X			MQL (*) µg/L	EFFLUENT ANALYSIS						UNITS	
	TESTING REQUIRED	BELIEVED PRESENT	BELIEVED ABSENT		MAXIMUM DAILY VALUE		MAXIMUM 30 DAY VALUE		LONG TERM AVERAGE VALUE		CONCEN-TRATION	MASS
					CONCENTRATION	MASS	CONCENTRATION	MASS	CONCENTRATION	MASS		
3,4-benzo fluoranthene			X	10	----	----	----	----	----	----	----	----
benzo(ghi)perylene			X	20	----	----	----	----	----	----	----	----
benzo(k)fluoranthene			X	5	----	----	----	----	----	----	----	----
bis(2-chloroethoxy)methane			X	10	----	----	----	----	----	----	----	----
bis(2-chloroethyl)ether			X	10	----	----	----	----	----	----	----	----
bis(2-chloroisopropyl)ether			X	10	----	----	----	----	----	----	----	----
bis(2-ethylhexyl)phthalate			X	10	----	----	----	----	----	----	----	----
4-bromophenyl phenyl ether			X	10	----	----	----	----	----	----	----	----
butylbenzyl phthalate			X	10	----	----	----	----	----	----	----	----
2-chloronaphthalene			X	10	----	----	----	----	----	----	----	----
4-chlorophenyl phenyl ether			X	10	----	----	----	----	----	----	----	----
chrysene			X	5	----	----	----	----	----	----	----	----
dibenzo(a,h)anthracene			X	5	----	----	----	----	----	----	----	----
3,3'-dichlorobenzidine			X	5	----	----	----	----	----	----	----	----
diethyl phthalate			X	10	----	----	----	----	----	----	----	----
dimethyl phthalate			X	10	----	----	----	----	----	----	----	----
di-n-butyl phthalate			X	10	----	----	----	----	----	----	----	----
2,4-dinitrotoluene			X	10	----	----	----	----	----	----	----	----
2,6-dinitrotoluene			X	10	----	----	----	----	----	----	----	----
di-n-octyl phthalate			X	10	----	----	----	----	----	----	----	----
1,2-diphenylhydrazine (as azobenzene)			X	20	----	----	----	----	----	----	----	----
fluoranthene			X	10	----	----	----	----	----	----	----	----
fluorene			X	10	----	----	----	----	----	----	----	----
hexachlorobenzene			X	5	----	----	----	----	----	----	----	----
hexachlorobutadiene			X	10	----	----	----	----	----	----	----	----
hexachlorocyclopentadiene			X	10	----	----	----	----	----	----	----	----

SECTION III – LABORATORY ANALYSIS

TABLE III:

OUTFALL NUMBER

009

ORGANIC TOXIC POLLUTANTS IN EACH OF THE FOUR FRACTIONS IN ANALYSIS BY GAS CHROMATOGRAPHY/MASS SPECTROSCOPY (GS/MS)

☐ Grab ☐ Composite

POLLUTANT	MARK X			MQL (*) µg/L	EFFLUENT ANALYSIS						UNITS	
	TESTING REQUIRED	BELIEVED PRESENT	BELIEVED ABSENT		MAXIMUM DAILY VALUE		MAXIMUM 30 DAY VALUE		LONG TERM AVERAGE VALUE		CONCEN-TRATION	MASS
					CONCENTRATION	MASS	CONCENTRATION	MASS	CONCENTRATION	MASS		
hexachloroethane			X	20	----	----	----	----	----	----	----	----
indeno(1,2,3-cd)pyrene			X	5	----	----	----	----	----	----	----	----
isophorone			X	10	----	----	----	----	----	----	----	----
naphthalene			X	10	----	----	----	----	----	----	----	----
nitrobenzene			X	10	----	----	----	----	----	----	----	----
N-nitrosodimethylamine			X	50	----	----	----	----	----	----	----	----
N-nitrosodi-n-propylamine			X	20	----	----	----	----	----	----	----	----
N-nitrosodiphenylamine			X	20	----	----	----	----	----	----	----	----
phenanthrene			X	10	----	----	----	----	----	----	----	----
pyrene			X	10	----	----	----	----	----	----	----	----
1,2,4-trichlorobenzene			X	10	----	----	----	----	----	----	----	----
PESTICIDES & PCBs – EPA METHOD 608 REQUIRED												
aldrin			X	0.01	----	----	----	----	----	----	----	----
Aroclor 1016 (PCB-1016)			X	0.2	----	----	----	----	----	----	----	----
Aroclor 1221 (PCB-1221)			X	0.2	----	----	----	----	----	----	----	----
Aroclor 1232 (PCB-1232)			X	0.2	----	----	----	----	----	----	----	----
Aroclor 1242 (PCB-1242)			X	0.2	----	----	----	----	----	----	----	----
Aroclor 1248 (PCB-1248)			X	0.2	----	----	----	----	----	----	----	----
Aroclor 1254 (PCB-1254)			X	0.2	----	----	----	----	----	----	----	----
Aroclor 1260 (PCB-1260)			X	0.2	----	----	----	----	----	----	----	----
alpha-BHC			X	0.05	----	----	----	----	----	----	----	----
beta-BHC			X	0.05	----	----	----	----	----	----	----	----

SECTION III – LABORATORY ANALYSIS

TABLE III:

OUTFALL NUMBER

009

ORGANIC TOXIC POLLUTANTS IN EACH OF THE FOUR FRACTIONS IN ANALYSIS BY GAS CHROMATOGRAPHY/MASS SPECTROSCOPY (GS/MS)

☐ Grab ☐ Composite

POLLUTANT	MARK X			MQL (*) µg/L	EFFLUENT ANALYSIS						UNITS	
	TESTING REQUIRED	BELIEVED PRESENT	BELIEVED ABSENT		MAXIMUM DAILY VALUE		MAXIMUM 30 DAY VALUE		LONG TERM AVERAGE VALUE		CONCEN-TRATION	MASS
					CONCENTRATION	MASS	CONCENTRATION	MASS	CONCENTRATION	MASS		
delta-BHC			X	0.05	----	----	----	----	----	----	----	----
gamma-BHC			X	0.05	----	----	----	----	----	----	----	----
chlordane			X	0.2	----	----	----	----	----	----	----	----
4,4'DDT			X	0.02	----	----	----	----	----	----	----	----
4,4'DDE			X	0.1	----	----	----	----	----	----	----	----
4,4'DDD			X	0.1	----	----	----	----	----	----	----	----
dieldrin			X	0.02	----	----	----	----	----	----	----	----
alpha-endosulfan			X	0.01	----	----	----	----	----	----	----	----
beta-endosulfan			X	0.02	----	----	----	----	----	----	----	----
endosulfan sulfate			X	0.1	----	----	----	----	----	----	----	----
endrin			X	0.02	----	----	----	----	----	----	----	----
endrin aldehyde			X	0.1	----	----	----	----	----	----	----	----
heptachlor			X	0.01	----	----	----	----	----	----	----	----
heptachlor epoxide			X	0.01	----	----	----	----	----	----	----	----
Toxaphene			X	0.3	----	----	----	----	----	----	----	----

(*) Minimum Quantification Level (MQL)

ECTION III – LABORATORY ANALYSIS

TABLE IV:

ADDITIONAL CONVENTIONAL AND NONCONVENTIONAL POLLUTANTS

OUTFALL NUMBER

101

☐ Grab ☐ Composite

POLLUTANT	MARK X			MQL (*) µg/L	EFFLUENT ANALYSIS						UNITS	
	TESTING REQUIRED	BELIEVED PRESENT	BELIEVED ABSENT		MAXIMUM DAILY VALUE		MAXIMUM 30 DAY VALUE		LONG TERM AVERAGE VALUE		CONCEN-TRATION	MASS
					CONCENTRATION	MASS	CONCENTRATION	MASS	CONCENTRATION	MASS		
CONVENTIONAL AND NONCONVENTIONAL POLLUTANTS												
Bromide			X	----	----	----	----	----	----	----	----	----
Chlorine, Total Residual			X	----	----	----	----	----	----	----	----	----
Color			X	----	----	----	----	----	----	----	----	----
Fecal Coliform (cols/100ml)	X	X		----	----	----	----	----	----	----	Col/100 ml	----
Fluoride			X	----	----	----	----	----	----	----	----	----
Kjeldahl Nitrogen, Total			X	----	----	----	----	----	----	----	----	----
Nitrate-Nitrite			X	----	----	----	----	----	----	----	----	----
Nitrogen, Total Organic			X	----	----	----	----	----	----	----	----	----
Phosphorus, Total			X	----	----	----	----	----	----	----	----	----
Radioactivity			X	----	----	----	----	----	----	----	----	----
Sulfate			X	----	----	----	----	----	----	----	----	----
Sulfide			X	----	----	----	----	----	----	----	----	----
Sulfite			X	----	----	----	----	----	----	----	----	----
Surfactants			X	----	----	----	----	----	----	----	----	----
Aluminum, Total			X	----	----	----	----	----	----	----	----	----
Barium, Total			X	----	----	----	----	----	----	----	----	----
Boron, Total			X	----	----	----	----	----	----	----	----	----
Cobalt, Total			X	----	----	----	----	----	----	----	----	----
Iron, Total			X	----	----	----	----	----	----	----	----	----
Magnesium, Total			X	----	----	----	----	----	----	----	----	----
Manganese, Total			X	----	----	----	----	----	----	----	----	----
Molybdenum			X	----	----	----	----	----	----	----	----	----
Tin, Total			X	----	----	----	----	----	----	----	----	----
Titanium, Total			X	----	----	----	----	----	----	----	----	----

(*) Minimum Quantification Level (MQL)

Outfall 101 has no discharge.

SECTION III – LABORATORY ANALYSIS

TABLE IV:

ADDITIONAL CONVENTIONAL AND NONCONVENTIONAL POLLUTANTS

OUTFALL NUMBER

201

X Grab ☐ Composite

POLLUTANT	MARK X			MQL (*) µg/L	EFFLUENT ANALYSIS						UNITS	
	TESTING REQUIRED	BELIEVED PRESENT	BELIEVED ABSENT		MAXIMUM DAILY VALUE		MAXIMUM 30 DAY VALUE		LONG TERM AVERAGE VALUE		CONCEN-TRATION	MASS
					CONCENTRATION	MASS	CONCENTRATION	MASS	CONCENTRATION	MASS		
CONVENTIONAL AND NONCONVENTIONAL POLLUTANTS												
Bromide			X	----	----	----	----	----	----	----	----	----
Chlorine, Total Residual	X			----	**0.08**	----	----	----	----	----	mg/L	----
Color			X	----	----	----	----	----	----	----	----	----
Fecal Coliform (cols/100ml)			X	----	----	----	----	----	----	----	----	----
Fluoride			X	----	----	----	----	----	----	----	----	----
Kjeldahl Nitrogen, Total			X	----	----	----	----	----	----	----	----	----
Nitrate-Nitrite			X	----	----	----	----	----	----	----	----	----
Nitrogen, Total Organic			X	----	----	----	----	----	----	----	----	----
Phosphorus, Total			X	----	----	----	----	----	----	----	----	----
Radioactivity			X	----	----	----	----	----	----	----	----	----
Sulfate			X	----	----	----	----	----	----	----	----	----
Sulfide			X	----	----	----	----	----	----	----	----	----
Sulfite			X	----	----	----	----	----	----	----	----	----
Surfactants			X	----	----	----	----	----	----	----	----	----
Aluminum, Total			X	----	----	----	----	----	----	----	----	----
Barium, Total			X	----	----	----	----	----	----	----	----	----
Boron, Total			X	----	----	----	----	----	----	----	----	----
Cobalt, Total			X	----	----	----	----	----	----	----	----	----
Iron, Total			X	----	----	----	----	----	----	----	----	----
Magnesium, Total			X	----	----	----	----	----	----	----	----	----
Manganese, Total			X	----	----	----	----	----	----	----	----	----
Molybdenum			X	----	----	----	----	----	----	----	----	----
Tin, Total			X	----	----	----	----	----	----	----	----	----
Titanium, Total			X	----	----	----	----	----	----	----	----	----

(*) Minimum Quantification Level (MQL)

Outfall 201 data from DMR monitoring period end date of January 31, 2023.

SECTION III – LABORATORY ANALYSIS

TABLE IV:

ADDITIONAL CONVENTIONAL AND NONCONVENTIONAL POLLUTANTS

OUTFALL NUMBER

301

☐ Grab ☐ Composite

POLLUTANT	MARK X			MQL (*) µg/L	EFFLUENT ANALYSIS						UNITS	
	TESTING REQUIRED	BELIEVED PRESENT	BELIEVED ABSENT		MAXIMUM DAILY VALUE		MAXIMUM 30 DAY VALUE		LONG TERM AVERAGE VALUE		CONCEN-TRATION	MASS
					CONCENTRATION	MASS	CONCENTRATION	MASS	CONCENTRATION	MASS		
CONVENTIONAL AND NONCONVENTIONAL POLLUTANTS												
Bromide			X	----	----	----	----	----	----	----	----	----
Chlorine, Total Residual			X	----	----	----	----	----	----	----	----	----
Color			X	----	----	----	----	----	----	----	----	----
Fecal Coliform (cols/100ml)			X	----	----	----	----	----	----	----	----	----
Fluoride			X	----	----	----	----	----	----	----	----	----
Kjeldahl Nitrogen, Total			X	----	----	----	----	----	----	----	----	----
Nitrate-Nitrite			X	----	----	----	----	----	----	----	----	----
Nitrogen, Total Organic			X	----	----	----	----	----	----	----	----	----
Phosphorus, Total			X	----	----	----	----	----	----	----	----	----
Radioactivity			X	----	----	----	----	----	----	----	----	----
Sulfate			X	----	----	----	----	----	----	----	----	----
Sulfide			X	----	----	----	----	----	----	----	----	----
Sulfite			X	----	----	----	----	----	----	----	----	----
Surfactants			X	----	----	----	----	----	----	----	----	----
Aluminum, Total			X	----	----	----	----	----	----	----	----	----
Barium, Total			X	----	----	----	----	----	----	----	----	----
Boron, Total			X	----	----	----	----	----	----	----	----	----
Cobalt, Total			X	----	----	----	----	----	----	----	----	----
Iron, Total			X	----	----	----	----	----	----	----	----	----
Magnesium, Total			X	----	----	----	----	----	----	----	----	----
Manganese, Total			X	----	----	----	----	----	----	----	----	----
Molybdenum			X	----	----	----	----	----	----	----	----	----
Tin, Total			X	----	----	----	----	----	----	----	----	----
Titanium, Total			X	----	----	----	----	----	----	----	----	----

(*) Minimum Quantification Level (MQL)

SECTION III – LABORATORY ANALYSIS

TABLE IV:

ADDITIONAL CONVENTIONAL AND NONCONVENTIONAL POLLUTANTS

OUTFALL NUMBER

401

X Grab ☐ Composite

POLLUTANT	**MARK X**			**MQL (*) µg/L**	**EFFLUENT ANALYSIS**						**UNITS**	
	TESTING REQUIRED	BELIEVED PRESENT	BELIEVED ABSENT		MAXIMUM DAILY VALUE		MAXIMUM 30 DAY VALUE		LONG TERM AVERAGE VALUE		CONCEN-TRATION	MASS
					CONCENTRATION	MASS	CONCENTRATION	MASS	CONCENTRATION	MASS		
CONVENTIONAL AND NONCONVENTIONAL POLLUTANTS												
Bromide			X	----	----	----	----	----	----	----	----	----
Chlorine, Total Residual			X	----	----	----	----	----	----	----	----	----
Color			X	----	----	----	----	----	----	----	----	----
Fecal Coliform (cols/100ml)			X	----	----	----	----	----	----	----	----	----
Fluoride			X	----	----	----	----	----	----	----	----	----
Kjeldahl Nitrogen, Total	X	X		----	**0.80**	----	----	----	----	----	mg/L	----
Nitrate-Nitrite	X	X		----	**0.50**	----	----	----	----	----	mg/L	----
Nitrogen, Total Organic			X	----	----	----	----	----	----	----	----	----
Phosphorus, Total	X	X		----	**0.22**	----	----	----	----	----	mg/L	----
Radioactivity			X	----	----	----	----	----	----	----	----	----
Sulfate			X	----	----	----	----	----	----	----	----	----
Sulfide			X	----	----	----	----	----	----	----	----	----
Sulfite			X	----	----	----	----	----	----	----	----	----
Surfactants			X	----	----	----	----	----	----	----	----	----
Aluminum, Total			X	----	----	----	----	----	----	----	----	----
Barium, Total			X	----	----	----	----	----	----	----	----	----
Boron, Total			X	----	----	----	----	----	----	----	----	----
Cobalt, Total			X	----	----	----	----	----	----	----	----	----
Iron, Total			X	----	----	----	----	----	----	----	----	----
Magnesium, Total			X	----	----	----	----	----	----	----	----	----
Manganese, Total			X	----	----	----	----	----	----	----	----	----
Molybdenum			X	----	----	----	----	----	----	----	----	----
Tin, Total			X	----	----	----	----	----	----	----	----	----
Titanium, Total			X	----	----	----	----	----	----	----	----	----

(*) Minimum Quantification Level (MQL)

Outfall 401 sampled November 14, 2022.

SECTION III – LABORATORY ANALYSIS

TABLE IV:

ADDITIONAL CONVENTIONAL AND NONCONVENTIONAL POLLUTANTS

OUTFALL NUMBER

002

☐ Grab ☐ Composite

POLLUTANT	MARK X			MQL (*) µg/L	EFFLUENT ANALYSIS						UNITS	
	TESTING REQUIRED	BELIEVED PRESENT	BELIEVED ABSENT		MAXIMUM DAILY VALUE		MAXIMUM 30 DAY VALUE		LONG TERM AVERAGE VALUE		CONCEN-TRATION	MASS
					CONCENTRATION	MASS	CONCENTRATION	MASS	CONCENTRATION	MASS		
CONVENTIONAL AND NONCONVENTIONAL POLLUTANTS												
Bromide			X	----	----	----	----	----	----	----	----	----
Chlorine, Total Residual			X	----	----	----	----	----	----	----	----	----
Color			X	----	----	----	----	----	----	----	----	----
Fecal Coliform (cols/100ml)			X	----	----	----	----	----	----	----	----	----
Fluoride			X	----	----	----	----	----	----	----	----	----
Kjeldahl Nitrogen, Total	X			----	**1.3**	----	----	----	----	----	mg/l	----
Nitrate-Nitrite	X			----	**0.25**	----	----	----	----	----	mg/l	----
Nitrogen, Total Organic			X	----	----	----	----	----	----	----	----	----
Phosphorus, Total	X			----	**0.11**	----	----	----	----	----	mg/l	----
Radioactivity			X	----	----	----	----	----	----	----	----	----
Sulfate			X	----	----	----	----	----	----	----	----	----
Sulfide			X	----	----	----	----	----	----	----	----	----
Sulfite			X	----	----	----	----	----	----	----	----	----
Surfactants			X	----	----	----	----	----	----	----	----	----
Aluminum, Total			X	----	----	----	----	----	----	----	----	----
Barium, Total			X	----	----	----	----	----	----	----	----	----
Boron, Total			X	----	----	----	----	----	----	----	----	----
Cobalt, Total			X	----	----	----	----	----	----	----	----	----
Iron, Total			X	----	----	----	----	----	----	----	----	----
Magnesium, Total			X	----	----	----	----	----	----	----	----	----
Manganese, Total			X	----	----	----	----	----	----	----	----	----
Molybdenum			X	----	----	----	----	----	----	----	----	----
Tin, Total			X	----	----	----	----	----	----	----	----	----
Titanium, Total			X	----	----	----	----	----	----	----	----	----

(*) Minimum Quantification Level (MQL)

Outfall 002 sampled on October 29, 2022.

SECTION III – LABORATORY ANALYSIS

TABLE IV:

ADDITIONAL CONVENTIONAL AND NONCONVENTIONAL POLLUTANTS

OUTFALL NUMBER

005

[X] Grab [ ] Composite

POLLUTANT	MARK X			MQL (*) µg/L	EFFLUENT ANALYSIS						UNITS	
	TESTING REQUIRED	BELIEVED PRESENT	BELIEVED ABSENT		MAXIMUM DAILY VALUE		MAXIMUM 30 DAY VALUE		LONG TERM AVERAGE VALUE		CONCEN-TRATION	MASS
					CONCENTRATION	MASS	CONCENTRATION	MASS	CONCENTRATION	MASS		
CONVENTIONAL AND NONCONVENTIONAL POLLUTANTS												
Bromide			X	----	----	----	----	----	----	----	----	----
Chlorine, Total Residual			X	----	----	----	----	----	----	----	----	----
Color			X	----	----	----	----	----	----	----	----	----
Fecal Coliform (cols/100ml)			X	----	----	----	----	----	----	----	----	----
Fluoride			X	----	----	----	----	----	----	----	----	----
Kjeldahl Nitrogen, Total	X			----	**1.0**	----	----	----	----	----	mg/L	----
Nitrate-Nitrite	X			----	**0.51**	----	----	----	----	----	mg/L	----
Nitrogen, Total Organic			X	----	----	----	----	----	----	----	----	----
Phosphorus, Total	X			----	**ND**	----	----	----	----	----	mg/L	----
Radioactivity			X	----	----	----	----	----	----	----	----	----
Sulfate			X	----	----	----	----	----	----	----	----	----
Sulfide			X	----	----	----	----	----	----	----	----	----
Sulfite			X	----	----	----	----	----	----	----	----	----
Surfactants			X	----	----	----	----	----	----	----	----	----
Aluminum, Total			X	----	----	----	----	----	----	----	----	----
Barium, Total			X	----	----	----	----	----	----	----	----	----
Boron, Total			X	----	----	----	----	----	----	----	----	----
Cobalt, Total			X	----	----	----	----	----	----	----	----	----
Iron, Total			X	----	----	----	----	----	----	----	----	----
Magnesium, Total			X	----	----	----	----	----	----	----	----	----
Manganese, Total			X	----	----	----	----	----	----	----	----	----
Molybdenum			X	----	----	----	----	----	----	----	----	----
Tin, Total			X	----	----	----	----	----	----	----	----	----
Titanium, Total			X	----	----	----	----	----	----	----	----	----

(*) Minimum Quantification Level (MQL)

Outfall 005 sampled on October 29, 2022.

SECTION III – LABORATORY ANALYSIS

TABLE IV:

ADDITIONAL CONVENTIONAL AND NONCONVENTIONAL POLLUTANTS

OUTFALL NUMBER

006

☐ Grab ☐ Composite

POLLUTANT	MARK X			MQL (*) µg/L	EFFLUENT ANALYSIS						UNITS	
	TESTING REQUIRED	BELIEVED PRESENT	BELIEVED ABSENT		MAXIMUM DAILY VALUE		MAXIMUM 30 DAY VALUE		LONG TERM AVERAGE VALUE		CONCEN-TRATION	MASS
					CONCENTRATION	MASS	CONCENTRATION	MASS	CONCENTRATION	MASS		
CONVENTIONAL AND NONCONVENTIONAL POLLUTANTS												
Bromide			X	----	----	----	----	----	----	----	----	----
Chlorine, Total Residual			X	----	----	----	----	----	----	----	----	----
Color			X	----	----	----	----	----	----	----	----	----
Fecal Coliform (cols/100ml)			X	----	----	----	----	----	----	----	----	----
Fluoride			X	----	----	----	----	----	----	----	----	----
Kjeldahl Nitrogen, Total	X			----	**1.1**	----	----	----	----	----	mg/L	----
Nitrate-Nitrite	X			----	**0.80**	----	----	----	----	----	mg/L	----
Nitrogen, Total Organic			X	----	----	----	----	----	----	----	----	----
Phosphorus, Total	X			----	**0.10**	----	----	----	----	----	mg/L	----
Radioactivity			X	----	----	----	----	----	----	----	----	----
Sulfate			X	----	----	----	----	----	----	----	----	----
Sulfide			X	----	----	----	----	----	----	----	----	----
Sulfite			X	----	----	----	----	----	----	----	----	----
Surfactants			X	----	----	----	----	----	----	----	----	----
Aluminum, Total			X	----	----	----	----	----	----	----	----	----
Barium, Total			X	----	----	----	----	----	----	----	----	----
Boron, Total			X	----	----	----	----	----	----	----	----	----
Cobalt, Total			X	----	----	----	----	----	----	----	----	----
Iron, Total			X	----	----	----	----	----	----	----	----	----
Magnesium, Total			X	----	----	----	----	----	----	----	----	----
Manganese, Total			X	----	----	----	----	----	----	----	----	----
Molybdenum			X	----	----	----	----	----	----	----	----	----
Tin, Total			X	----	----	----	----	----	----	----	----	----
Titanium, Total			X	----	----	----	----	----	----	----	----	----

(*) Minimum Quantification Level (MQL)

Outfall 006 sampled October 29, 2022.

SECTION III – LABORATORY ANALYSIS

TABLE IV:

ADDITIONAL CONVENTIONAL AND NONCONVENTIONAL POLLUTANTS

OUTFALL NUMBER

007

X Grab ☐ Composite

POLLUTANT	MARK X			MQL (*) µg/L	EFFLUENT ANALYSIS						UNITS	
	TESTING REQUIRED	BELIEVED PRESENT	BELIEVED ABSENT		MAXIMUM DAILY VALUE		MAXIMUM 30 DAY VALUE		LONG TERM AVERAGE VALUE		CONCEN-TRATION	MASS
					CONCENTRATION	MASS	CONCENTRATION	MASS	CONCENTRATION	MASS		
CONVENTIONAL AND NONCONVENTIONAL POLLUTANTS												
Bromide			X	----	----	----	----	----	----	----	----	----
Chlorine, Total Residual			X	----	----	----	----	----	----	----	----	----
Color			X	----	----	----	----	----	----	----	----	----
Fecal Coliform (cols/100ml)			X	----	----	----	----	----	----	----	----	----
Fluoride			X	----	----	----	----	----	----	----	----	----
Kjeldahl Nitrogen, Total	X			----	**1.9**	----	----	----	----	----	mg/l	----
Nitrate-Nitrite	X			----	**1.4**	----	----	----	----	----	mg/l	----
Nitrogen, Total Organic			X	----	----	----	----	----	----	----	----	----
Phosphorus, Total	X			----	**0.33**	----	----	----	----	----	mg/l	----
Radioactivity			X	----	----	----	----	----	----	----	----	----
Sulfate			X	----	----	----	----	----	----	----	----	----
Sulfide			X	----	----	----	----	----	----	----	----	----
Sulfite			X	----	----	----	----	----	----	----	----	----
Surfactants			X	----	----	----	----	----	----	----	----	----
Aluminum, Total			X	----	----	----	----	----	----	----	----	----
Barium, Total			X	----	----	----	----	----	----	----	----	----
Boron, Total			X	----	----	----	----	----	----	----	----	----
Cobalt, Total			X	----	----	----	----	----	----	----	----	----
Iron, Total			X	----	----	----	----	----	----	----	----	----
Magnesium, Total			X	----	----	----	----	----	----	----	----	----
Manganese, Total			X	----	----	----	----	----	----	----	----	----
Molybdenum			X	----	----	----	----	----	----	----	----	----
Tin, Total			X	----	----	----	----	----	----	----	----	----
Titanium, Total			X	----	----	----	----	----	----	----	----	----

(*) Minimum Quantification Level (MQL)

Outfall 007 sampled on October 25, 2022

SECTION III – LABORATORY ANALYSIS

TABLE IV:

ADDITIONAL CONVENTIONAL AND NONCONVENTIONAL POLLUTANTS

OUTFALL NUMBER **008**

X Grab ☐ Composite

POLLUTANT	**MARK X**			**MQL (*) µg/L**	**EFFLUENT ANALYSIS**						**UNITS**	
	TESTING REQUIRED	BELIEVED PRESENT	BELIEVED ABSENT		MAXIMUM DAILY VALUE		MAXIMUM 30 DAY VALUE		LONG TERM AVERAGE VALUE		CONCEN-TRATION	MASS
					CONCENTRATION	MASS	CONCENTRATION	MASS	CONCENTRATION	MASS		
CONVENTIONAL AND NONCONVENTIONAL POLLUTANTS												
Bromide			X	----	----	----	----	----	----	----	----	----
Chlorine, Total Residual			X	----	----	----	----	----	----	----	----	----
Color			X	----	----	----	----	----	----	----	----	----
Fecal Coliform (cols/100ml)			X	----	----	----	----	----	----	----	----	----
Fluoride			X	----	----	----	----	----	----	----	----	----
Kjeldahl Nitrogen, Total	X			----	**ND**	----	----	----	----	----	mg/l	----
Nitrate-Nitrite	X			----	**1.1**	----	----	----	----	----	mg/l	----
Nitrogen, Total Organic			X	----	----	----	----	----	----	----	----	----
Phosphorus, Total	X			----	**ND**	----	----	----	----	----	mg/l	----
Radioactivity			X	----	----	----	----	----	----	----	----	----
Sulfate			X	----	----	----	----	----	----	----	----	----
Sulfide			X	----	----	----	----	----	----	----	----	----
Sulfite			X	----	----	----	----	----	----	----	----	----
Surfactants			X	----	----	----	----	----	----	----	----	----
Aluminum, Total			X	----	----	----	----	----	----	----	----	----
Barium, Total			X	----	----	----	----	----	----	----	----	----
Boron, Total			X	----	----	----	----	----	----	----	----	----
Cobalt, Total			X	----	----	----	----	----	----	----	----	----
Iron, Total			X	----	----	----	----	----	----	----	----	----
Magnesium, Total			X	----	----	----	----	----	----	----	----	----
Manganese, Total			X	----	----	----	----	----	----	----	----	----
Molybdenum			X	----	----	----	----	----	----	----	----	----
Tin, Total			X	----	----	----	----	----	----	----	----	----
Titanium, Total			X	----	----	----	----	----	----	----	----	----

(*) Minimum Quantification Level (MQL)

Outfall 008 sampled November 14, 2022.

SECTION III – LABORATORY ANALYSIS

TABLE IV:

ADDITIONAL CONVENTIONAL AND NONCONVENTIONAL POLLUTANTS

OUTFALL NUMBER

009

X Grab ☐ Composite

POLLUTANT	MARK X			MQL (*) µg/L	EFFLUENT ANALYSIS						UNITS	
	TESTING REQUIRED	BELIEVED PRESENT	BELIEVED ABSENT		MAXIMUM DAILY VALUE		MAXIMUM 30 DAY VALUE		LONG TERM AVERAGE VALUE		CONCEN-TRATION	MASS
					CONCENTRATION	MASS	CONCENTRATION	MASS	CONCENTRATION	MASS		
CONVENTIONAL AND NONCONVENTIONAL POLLUTANTS												
Bromide			X	----	----	----	----	----	----	----	----	----
Chlorine, Total Residual			X	----	----	----	----	----	----	----	----	----
Color			X	----	----	----	----	----	----	----	----	----
Fecal Coliform (cols/100ml)			X	----	----	----	----	----	----	----	----	----
Fluoride			X	----	----	----	----	----	----	----	----	----
Kjeldahl Nitrogen, Total	X			----	**0.91**	----	----	----	----	----	mg/L	----
Nitrate-Nitrite	X			----	**0.72**	----	----	----	----	----	mg/L	----
Nitrogen, Total Organic			X	----	----	----	----	----	----	----	----	----
Phosphorus, Total	X			----	**0.35**	----	----	----	----	----	mg/L	----
Radioactivity			X	----	----	----	----	----	----	----	----	----
Sulfate			X	----	----	----	----	----	----	----	----	----
Sulfide			X	----	----	----	----	----	----	----	----	----
Sulfite			X	----	----	----	----	----	----	----	----	----
Surfactants			X	----	----	----	----	----	----	----	----	----
Aluminum, Total			X	----	----	----	----	----	----	----	----	----
Barium, Total			X	----	----	----	----	----	----	----	----	----
Boron, Total			X	----	----	----	----	----	----	----	----	----
Cobalt, Total			X	----	----	----	----	----	----	----	----	----
Iron, Total			X	----	----	----	----	----	----	----	----	----
Magnesium, Total			X	----	----	----	----	----	----	----	----	----
Manganese, Total			X	----	----	----	----	----	----	----	----	----
Molybdenum			X	----	----	----	----	----	----	----	----	----
Tin, Total			X	----	----	----	----	----	----	----	----	----
Titanium, Total			X	----	----	----	----	----	----	----	----	----

(*) Minimum Quantification Level (MQL)

Outfall 009 sampled November 14, 2022.

SECTION III – LABORATORY ANALYSIS

TABLE V: **OUTFALL NUMBER**

TOXIC POLLUTANTS AND HAZARDOUS SUBSTANCES **301**

☐ Grab ☐ Composite

POLLUTANT	MARK X			MQL (*) µg/L	EFFLUENT ANALYSIS						UNITS	
	TESTING REQUIRED	BELIEVED PRESENT	BELIEVED ABSENT		MAXIMUM DAILY VALUE		MAXIMUM 30 DAY VALUE		LONG TERM AVERAGE VALUE		CONCEN-TRATION	MASS
					CONCENTRATION	MASS	CONCENTRATION	MASS	CONCENTRATION	MASS		
TOXIC POLLUTANTS AND HAZARDOUS SUBSTANCES												
Asbestos			X	----	----	----	----	----	----	----	----	----
HAZARDOUS SUBSTANCES												
Acetaldehyde			X	----	----	----	----	----	----	----	----	----
Allyl alcohol			X	----	----	----	----	----	----	----	----	----
Allyl chloride			X	----	----	----	----	----	----	----	----	----
Amyl acetate			X	----	----	----	----	----	----	----	----	----
Aniline			X	----	----	----	----	----	----	----	----	----
Benzonitrile			X	----	----	----	----	----	----	----	----	----
Benzyl chloride			X	----	----	----	----	----	----	----	----	----
Butyl acetate			X	----	----	----	----	----	----	----	----	----
Butylamine			X	----	----	----	----	----	----	----	----	----
Captan			X	----	----	----	----	----	----	----	----	----
Carbaryl			X	----	----	----	----	----	----	----	----	----
Carbofuran			X	----	----	----	----	----	----	----	----	----
Carbon disulfide			X	----	----	----	----	----	----	----	----	----
Chlorpyrifos			X	----	----	----	----	----	----	----	----	----
Coumaphos			X	----	----	----	----	----	----	----	----	----
Cresol			X	----	----	----	----	----	----	----	----	----
Crotonaldehyde			X	----	----	----	----	----	----	----	----	----
Cyclohexane			X	----	----	----	----	----	----	----	----	----
2,4-D (2,4-Dichlorophenoxy acetic acid)			X	----	----	----	----	----	----	----	----	----
Diazinon			X	----	----	----	----	----	----	----	----	----
Dicamba			X	----	----	----	----	----	----	----	----	----
Dichlobenil			X	----	----	----	----	----	----	----	----	----
Dichlone			X	----	----	----	----	----	----	----	----	----

SECTION III – LABORATORY ANALYSIS

TABLE V:

TOXIC POLLUTANTS AND HAZARDOUS SUBSTANCES

OUTFALL NUMBER

301

☐ Grab ☐ Composite

POLLUTANT	MARK X			MQL (*) µg/L	EFFLUENT ANALYSIS						UNITS	
	TESTING REQUIRED	BELIEVED PRESENT	BELIEVED ABSENT		MAXIMUM DAILY VALUE		MAXIMUM 30 DAY VALUE		LONG TERM AVERAGE VALUE		CONCEN-TRATION	MASS
					CONCENTRATION	MASS	CONCENTRATION	MASS	CONCENTRATION	MASS		
2,2-Dichloropropionic acid			X	----	----	----	----	----	----	----	----	----
Dichlorvos			X	----	----	----	----	----	----	----	----	----
Diethyl amine			X	----	----	----	----	----	----	----	----	----
Dimethyl Amine			X	----	----	----	----	----	----	----	----	----
Dinitrobenzene			X	----	----	----	----	----	----	----	----	----
Diquat			X	----	----	----	----	----	----	----	----	----
Disulfoton			X	----	----	----	----	----	----	----	----	----
Diuron			X	----	----	----	----	----	----	----	----	----
Epichlorohydrin			X	----	----	----	----	----	----	----	----	----
Ethion			X	----	----	----	----	----	----	----	----	----
Ethylene diamine			X	----	----	----	----	----	----	----	----	----
Ethylene dibromide			X	----	----	----	----	----	----	----	----	----
Formaldehyde			X	----	----	----	----	----	----	----	----	----
Furfural			X	----	----	----	----	----	----	----	----	----
Guthion			X	----	----	----	----	----	----	----	----	----
Isoprene			X	----	----	----	----	----	----	----	----	----
Isopropanolamine Dodecylbenzenesulfonate			X	----	----	----	----	----	----	----	----	----
Kelthane			X	----	----	----	----	----	----	----	----	----
Kepone			X	----	----	----	----	----	----	----	----	----
Malathion			X	----	----	----	----	----	----	----	----	----
Mercaptodimethur			X	----	----	----	----	----	----	----	----	----
Methoxychlor			X	----	----	----	----	----	----	----	----	----
Methyl mercaptan			X	----	----	----	----	----	----	----	----	----
Methyl methacrylate			X	----	----	----	----	----	----	----	----	----
Methyl parathion			X	----	----	----	----	----	----	----	----	----
Mevinphos			X	----	----	----	----	----	----	----	----	----

SECTION III – LABORATORY ANALYSIS

TABLE V:

TOXIC POLLUTANTS AND HAZARDOUS SUBSTANCES

OUTFALL NUMBER

301

☐ Grab ☐ Composite

POLLUTANT	MARK X			MQL (*) µg/L	EFFLUENT ANALYSIS						UNITS	
	TESTING REQUIRED	BELIEVED PRESENT	BELIEVED ABSENT		MAXIMUM DAILY VALUE		MAXIMUM 30 DAY VALUE		LONG TERM AVERAGE VALUE		CONCEN-TRATION	MASS
					CONCENTRATION	MASS	CONCENTRATION	MASS	CONCENTRATION	MASS		
Mexacarbate			X	----	----	----	----	----	----	----	----	----
Monoethyl amine			X	----	----	----	----	----	----	----	----	----
Monomethyl amine			X	----	----	----	----	----	----	----	----	----
Naled			X	----	----	----	----	----	----	----	----	----
Napthenic acid			X	----	----	----	----	----	----	----	----	----
Nitrotoluene			X	----	----	----	----	----	----	----	----	----
Parathion			X	----	----	----	----	----	----	----	----	----
Phenolsulfanate			X	----	----	----	----	----	----	----	----	----
Phosgene			X	----	----	----	----	----	----	----	----	----
Propargite			X	----	----	----	----	----	----	----	----	----
Propylene oxide			X	----	----	----	----	----	----	----	----	----
Pyrethrins			X	----	----	----	----	----	----	----	----	----
Quinoline			X	----	----	----	----	----	----	----	----	----
Resorcinol			X	----	----	----	----	----	----	----	----	----
Strontium			X	----	----	----	----	----	----	----	----	----
Strychnine			X	----	----	----	----	----	----	----	----	----
Styrene			X	----	----	----	----	----	----	----	----	----
2,4,5-T (2,4,5-Trichlorophenoxy acetic acid)			X	----	----	----	----	----	----	----	----	----
TDE (Tetrachlorodiphenylethane)			X	----	----	----	----	----	----	----	----	----
2,4,5-TP[2-(2,4,5-Trichlorophenoxy) propanoic acid]			X	----	----	----	----	----	----	----	----	----
Trichlorfon			X	----	----	----	----	----	----	----	----	----

SECTION III – LABORATORY ANALYSIS

TABLE V:

TOXIC POLLUTANTS AND HAZARDOUS SUBSTANCES

OUTFALL NUMBER

301

☐ Grab ☐ Composite

POLLUTANT	MARK X			MQL (*) µg/L	EFFLUENT ANALYSIS						UNITS	
	TESTING REQUIRED	BELIEVED PRESENT	BELIEVED ABSENT		MAXIMUM DAILY VALUE		MAXIMUM 30 DAY VALUE		LONG TERM AVERAGE VALUE		CONCEN-TRATION	MASS
					CONCENTRATION	MASS	CONCENTRATION	MASS	CONCENTRATION	MASS		
Triethanolamine Dodecylbenzenesulfonate			X	----	----	----	----	----	----	----	----	----
Triethylamine			X	----	----	----	----	----	----	----	----	----
Trimethylamine			X	----	----	----	----	----	----	----	----	----
Uranium			X	----	----	----	----	----	----	----	----	----
Vanadium			X	----	----	----	----	----	----	----	----	----
Vinyl Acetate			X	----	----	----	----	----	----	----	----	----
Xylene			X	----	----	----	----	----	----	----	----	----
Xylenol			X	----	----	----	----	----	----	----	----	----
Zirconium			X	----	----	----	----	----	----	----	----	----

(*) Minimum Quantification Level (MQL)

SECTION III – LABORATORY ANALYSIS

TABLE V:

TOXIC POLLUTANTS AND HAZARDOUS SUBSTANCES

OUTFALL NUMBER

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☐ Grab ☐ Composite

POLLUTANT	MARK X			MQL (*) µg/L	EFFLUENT ANALYSIS						UNITS	
	TESTING REQUIRED	BELIEVED PRESENT	BELIEVED ABSENT		MAXIMUM DAILY VALUE		MAXIMUM 30 DAY VALUE		LONG TERM AVERAGE VALUE		CONCEN-TRATION	MASS
					CONCENTRATION	MASS	CONCENTRATION	MASS	CONCENTRATION	MASS		
TOXIC POLLUTANTS AND HAZARDOUS SUBSTANCES												
Asbestos			X	----	----	----	----	----	----	----	----	----
HAZARDOUS SUBSTANCES												
Acetaldehyde			X	----	----	----	----	----	----	----	----	----
Allyl alcohol			X	----	----	----	----	----	----	----	----	----
Allyl chloride			X	----	----	----	----	----	----	----	----	----
Amyl acetate			X	----	----	----	----	----	----	----	----	----
Aniline			X	----	----	----	----	----	----	----	----	----
Benzonitrile			X	----	----	----	----	----	----	----	----	----
Benzyl chloride			X	----	----	----	----	----	----	----	----	----
Butyl acetate			X	----	----	----	----	----	----	----	----	----
Butylamine			X	----	----	----	----	----	----	----	----	----
Captan			X	----	----	----	----	----	----	----	----	----
Carbaryl			X	----	----	----	----	----	----	----	----	----
Carbofuran			X	----	----	----	----	----	----	----	----	----
Carbon disulfide			X	----	----	----	----	----	----	----	----	----
Chlorpyrifos			X	----	----	----	----	----	----	----	----	----
Coumaphos			X	----	----	----	----	----	----	----	----	----
Cresol			X	----	----	----	----	----	----	----	----	----
Crotonaldehyde			X	----	----	----	----	----	----	----	----	----
Cyclohexane			X	----	----	----	----	----	----	----	----	----
2,4-D (2,4-Dichlorophenoxy acetic acid)			X	----	----	----	----	----	----	----	----	----
Diazinon			X	----	----	----	----	----	----	----	----	----
Dicamba			X	----	----	----	----	----	----	----	----	----
Dichlobenil			X	----	----	----	----	----	----	----	----	----
Dichlone			X	----	----	----	----	----	----	----	----	----

SECTION III – LABORATORY ANALYSIS

TABLE V:

TOXIC POLLUTANTS AND HAZARDOUS SUBSTANCES

OUTFALL NUMBER

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☐ Grab ☐ Composite

POLLUTANT	MARK X			MQL (*) µg/L	EFFLUENT ANALYSIS						UNITS	
	TESTING REQUIRED	BELIEVED PRESENT	BELIEVED ABSENT		MAXIMUM DAILY VALUE		MAXIMUM 30 DAY VALUE		LONG TERM AVERAGE VALUE		CONCEN-TRATION	MASS
					CONCENTRATION	MASS	CONCENTRATION	MASS	CONCENTRATION	MASS		
2,2-Dichloropropionic acid			X	----	----	----	----	----	----	----	----	----
Dichlorvos			X	----	----	----	----	----	----	----	----	----
Diethyl amine			X	----	----	----	----	----	----	----	----	----
Dimethyl Amine			X	----	----	----	----	----	----	----	----	----
Dinitrobenzene			X	----	----	----	----	----	----	----	----	----
Diquat			X	----	----	----	----	----	----	----	----	----
Disulfoton			X	----	----	----	----	----	----	----	----	----
Diuron			X	----	----	----	----	----	----	----	----	----
Epichlorohydrin			X	----	----	----	----	----	----	----	----	----
Ethion			X	----	----	----	----	----	----	----	----	----
Ethylene diamine			X	----	----	----	----	----	----	----	----	----
Ethylene dibromide			X	----	----	----	----	----	----	----	----	----
Formaldehyde			X	----	----	----	----	----	----	----	----	----
Furfural			X	----	----	----	----	----	----	----	----	----
Guthion			X	----	----	----	----	----	----	----	----	----
Isoprene			X	----	----	----	----	----	----	----	----	----
Isopropanolamine Dodecylbenzenesulfonate			X	----	----	----	----	----	----	----	----	----
Kelthane			X	----	----	----	----	----	----	----	----	----
Kepone			X	----	----	----	----	----	----	----	----	----
Malathion			X	----	----	----	----	----	----	----	----	----
Mercaptodimethur			X	----	----	----	----	----	----	----	----	----
Methoxychlor			X	----	----	----	----	----	----	----	----	----
Methyl mercaptan			X	----	----	----	----	----	----	----	----	----
Methyl methacrylate			X	----	----	----	----	----	----	----	----	----
Methyl parathion			X	----	----	----	----	----	----	----	----	----
Mevinphos			X	----	----	----	----	----	----	----	----	----

SECTION III – LABORATORY ANALYSIS

TABLE V:

TOXIC POLLUTANTS AND HAZARDOUS SUBSTANCES

OUTFALL NUMBER

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☐ Grab ☐ Composite

POLLUTANT	MARK X			MQL (*) µg/L	EFFLUENT ANALYSIS						UNITS	
	TESTING REQUIRED	BELIEVED PRESENT	BELIEVED ABSENT		MAXIMUM DAILY VALUE		MAXIMUM 30 DAY VALUE		LONG TERM AVERAGE VALUE		CONCEN-TRATION	MASS
					CONCENTRATION	MASS	CONCENTRATION	MASS	CONCENTRATION	MASS		
Mexacarbate			X	----	----	----	----	----	----	----	----	----
Monoethyl amine			X	----	----	----	----	----	----	----	----	----
Monomethyl amine			X	----	----	----	----	----	----	----	----	----
Naled			X	----	----	----	----	----	----	----	----	----
Napthenic acid			X	----	----	----	----	----	----	----	----	----
Nitrotoluene			X	----	----	----	----	----	----	----	----	----
Parathion			X	----	----	----	----	----	----	----	----	----
Phenolsulfanate			X	----	----	----	----	----	----	----	----	----
Phosgene			X	----	----	----	----	----	----	----	----	----
Propargite			X	----	----	----	----	----	----	----	----	----
Propylene oxide			X	----	----	----	----	----	----	----	----	----
Pyrethrins			X	----	----	----	----	----	----	----	----	----
Quinoline			X	----	----	----	----	----	----	----	----	----
Resorcinol			X	----	----	----	----	----	----	----	----	----
Strontium			X	----	----	----	----	----	----	----	----	----
Strychnine			X	----	----	----	----	----	----	----	----	----
Styrene			X	----	----	----	----	----	----	----	----	----
2,4,5-T (2,4,5-Trichlorophenoxy acetic acid)			X	----	----	----	----	----	----	----	----	----
TDE (Tetrachlorodiphenylethane)			X	----	----	----	----	----	----	----	----	----
2,4,5-TP[2-(2,4,5-Trichlorophenoxy) propanoic acid]			X	----	----	----	----	----	----	----	----	----
Trichlorfon			X	----	----	----	----	----	----	----	----	----

SECTION III – LABORATORY ANALYSIS

TABLE V:

TOXIC POLLUTANTS AND HAZARDOUS SUBSTANCES

OUTFALL NUMBER

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☐ Grab ☐ Composite

POLLUTANT	MARK X			MQL (*) µg/L	EFFLUENT ANALYSIS						UNITS	
	TESTING REQUIRED	BELIEVED PRESENT	BELIEVED ABSENT		MAXIMUM DAILY VALUE		MAXIMUM 30 DAY VALUE		LONG TERM AVERAGE VALUE		CONCEN-TRATION	MASS
					CONCENTRATION	MASS	CONCENTRATION	MASS	CONCENTRATION	MASS		
Triethanolamine Dodecylbenzenesulfonate			X	----	----	----	----	----	----	----	----	----
Triethylamine			X	----	----	----	----	----	----	----	----	----
Trimethylamine			X	----	----	----	----	----	----	----	----	----
Uranium			X	----	----	----	----	----	----	----	----	----
Vanadium			X	----	----	----	----	----	----	----	----	----
Vinyl Acetate			X	----	----	----	----	----	----	----	----	----
Xylene			X	----	----	----	----	----	----	----	----	----
Xylenol			X	----	----	----	----	----	----	----	----	----
Zirconium			X	----	----	----	----	----	----	----	----	----

(*) Minimum Quantification Level (MQL)

SECTION III – LABORATORY ANALYSIS

TABLE V:

TOXIC POLLUTANTS AND HAZARDOUS SUBSTANCES

OUTFALL NUMBER

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☐ Grab ☐ Composite

POLLUTANT	MARK X: TESTING REQUIRED	MARK X: BELIEVED PRESENT	MARK X: BELIEVED ABSENT	MQL (*) µg/L	EFFLUENT ANALYSIS: MAXIMUM DAILY VALUE: CONCENTRATION	MAXIMUM DAILY VALUE: MASS	MAXIMUM 30 DAY VALUE: CONCENTRATION	MAXIMUM 30 DAY VALUE: MASS	LONG TERM AVERAGE VALUE: CONCENTRATION	LONG TERM AVERAGE VALUE: MASS	UNITS: CONCEN-TRATION	UNITS: MASS
TOXIC POLLUTANTS AND HAZARDOUS SUBSTANCES												
Asbestos			X	----	----	----	----	----	----	----	----	----
HAZARDOUS SUBSTANCES												
Acetaldehyde			X	----	----	----	----	----	----	----	----	----
Allyl alcohol			X	----	----	----	----	----	----	----	----	----
Allyl chloride			X	----	----	----	----	----	----	----	----	----
Amyl acetate			X	----	----	----	----	----	----	----	----	----
Aniline			X	----	----	----	----	----	----	----	----	----
Benzonitrile			X	----	----	----	----	----	----	----	----	----
Benzyl chloride			X	----	----	----	----	----	----	----	----	----
Butyl acetate			X	----	----	----	----	----	----	----	----	----
Butylamine			X	----	----	----	----	----	----	----	----	----
Captan			X	----	----	----	----	----	----	----	----	----
Carbaryl			X	----	----	----	----	----	----	----	----	----
Carbofuran			X	----	----	----	----	----	----	----	----	----
Carbon disulfide			X	----	----	----	----	----	----	----	----	----
Chlorpyrifos			X	----	----	----	----	----	----	----	----	----
Coumaphos			X	----	----	----	----	----	----	----	----	----
Cresol			X	----	----	----	----	----	----	----	----	----
Crotonaldehyde			X	----	----	----	----	----	----	----	----	----
Cyclohexane			X	----	----	----	----	----	----	----	----	----
2,4-D (2,4-Dichlorophenoxy acetic acid)			X	----	----	----	----	----	----	----	----	----
Diazinon			X	----	----	----	----	----	----	----	----	----
Dicamba			X	----	----	----	----	----	----	----	----	----
Dichlobenil			X	----	----	----	----	----	----	----	----	----
Dichlone			X	----	----	----	----	----	----	----	----	----

SECTION III – LABORATORY ANALYSIS

TABLE V:

TOXIC POLLUTANTS AND HAZARDOUS SUBSTANCES

OUTFALL NUMBER

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☐ Grab ☐ Composite

POLLUTANT	MARK X			MQL (*) µg/L	EFFLUENT ANALYSIS						UNITS	
	TESTING REQUIRED	BELIEVED PRESENT	BELIEVED ABSENT		MAXIMUM DAILY VALUE		MAXIMUM 30 DAY VALUE		LONG TERM AVERAGE VALUE		CONCEN-TRATION	MASS
					CONCENTRATION	MASS	CONCENTRATION	MASS	CONCENTRATION	MASS		
2,2-Dichloropropionic acid			X	----	----	----	----	----	----	----	----	----
Dichlorvos			X	----	----	----	----	----	----	----	----	----
Diethyl amine			X	----	----	----	----	----	----	----	----	----
Dimethyl Amine			X	----	----	----	----	----	----	----	----	----
Dinitrobenzene			X	----	----	----	----	----	----	----	----	----
Diquat			X	----	----	----	----	----	----	----	----	----
Disulfoton			X	----	----	----	----	----	----	----	----	----
Diuron			X	----	----	----	----	----	----	----	----	----
Epichlorohydrin			X	----	----	----	----	----	----	----	----	----
Ethion			X	----	----	----	----	----	----	----	----	----
Ethylene diamine			X	----	----	----	----	----	----	----	----	----
Ethylene dibromide			X	----	----	----	----	----	----	----	----	----
Formaldehyde			X	----	----	----	----	----	----	----	----	----
Furfural			X	----	----	----	----	----	----	----	----	----
Guthion			X	----	----	----	----	----	----	----	----	----
Isoprene			X	----	----	----	----	----	----	----	----	----
Isopropanolamine Dodecylbenzenesulfonate			X	----	----	----	----	----	----	----	----	----
Kelthane			X	----	----	----	----	----	----	----	----	----
Kepone			X	----	----	----	----	----	----	----	----	----
Malathion			X	----	----	----	----	----	----	----	----	----
Mercaptodimethur			X	----	----	----	----	----	----	----	----	----
Methoxychlor			X	----	----	----	----	----	----	----	----	----
Methyl mercaptan			X	----	----	----	----	----	----	----	----	----
Methyl methacrylate			X	----	----	----	----	----	----	----	----	----
Methyl parathion			X	----	----	----	----	----	----	----	----	----
Mevinphos			X	----	----	----	----	----	----	----	----	----

SECTION III – LABORATORY ANALYSIS

TABLE V:

TOXIC POLLUTANTS AND HAZARDOUS SUBSTANCES

OUTFALL NUMBER

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☐ Grab ☐ Composite

POLLUTANT	MARK X			MQL (*) µg/L	EFFLUENT ANALYSIS						UNITS	
	TESTING REQUIRED	BELIEVED PRESENT	BELIEVED ABSENT		MAXIMUM DAILY VALUE		MAXIMUM 30 DAY VALUE		LONG TERM AVERAGE VALUE		CONCEN-TRATION	MASS
					CONCENTRATION	MASS	CONCENTRATION	MASS	CONCENTRATION	MASS		
Mexacarbate			X	----	----	----	----	----	----	----	----	----
Monoethyl amine			X	----	----	----	----	----	----	----	----	----
Monomethyl amine			X	----	----	----	----	----	----	----	----	----
Naled			X	----	----	----	----	----	----	----	----	----
Napthenic acid			X	----	----	----	----	----	----	----	----	----
Nitrotoluene			X	----	----	----	----	----	----	----	----	----
Parathion			X	----	----	----	----	----	----	----	----	----
Phenolsulfanate			X	----	----	----	----	----	----	----	----	----
Phosgene			X	----	----	----	----	----	----	----	----	----
Propargite			X	----	----	----	----	----	----	----	----	----
Propylene oxide			X	----	----	----	----	----	----	----	----	----
Pyrethrins			X	----	----	----	----	----	----	----	----	----
Quinoline			X	----	----	----	----	----	----	----	----	----
Resorcinol			X	----	----	----	----	----	----	----	----	----
Strontium			X	----	----	----	----	----	----	----	----	----
Strychnine			X	----	----	----	----	----	----	----	----	----
Styrene			X	----	----	----	----	----	----	----	----	----
2,4,5-T (2,4,5-Trichlorophenoxy acetic acid)			X	----	----	----	----	----	----	----	----	----
TDE (Tetrachlorodiphenylethane)			X	----	----	----	----	----	----	----	----	----
2,4,5-TP[2-(2,4,5-Trichlorophenoxy) propanoic acid]			X	----	----	----	----	----	----	----	----	----
Trichlorfon			X	----	----	----	----	----	----	----	----	----

SECTION III – LABORATORY ANALYSIS

TABLE V:

TOXIC POLLUTANTS AND HAZARDOUS SUBSTANCES

OUTFALL NUMBER

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☐ Grab ☐ Composite

POLLUTANT	MARK X			MQL (*) µg/L	EFFLUENT ANALYSIS						UNITS	
	TESTING REQUIRED	BELIEVED PRESENT	BELIEVED ABSENT		MAXIMUM DAILY VALUE		MAXIMUM 30 DAY VALUE		LONG TERM AVERAGE VALUE		CONCEN-TRATION	MASS
					CONCENTRATION	MASS	CONCENTRATION	MASS	CONCENTRATION	MASS		
Triethanolamine Dodecylbenzenesulfonate			X	----	----	----	----	----	----	----	----	----
Triethylamine			X	----	----	----	----	----	----	----	----	----
Trimethylamine			X	----	----	----	----	----	----	----	----	----
Uranium			X	----	----	----	----	----	----	----	----	----
Vanadium			X	----	----	----	----	----	----	----	----	----
Vinyl Acetate			X	----	----	----	----	----	----	----	----	----
Xylene			X	----	----	----	----	----	----	----	----	----
Xylenol			X	----	----	----	----	----	----	----	----	----
Zirconium			X	----	----	----	----	----	----	----	----	----

(*) Minimum Quantification Level (MQL)

SECTION III – LABORATORY ANALYSIS

TABLE V:

TOXIC POLLUTANTS AND HAZARDOUS SUBSTANCES

OUTFALL NUMBER

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☐ Grab ☐ Composite

POLLUTANT	MARK X			MQL (*) µg/L	EFFLUENT ANALYSIS						UNITS	
	TESTING REQUIRED	BELIEVED PRESENT	BELIEVED ABSENT		MAXIMUM DAILY VALUE		MAXIMUM 30 DAY VALUE		LONG TERM AVERAGE VALUE		CONCEN-TRATION	MASS
					CONCENTRATION	MASS	CONCENTRATION	MASS	CONCENTRATION	MASS		
TOXIC POLLUTANTS AND HAZARDOUS SUBSTANCES												
Asbestos			X	----	----	----	----	----	----	----	----	----
HAZARDOUS SUBSTANCES												
Acetaldehyde			X	----	----	----	----	----	----	----	----	----
Allyl alcohol			X	----	----	----	----	----	----	----	----	----
Allyl chloride			X	----	----	----	----	----	----	----	----	----
Amyl acetate			X	----	----	----	----	----	----	----	----	----
Aniline			X	----	----	----	----	----	----	----	----	----
Benzonitrile			X	----	----	----	----	----	----	----	----	----
Benzyl chloride			X	----	----	----	----	----	----	----	----	----
Butyl acetate			X	----	----	----	----	----	----	----	----	----
Butylamine			X	----	----	----	----	----	----	----	----	----
Captan			X	----	----	----	----	----	----	----	----	----
Carbaryl			X	----	----	----	----	----	----	----	----	----
Carbofuran			X	----	----	----	----	----	----	----	----	----
Carbon disulfide			X	----	----	----	----	----	----	----	----	----
Chlorpyrifos			X	----	----	----	----	----	----	----	----	----
Coumaphos			X	----	----	----	----	----	----	----	----	----
Cresol			X	----	----	----	----	----	----	----	----	----
Crotonaldehyde			X	----	----	----	----	----	----	----	----	----
Cyclohexane			X	----	----	----	----	----	----	----	----	----
2,4-D (2,4-Dichlorophenoxy acetic acid)			X	----	----	----	----	----	----	----	----	----
Diazinon			X	----	----	----	----	----	----	----	----	----
Dicamba			X	----	----	----	----	----	----	----	----	----
Dichlobenil			X	----	----	----	----	----	----	----	----	----
Dichlone			X	----	----	----	----	----	----	----	----	----

SECTION III – LABORATORY ANALYSIS

TABLE V:

TOXIC POLLUTANTS AND HAZARDOUS SUBSTANCES

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POLLUTANT	MARK X			MQL (*) µg/L	EFFLUENT ANALYSIS						UNITS	
	TESTING REQUIRED	BELIEVED PRESENT	BELIEVED ABSENT		MAXIMUM DAILY VALUE		MAXIMUM 30 DAY VALUE		LONG TERM AVERAGE VALUE		CONCEN-TRATION	MASS
					CONCENTRATION	MASS	CONCENTRATION	MASS	CONCENTRATION	MASS		
2,2-Dichloropropionic acid			X	----	----	----	----	----	----	----	----	----
Dichlorvos			X	----	----	----	----	----	----	----	----	----
Diethyl amine			X	----	----	----	----	----	----	----	----	----
Dimethyl Amine			X	----	----	----	----	----	----	----	----	----
Dinitrobenzene			X	----	----	----	----	----	----	----	----	----
Diquat			X	----	----	----	----	----	----	----	----	----
Disulfoton			X	----	----	----	----	----	----	----	----	----
Diuron			X	----	----	----	----	----	----	----	----	----
Epichlorohydrin			X	----	----	----	----	----	----	----	----	----
Ethion			X	----	----	----	----	----	----	----	----	----
Ethylene diamine			X	----	----	----	----	----	----	----	----	----
Ethylene dibromide			X	----	----	----	----	----	----	----	----	----
Formaldehyde			X	----	----	----	----	----	----	----	----	----
Furfural			X	----	----	----	----	----	----	----	----	----
Guthion			X	----	----	----	----	----	----	----	----	----
Isoprene			X	----	----	----	----	----	----	----	----	----
Isopropanolamine Dodecylbenzenesulfonate			X	----	----	----	----	----	----	----	----	----
Kelthane			X	----	----	----	----	----	----	----	----	----
Kepone			X	----	----	----	----	----	----	----	----	----
Malathion			X	----	----	----	----	----	----	----	----	----
Mercaptodimethur			X	----	----	----	----	----	----	----	----	----
Methoxychlor			X	----	----	----	----	----	----	----	----	----
Methyl mercaptan			X	----	----	----	----	----	----	----	----	----
Methyl methacrylate			X	----	----	----	----	----	----	----	----	----
Methyl parathion			X	----	----	----	----	----	----	----	----	----
Mevinphos			X	----	----	----	----	----	----	----	----	----

SECTION III – LABORATORY ANALYSIS

TABLE V:

TOXIC POLLUTANTS AND HAZARDOUS SUBSTANCES

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POLLUTANT	MARK X			MQL (*) µg/L	EFFLUENT ANALYSIS						UNITS	
	TESTING REQUIRED	BELIEVED PRESENT	BELIEVED ABSENT		MAXIMUM DAILY VALUE		MAXIMUM 30 DAY VALUE		LONG TERM AVERAGE VALUE		CONCEN-TRATION	MASS
					CONCENTRATION	MASS	CONCENTRATION	MASS	CONCENTRATION	MASS		
Mexacarbate			X	----	----	----	----	----	----	----	----	----
Monoethyl amine			X	----	----	----	----	----	----	----	----	----
Monomethyl amine			X	----	----	----	----	----	----	----	----	----
Naled			X	----	----	----	----	----	----	----	----	----
Napthenic acid			X	----	----	----	----	----	----	----	----	----
Nitrotoluene			X	----	----	----	----	----	----	----	----	----
Parathion			X	----	----	----	----	----	----	----	----	----
Phenolsulfanate			X	----	----	----	----	----	----	----	----	----
Phosgene			X	----	----	----	----	----	----	----	----	----
Propargite			X	----	----	----	----	----	----	----	----	----
Propylene oxide			X	----	----	----	----	----	----	----	----	----
Pyrethrins			X	----	----	----	----	----	----	----	----	----
Quinoline			X	----	----	----	----	----	----	----	----	----
Resorcinol			X	----	----	----	----	----	----	----	----	----
Strontium			X	----	----	----	----	----	----	----	----	----
Strychnine			X	----	----	----	----	----	----	----	----	----
Styrene			X	----	----	----	----	----	----	----	----	----
2,4,5-T (2,4,5-Trichlorophenoxy acetic acid)			X	----	----	----	----	----	----	----	----	----
TDE (Tetrachlorodiphenylethane)			X	----	----	----	----	----	----	----	----	----
2,4,5-TP[2-(2,4,5-Trichlorophenoxy) propanoic acid]			X	----	----	----	----	----	----	----	----	----
Trichlorfon			X	----	----	----	----	----	----	----	----	----

SECTION III – LABORATORY ANALYSIS

TABLE V:

TOXIC POLLUTANTS AND HAZARDOUS SUBSTANCES

OUTFALL NUMBER

005

☐ Grab ☐ Composite

POLLUTANT	MARK X			MQL (*) µg/L	EFFLUENT ANALYSIS						UNITS	
	TESTING REQUIRED	BELIEVED PRESENT	BELIEVED ABSENT		MAXIMUM DAILY VALUE		MAXIMUM 30 DAY VALUE		LONG TERM AVERAGE VALUE		CONCEN-TRATION	MASS
					CONCENTRATION	MASS	CONCENTRATION	MASS	CONCENTRATION	MASS		
Triethanolamine Dodecylbenzenesulfonate			X	----	----	----	----	----	----	----	----	----
Triethylamine			X	----	----	----	----	----	----	----	----	----
Trimethylamine			X	----	----	----	----	----	----	----	----	----
Uranium			X	----	----	----	----	----	----	----	----	----
Vanadium			X	----	----	----	----	----	----	----	----	----
Vinyl Acetate			X	----	----	----	----	----	----	----	----	----
Xylene			X	----	----	----	----	----	----	----	----	----
Xylenol			X	----	----	----	----	----	----	----	----	----
Zirconium			X	----	----	----	----	----	----	----	----	----

(*) Minimum Quantification Level (MQL)

SECTION III – LABORATORY ANALYSIS

TABLE V:

TOXIC POLLUTANTS AND HAZARDOUS SUBSTANCES

OUTFALL NUMBER

006

☐ Grab ☐ Composite

POLLUTANT	MARK X			MQL (*) µg/L	EFFLUENT ANALYSIS						UNITS	
	TESTING REQUIRED	BELIEVED PRESENT	BELIEVED ABSENT		MAXIMUM DAILY VALUE		MAXIMUM 30 DAY VALUE		LONG TERM AVERAGE VALUE		CONCEN-TRATION	MASS
					CONCENTRATION	MASS	CONCENTRATION	MASS	CONCENTRATION	MASS		
TOXIC POLLUTANTS AND HAZARDOUS SUBSTANCES												
Asbestos			X	----	----	----	----	----	----	----	----	----
HAZARDOUS SUBSTANCES												
Acetaldehyde			X	----	----	----	----	----	----	----	----	----
Allyl alcohol			X	----	----	----	----	----	----	----	----	----
Allyl chloride			X	----	----	----	----	----	----	----	----	----
Amyl acetate			X	----	----	----	----	----	----	----	----	----
Aniline			X	----	----	----	----	----	----	----	----	----
Benzonitrile			X	----	----	----	----	----	----	----	----	----
Benzyl chloride			X	----	----	----	----	----	----	----	----	----
Butyl acetate			X	----	----	----	----	----	----	----	----	----
Butylamine			X	----	----	----	----	----	----	----	----	----
Captan			X	----	----	----	----	----	----	----	----	----
Carbaryl			X	----	----	----	----	----	----	----	----	----
Carbofuran			X	----	----	----	----	----	----	----	----	----
Carbon disulfide			X	----	----	----	----	----	----	----	----	----
Chlorpyrifos			X	----	----	----	----	----	----	----	----	----
Coumaphos			X	----	----	----	----	----	----	----	----	----
Cresol			X	----	----	----	----	----	----	----	----	----
Crotonaldehyde			X	----	----	----	----	----	----	----	----	----
Cyclohexane			X	----	----	----	----	----	----	----	----	----
2,4-D (2,4-Dichlorophenoxy acetic acid)			X	----	----	----	----	----	----	----	----	----
Diazinon			X	----	----	----	----	----	----	----	----	----
Dicamba			X	----	----	----	----	----	----	----	----	----
Dichlobenil			X	----	----	----	----	----	----	----	----	----
Dichlone			X	----	----	----	----	----	----	----	----	----

SECTION III – LABORATORY ANALYSIS

TABLE V:

TOXIC POLLUTANTS AND HAZARDOUS SUBSTANCES

OUTFALL NUMBER

006

☐ Grab ☐ Composite

POLLUTANT	MARK X			MQL (*) µg/L	EFFLUENT ANALYSIS						UNITS	
	TESTING REQUIRED	BELIEVED PRESENT	BELIEVED ABSENT		MAXIMUM DAILY VALUE		MAXIMUM 30 DAY VALUE		LONG TERM AVERAGE VALUE		CONCEN-TRATION	MASS
					CONCENTRATION	MASS	CONCENTRATION	MASS	CONCENTRATION	MASS		
2,2-Dichloropropionic acid			X	----	----	----	----	----	----	----	----	----
Dichlorvos			X	----	----	----	----	----	----	----	----	----
Diethyl amine			X	----	----	----	----	----	----	----	----	----
Dimethyl Amine			X	----	----	----	----	----	----	----	----	----
Dinitrobenzene			X	----	----	----	----	----	----	----	----	----
Diquat			X	----	----	----	----	----	----	----	----	----
Disulfoton			X	----	----	----	----	----	----	----	----	----
Diuron			X	----	----	----	----	----	----	----	----	----
Epichlorohydrin			X	----	----	----	----	----	----	----	----	----
Ethion			X	----	----	----	----	----	----	----	----	----
Ethylene diamine			X	----	----	----	----	----	----	----	----	----
Ethylene dibromide			X	----	----	----	----	----	----	----	----	----
Formaldehyde			X	----	----	----	----	----	----	----	----	----
Furfural			X	----	----	----	----	----	----	----	----	----
Guthion			X	----	----	----	----	----	----	----	----	----
Isoprene			X	----	----	----	----	----	----	----	----	----
Isopropanolamine Dodecylbenzenesulfonate			X	----	----	----	----	----	----	----	----	----
Kelthane			X	----	----	----	----	----	----	----	----	----
Kepone			X	----	----	----	----	----	----	----	----	----
Malathion			X	----	----	----	----	----	----	----	----	----
Mercaptodimethur			X	----	----	----	----	----	----	----	----	----
Methoxychlor			X	----	----	----	----	----	----	----	----	----
Methyl mercaptan			X	----	----	----	----	----	----	----	----	----
Methyl methacrylate			X	----	----	----	----	----	----	----	----	----
Methyl parathion			X	----	----	----	----	----	----	----	----	----
Mevinphos			X	----	----	----	----	----	----	----	----	----

SECTION III – LABORATORY ANALYSIS

TABLE V:

TOXIC POLLUTANTS AND HAZARDOUS SUBSTANCES

OUTFALL NUMBER

006

☐ Grab ☐ Composite

POLLUTANT	MARK X			MQL (*) µg/L	EFFLUENT ANALYSIS						UNITS	
	TESTING REQUIRED	BELIEVED PRESENT	BELIEVED ABSENT		MAXIMUM DAILY VALUE		MAXIMUM 30 DAY VALUE		LONG TERM AVERAGE VALUE		CONCEN-TRATION	MASS
					CONCENTRATION	MASS	CONCENTRATION	MASS	CONCENTRATION	MASS		
Mexacarbate			X	----	----	----	----	----	----	----	----	----
Monoethyl amine			X	----	----	----	----	----	----	----	----	----
Monomethyl amine			X	----	----	----	----	----	----	----	----	----
Naled			X	----	----	----	----	----	----	----	----	----
Napthenic acid			X	----	----	----	----	----	----	----	----	----
Nitrotoluene			X	----	----	----	----	----	----	----	----	----
Parathion			X	----	----	----	----	----	----	----	----	----
Phenolsulfanate			X	----	----	----	----	----	----	----	----	----
Phosgene			X	----	----	----	----	----	----	----	----	----
Propargite			X	----	----	----	----	----	----	----	----	----
Propylene oxide			X	----	----	----	----	----	----	----	----	----
Pyrethrins			X	----	----	----	----	----	----	----	----	----
Quinoline			X	----	----	----	----	----	----	----	----	----
Resorcinol			X	----	----	----	----	----	----	----	----	----
Strontium			X	----	----	----	----	----	----	----	----	----
Strychnine			X	----	----	----	----	----	----	----	----	----
Styrene			X	----	----	----	----	----	----	----	----	----
2,4,5-T (2,4,5-Trichlorophenoxy acetic acid)			X	----	----	----	----	----	----	----	----	----
TDE (Tetrachlorodiphenylethane)			X	----	----	----	----	----	----	----	----	----
2,4,5-TP[2-(2,4,5-Trichlorophenoxy) propanoic acid]			X	----	----	----	----	----	----	----	----	----
Trichlorfon			X	----	----	----	----	----	----	----	----	----

SECTION III – LABORATORY ANALYSIS

TABLE V: **OUTFALL NUMBER**

TOXIC POLLUTANTS AND HAZARDOUS SUBSTANCES **006**

☐ Grab ☐ Composite

POLLUTANT	MARK X			MQL (*) µg/L	EFFLUENT ANALYSIS						UNITS	
	TESTING REQUIRED	BELIEVED PRESENT	BELIEVED ABSENT		MAXIMUM DAILY VALUE		MAXIMUM 30 DAY VALUE		LONG TERM AVERAGE VALUE		CONCEN-TRATION	MASS
					CONCENTRATION	MASS	CONCENTRATION	MASS	CONCENTRATION	MASS		
Triethanolamine Dodecylbenzenesulfonate			X	----	----	----	----	----	----	----	----	----
Triethylamine			X	----	----	----	----	----	----	----	----	----
Trimethylamine			X	----	----	----	----	----	----	----	----	----
Uranium			X	----	----	----	----	----	----	----	----	----
Vanadium			X	----	----	----	----	----	----	----	----	----
Vinyl Acetate			X	----	----	----	----	----	----	----	----	----
Xylene			X	----	----	----	----	----	----	----	----	----
Xylenol			X	----	----	----	----	----	----	----	----	----
Zirconium			X	----	----	----	----	----	----	----	----	----

(*) Minimum Quantification Level (MQL)

SECTION III – LABORATORY ANALYSIS

TABLE V:

TOXIC POLLUTANTS AND HAZARDOUS SUBSTANCES

OUTFALL NUMBER

007

☐ Grab ☐ Composite

POLLUTANT	**MARK X**			**MQL (*) µg/L**	**EFFLUENT ANALYSIS**						**UNITS**	
	TESTING REQUIRED	BELIEVED PRESENT	BELIEVED ABSENT		MAXIMUM DAILY VALUE		MAXIMUM 30 DAY VALUE		LONG TERM AVERAGE VALUE		CONCEN-TRATION	MASS
					CONCENTRATION	MASS	CONCENTRATION	MASS	CONCENTRATION	MASS		
TOXIC POLLUTANTS AND HAZARDOUS SUBSTANCES												
Asbestos			X	----	----	----	----	----	----	----	----	----
HAZARDOUS SUBSTANCES												
Acetaldehyde			X	----	----	----	----	----	----	----	----	----
Allyl alcohol			X	----	----	----	----	----	----	----	----	----
Allyl chloride			X	----	----	----	----	----	----	----	----	----
Amyl acetate			X	----	----	----	----	----	----	----	----	----
Aniline			X	----	----	----	----	----	----	----	----	----
Benzonitrile			X	----	----	----	----	----	----	----	----	----
Benzyl chloride			X	----	----	----	----	----	----	----	----	----
Butyl acetate			X	----	----	----	----	----	----	----	----	----
Butylamine			X	----	----	----	----	----	----	----	----	----
Captan			X	----	----	----	----	----	----	----	----	----
Carbaryl			X	----	----	----	----	----	----	----	----	----
Carbofuran			X	----	----	----	----	----	----	----	----	----
Carbon disulfide			X	----	----	----	----	----	----	----	----	----
Chlorpyrifos			X	----	----	----	----	----	----	----	----	----
Coumaphos			X	----	----	----	----	----	----	----	----	----
Cresol			X	----	----	----	----	----	----	----	----	----
Crotonaldehyde			X	----	----	----	----	----	----	----	----	----
Cyclohexane			X	----	----	----	----	----	----	----	----	----
2,4-D (2,4-Dichlorophenoxy acetic acid)			X	----	----	----	----	----	----	----	----	----
Diazinon			X	----	----	----	----	----	----	----	----	----
Dicamba			X	----	----	----	----	----	----	----	----	----
Dichlobenil			X	----	----	----	----	----	----	----	----	----
Dichlone			X	----	----	----	----	----	----	----	----	----

SECTION III – LABORATORY ANALYSIS

TABLE V:

TOXIC POLLUTANTS AND HAZARDOUS SUBSTANCES

OUTFALL NUMBER

007

☐ Grab ☐ Composite

POLLUTANT	MARK X			MQL (*) µg/L	EFFLUENT ANALYSIS						UNITS	
	TESTING REQUIRED	BELIEVED PRESENT	BELIEVED ABSENT		MAXIMUM DAILY VALUE		MAXIMUM 30 DAY VALUE		LONG TERM AVERAGE VALUE		CONCEN-TRATION	MASS
					CONCENTRATION	MASS	CONCENTRATION	MASS	CONCENTRATION	MASS		
2,2-Dichloropropionic acid			X	----	----	----	----	----	----	----	----	----
Dichlorvos			X	----	----	----	----	----	----	----	----	----
Diethyl amine			X	----	----	----	----	----	----	----	----	----
Dimethyl Amine			X	----	----	----	----	----	----	----	----	----
Dinitrobenzene			X	----	----	----	----	----	----	----	----	----
Diquat			X	----	----	----	----	----	----	----	----	----
Disulfoton			X	----	----	----	----	----	----	----	----	----
Diuron			X	----	----	----	----	----	----	----	----	----
Epichlorohydrin			X	----	----	----	----	----	----	----	----	----
Ethion			X	----	----	----	----	----	----	----	----	----
Ethylene diamine			X	----	----	----	----	----	----	----	----	----
Ethylene dibromide			X	----	----	----	----	----	----	----	----	----
Formaldehyde			X	----	----	----	----	----	----	----	----	----
Furfural			X	----	----	----	----	----	----	----	----	----
Guthion			X	----	----	----	----	----	----	----	----	----
Isoprene			X	----	----	----	----	----	----	----	----	----
Isopropanolamine Dodecylbenzenesulfonate			X	----	----	----	----	----	----	----	----	----
Kelthane			X	----	----	----	----	----	----	----	----	----
Kepone			X	----	----	----	----	----	----	----	----	----
Malathion			X	----	----	----	----	----	----	----	----	----
Mercaptodimethur			X	----	----	----	----	----	----	----	----	----
Methoxychlor			X	----	----	----	----	----	----	----	----	----
Methyl mercaptan			X	----	----	----	----	----	----	----	----	----
Methyl methacrylate			X	----	----	----	----	----	----	----	----	----
Methyl parathion			X	----	----	----	----	----	----	----	----	----
Mevinphos			X	----	----	----	----	----	----	----	----	----

SECTION III – LABORATORY ANALYSIS

TABLE V:

TOXIC POLLUTANTS AND HAZARDOUS SUBSTANCES

OUTFALL NUMBER

007

☐ Grab ☐ Composite

POLLUTANT	MARK X			MQL (*) µg/L	EFFLUENT ANALYSIS						UNITS	
	TESTING REQUIRED	BELIEVED PRESENT	BELIEVED ABSENT		MAXIMUM DAILY VALUE		MAXIMUM 30 DAY VALUE		LONG TERM AVERAGE VALUE		CONCEN-TRATION	MASS
					CONCENTRATION	MASS	CONCENTRATION	MASS	CONCENTRATION	MASS		
Mexacarbate			X	----	----	----	----	----	----	----	----	----
Monoethyl amine			X	----	----	----	----	----	----	----	----	----
Monomethyl amine			X	----	----	----	----	----	----	----	----	----
Naled			X	----	----	----	----	----	----	----	----	----
Napthenic acid			X	----	----	----	----	----	----	----	----	----
Nitrotoluene			X	----	----	----	----	----	----	----	----	----
Parathion			X	----	----	----	----	----	----	----	----	----
Phenolsulfanate			X	----	----	----	----	----	----	----	----	----
Phosgene			X	----	----	----	----	----	----	----	----	----
Propargite			X	----	----	----	----	----	----	----	----	----
Propylene oxide			X	----	----	----	----	----	----	----	----	----
Pyrethrins			X	----	----	----	----	----	----	----	----	----
Quinoline			X	----	----	----	----	----	----	----	----	----
Resorcinol			X	----	----	----	----	----	----	----	----	----
Strontium			X	----	----	----	----	----	----	----	----	----
Strychnine			X	----	----	----	----	----	----	----	----	----
Styrene			X	----	----	----	----	----	----	----	----	----
2,4,5-T (2,4,5-Trichlorophenoxy acetic acid)			X	----	----	----	----	----	----	----	----	----
TDE (Tetrachlorodiphenylethane)			X	----	----	----	----	----	----	----	----	----
2,4,5-TP[2-(2,4,5-Trichlorophenoxy) propanoic acid]			X	----	----	----	----	----	----	----	----	----
Trichlorfon			X	----	----	----	----	----	----	----	----	----

SECTION III – LABORATORY ANALYSIS

TABLE V:

TOXIC POLLUTANTS AND HAZARDOUS SUBSTANCES

OUTFALL NUMBER

007

☐ Grab ☐ Composite

POLLUTANT	**MARK X**			**MQL (*) µg/L**	**EFFLUENT ANALYSIS**						**UNITS**	
	TESTING REQUIRED	BELIEVED PRESENT	BELIEVED ABSENT		MAXIMUM DAILY VALUE		MAXIMUM 30 DAY VALUE		LONG TERM AVERAGE VALUE		CONCEN-TRATION	MASS
					CONCENTRATION	MASS	CONCENTRATION	MASS	CONCENTRATION	MASS		
Triethanolamine Dodecylbenzenesulfonate			X	----	----	----	----	----	----	----	----	----
Triethylamine			X	----	----	----	----	----	----	----	----	----
Trimethylamine			X	----	----	----	----	----	----	----	----	----
Uranium			X	----	----	----	----	----	----	----	----	----
Vanadium			X	----	----	----	----	----	----	----	----	----
Vinyl Acetate			X	----	----	----	----	----	----	----	----	----
Xylene			X	----	----	----	----	----	----	----	----	----
Xylenol			X	----	----	----	----	----	----	----	----	----
Zirconium			X	----	----	----	----	----	----	----	----	----

(*) Minimum Quantification Level (MQL)

SECTION III – LABORATORY ANALYSIS

TABLE V:

TOXIC POLLUTANTS AND HAZARDOUS SUBSTANCES

OUTFALL NUMBER

008

☐ Grab ☐ Composite

POLLUTANT	MARK X			MQL (*) µg/L	EFFLUENT ANALYSIS						UNITS	
	TESTING REQUIRED	BELIEVED PRESENT	BELIEVED ABSENT		MAXIMUM DAILY VALUE		MAXIMUM 30 DAY VALUE		LONG TERM AVERAGE VALUE		CONCEN-TRATION	MASS
					CONCENTRATION	MASS	CONCENTRATION	MASS	CONCENTRATION	MASS		
TOXIC POLLUTANTS AND HAZARDOUS SUBSTANCES												
Asbestos			X	----	----	----	----	----	----	----	----	----
HAZARDOUS SUBSTANCES												
Acetaldehyde			X	----	----	----	----	----	----	----	----	----
Allyl alcohol			X	----	----	----	----	----	----	----	----	----
Allyl chloride			X	----	----	----	----	----	----	----	----	----
Amyl acetate			X	----	----	----	----	----	----	----	----	----
Aniline			X	----	----	----	----	----	----	----	----	----
Benzonitrile			X	----	----	----	----	----	----	----	----	----
Benzyl chloride			X	----	----	----	----	----	----	----	----	----
Butyl acetate			X	----	----	----	----	----	----	----	----	----
Butylamine			X	----	----	----	----	----	----	----	----	----
Captan			X	----	----	----	----	----	----	----	----	----
Carbaryl			X	----	----	----	----	----	----	----	----	----
Carbofuran			X	----	----	----	----	----	----	----	----	----
Carbon disulfide			X	----	----	----	----	----	----	----	----	----
Chlorpyrifos			X	----	----	----	----	----	----	----	----	----
Coumaphos			X	----	----	----	----	----	----	----	----	----
Cresol			X	----	----	----	----	----	----	----	----	----
Crotonaldehyde			X	----	----	----	----	----	----	----	----	----
Cyclohexane			X	----	----	----	----	----	----	----	----	----
2,4-D (2,4-Dichlorophenoxy acetic acid)			X	----	----	----	----	----	----	----	----	----
Diazinon			X	----	----	----	----	----	----	----	----	----
Dicamba			X	----	----	----	----	----	----	----	----	----
Dichlobenil			X	----	----	----	----	----	----	----	----	----
Dichlone			X	----	----	----	----	----	----	----	----	----

SECTION III – LABORATORY ANALYSIS

TABLE V:

TOXIC POLLUTANTS AND HAZARDOUS SUBSTANCES

OUTFALL NUMBER

008

☐ Grab ☐ Composite

POLLUTANT	MARK X			MQL (*) µg/L	EFFLUENT ANALYSIS						UNITS	
	TESTING REQUIRED	BELIEVED PRESENT	BELIEVED ABSENT		MAXIMUM DAILY VALUE		MAXIMUM 30 DAY VALUE		LONG TERM AVERAGE VALUE		CONCEN-TRATION	MASS
					CONCENTRATION	MASS	CONCENTRATION	MASS	CONCENTRATION	MASS		
2,2-Dichloropropionic acid			X	----	----	----	----	----	----	----	----	----
Dichlorvos			X	----	----	----	----	----	----	----	----	----
Diethyl amine			X	----	----	----	----	----	----	----	----	----
Dimethyl Amine			X	----	----	----	----	----	----	----	----	----
Dinitrobenzene			X	----	----	----	----	----	----	----	----	----
Diquat			X	----	----	----	----	----	----	----	----	----
Disulfoton			X	----	----	----	----	----	----	----	----	----
Diuron			X	----	----	----	----	----	----	----	----	----
Epichlorohydrin			X	----	----	----	----	----	----	----	----	----
Ethion			X	----	----	----	----	----	----	----	----	----
Ethylene diamine			X	----	----	----	----	----	----	----	----	----
Ethylene dibromide			X	----	----	----	----	----	----	----	----	----
Formaldehyde			X	----	----	----	----	----	----	----	----	----
Furfural			X	----	----	----	----	----	----	----	----	----
Guthion			X	----	----	----	----	----	----	----	----	----
Isoprene			X	----	----	----	----	----	----	----	----	----
Isopropanolamine Dodecylbenzenesulfonate			X	----	----	----	----	----	----	----	----	----
Kelthane			X	----	----	----	----	----	----	----	----	----
Kepone			X	----	----	----	----	----	----	----	----	----
Malathion			X	----	----	----	----	----	----	----	----	----
Mercaptodimethur			X	----	----	----	----	----	----	----	----	----
Methoxychlor			X	----	----	----	----	----	----	----	----	----
Methyl mercaptan			X	----	----	----	----	----	----	----	----	----
Methyl methacrylate			X	----	----	----	----	----	----	----	----	----
Methyl parathion			X	----	----	----	----	----	----	----	----	----
Mevinphos			X	----	----	----	----	----	----	----	----	----

SECTION III – LABORATORY ANALYSIS

TABLE V:

TOXIC POLLUTANTS AND HAZARDOUS SUBSTANCES

OUTFALL NUMBER

008

☐ Grab ☐ Composite

POLLUTANT	MARK X			MQL (*) µg/L	EFFLUENT ANALYSIS						UNITS	
	TESTING REQUIRED	BELIEVED PRESENT	BELIEVED ABSENT		MAXIMUM DAILY VALUE		MAXIMUM 30 DAY VALUE		LONG TERM AVERAGE VALUE		CONCEN-TRATION	MASS
					CONCENTRATION	MASS	CONCENTRATION	MASS	CONCENTRATION	MASS		
Mexacarbate			X	----	----	----	----	----	----	----	----	----
Monoethyl amine			X	----	----	----	----	----	----	----	----	----
Monomethyl amine			X	----	----	----	----	----	----	----	----	----
Naled			X	----	----	----	----	----	----	----	----	----
Napthenic acid			X	----	----	----	----	----	----	----	----	----
Nitrotoluene			X	----	----	----	----	----	----	----	----	----
Parathion			X	----	----	----	----	----	----	----	----	----
Phenolsulfanate			X	----	----	----	----	----	----	----	----	----
Phosgene			X	----	----	----	----	----	----	----	----	----
Propargite			X	----	----	----	----	----	----	----	----	----
Propylene oxide			X	----	----	----	----	----	----	----	----	----
Pyrethrins			X	----	----	----	----	----	----	----	----	----
Quinoline			X	----	----	----	----	----	----	----	----	----
Resorcinol			X	----	----	----	----	----	----	----	----	----
Strontium			X	----	----	----	----	----	----	----	----	----
Strychnine			X	----	----	----	----	----	----	----	----	----
Styrene			X	----	----	----	----	----	----	----	----	----
2,4,5-T (2,4,5-Trichlorophenoxy acetic acid)			X	----	----	----	----	----	----	----	----	----
TDE (Tetrachlorodiphenylethane)			X	----	----	----	----	----	----	----	----	----
2,4,5-TP[2-(2,4,5-Trichlorophenoxy) propanoic acid]			X	----	----	----	----	----	----	----	----	----
Trichlorfon			X	----	----	----	----	----	----	----	----	----

SECTION III – LABORATORY ANALYSIS

TABLE V:

TOXIC POLLUTANTS AND HAZARDOUS SUBSTANCES

OUTFALL NUMBER

008

☐ Grab ☐ Composite

POLLUTANT	MARK X: TESTING REQUIRED	MARK X: BELIEVED PRESENT	MARK X: BELIEVED ABSENT	MQL (*) µg/L	EFFLUENT ANALYSIS: MAXIMUM DAILY VALUE: CONCENTRATION	EFFLUENT ANALYSIS: MAXIMUM DAILY VALUE: MASS	EFFLUENT ANALYSIS: MAXIMUM 30 DAY VALUE: CONCENTRATION	EFFLUENT ANALYSIS: MAXIMUM 30 DAY VALUE: MASS	EFFLUENT ANALYSIS: LONG TERM AVERAGE VALUE: CONCENTRATION	EFFLUENT ANALYSIS: LONG TERM AVERAGE VALUE: MASS	UNITS: CONCEN-TRATION	UNITS: MASS
Triethanolamine Dodecylbenzenesulfonate			X	----	----	----	----	----	----	----	----	----
Triethylamine			X	----	----	----	----	----	----	----	----	----
Trimethylamine			X	----	----	----	----	----	----	----	----	----
Uranium			X	----	----	----	----	----	----	----	----	----
Vanadium			X	----	----	----	----	----	----	----	----	----
Vinyl Acetate			X	----	----	----	----	----	----	----	----	----
Xylene			X	----	----	----	----	----	----	----	----	----
Xylenol			X	----	----	----	----	----	----	----	----	----
Zirconium			X	----	----	----	----	----	----	----	----	----

(*) Minimum Quantification Level (MQL)

SECTION III – LABORATORY ANALYSIS

TABLE V:

OUTFALL NUMBER

TOXIC POLLUTANTS AND HAZARDOUS SUBSTANCES

009

☐ Grab ☐ Composite

POLLUTANT	MARK X			MQL (*) µg/L	EFFLUENT ANALYSIS						UNITS	
	TESTING REQUIRED	BELIEVED PRESENT	BELIEVED ABSENT		MAXIMUM DAILY VALUE		MAXIMUM 30 DAY VALUE		LONG TERM AVERAGE VALUE		CONCEN-TRATION	MASS
					CONCENTRATION	MASS	CONCENTRATION	MASS	CONCENTRATION	MASS		
TOXIC POLLUTANTS AND HAZARDOUS SUBSTANCES												
Asbestos			X	----	----	----	----	----	----	----	----	----
HAZARDOUS SUBSTANCES												
Acetaldehyde			X	----	----	----	----	----	----	----	----	----
Allyl alcohol			X	----	----	----	----	----	----	----	----	----
Allyl chloride			X	----	----	----	----	----	----	----	----	----
Amyl acetate			X	----	----	----	----	----	----	----	----	----
Aniline			X	----	----	----	----	----	----	----	----	----
Benzonitrile			X	----	----	----	----	----	----	----	----	----
Benzyl chloride			X	----	----	----	----	----	----	----	----	----
Butyl acetate			X	----	----	----	----	----	----	----	----	----
Butylamine			X	----	----	----	----	----	----	----	----	----
Captan			X	----	----	----	----	----	----	----	----	----
Carbaryl			X	----	----	----	----	----	----	----	----	----
Carbofuran			X	----	----	----	----	----	----	----	----	----
Carbon disulfide			X	----	----	----	----	----	----	----	----	----
Chlorpyrifos			X	----	----	----	----	----	----	----	----	----
Coumaphos			X	----	----	----	----	----	----	----	----	----
Cresol			X	----	----	----	----	----	----	----	----	----
Crotonaldehyde			X	----	----	----	----	----	----	----	----	----
Cyclohexane			X	----	----	----	----	----	----	----	----	----
2,4-D (2,4-Dichlorophenoxy acetic acid)			X	----	----	----	----	----	----	----	----	----
Diazinon			X	----	----	----	----	----	----	----	----	----
Dicamba			X	----	----	----	----	----	----	----	----	----
Dichlobenil			X	----	----	----	----	----	----	----	----	----
Dichlone			X	----	----	----	----	----	----	----	----	----

SECTION III – LABORATORY ANALYSIS

TABLE V:

TOXIC POLLUTANTS AND HAZARDOUS SUBSTANCES

OUTFALL NUMBER

009

☐ Grab ☐ Composite

POLLUTANT	MARK X			MQL (*) µg/L	EFFLUENT ANALYSIS						UNITS	
	TESTING REQUIRED	BELIEVED PRESENT	BELIEVED ABSENT		MAXIMUM DAILY VALUE		MAXIMUM 30 DAY VALUE		LONG TERM AVERAGE VALUE		CONCEN-TRATION	MASS
					CONCENTRATION	MASS	CONCENTRATION	MASS	CONCENTRATION	MASS		
2,2-Dichloropropionic acid			X	----	----	----	----	----	----	----	----	----
Dichlorvos			X	----	----	----	----	----	----	----	----	----
Diethyl amine			X	----	----	----	----	----	----	----	----	----
Dimethyl Amine			X	----	----	----	----	----	----	----	----	----
Dinitrobenzene			X	----	----	----	----	----	----	----	----	----
Diquat			X	----	----	----	----	----	----	----	----	----
Disulfoton			X	----	----	----	----	----	----	----	----	----
Diuron			X	----	----	----	----	----	----	----	----	----
Epichlorohydrin			X	----	----	----	----	----	----	----	----	----
Ethion			X	----	----	----	----	----	----	----	----	----
Ethylene diamine			X	----	----	----	----	----	----	----	----	----
Ethylene dibromide			X	----	----	----	----	----	----	----	----	----
Formaldehyde			X	----	----	----	----	----	----	----	----	----
Furfural			X	----	----	----	----	----	----	----	----	----
Guthion			X	----	----	----	----	----	----	----	----	----
Isoprene			X	----	----	----	----	----	----	----	----	----
Isopropanolamine Dodecylbenzenesulfonate			X	----	----	----	----	----	----	----	----	----
Kelthane			X	----	----	----	----	----	----	----	----	----
Kepone			X	----	----	----	----	----	----	----	----	----
Malathion			X	----	----	----	----	----	----	----	----	----
Mercaptodimethur			X	----	----	----	----	----	----	----	----	----
Methoxychlor			X	----	----	----	----	----	----	----	----	----
Methyl mercaptan			X	----	----	----	----	----	----	----	----	----
Methyl methacrylate			X	----	----	----	----	----	----	----	----	----
Methyl parathion			X	----	----	----	----	----	----	----	----	----
Mevinphos			X	----	----	----	----	----	----	----	----	----

SECTION III – LABORATORY ANALYSIS

TABLE V:

TOXIC POLLUTANTS AND HAZARDOUS SUBSTANCES

OUTFALL NUMBER

009

☐ Grab ☐ Composite

POLLUTANT	MARK X			MQL (*) µg/L	EFFLUENT ANALYSIS						UNITS	
	TESTING REQUIRED	BELIEVED PRESENT	BELIEVED ABSENT		MAXIMUM DAILY VALUE		MAXIMUM 30 DAY VALUE		LONG TERM AVERAGE VALUE		CONCEN-TRATION	MASS
					CONCENTRATION	MASS	CONCENTRATION	MASS	CONCENTRATION	MASS		
Mexacarbate			X	----	----	----	----	----	----	----	----	----
Monoethyl amine			X	----	----	----	----	----	----	----	----	----
Monomethyl amine			X	----	----	----	----	----	----	----	----	----
Naled			X	----	----	----	----	----	----	----	----	----
Napthenic acid			X	----	----	----	----	----	----	----	----	----
Nitrotoluene			X	----	----	----	----	----	----	----	----	----
Parathion			X	----	----	----	----	----	----	----	----	----
Phenolsulfanate			X	----	----	----	----	----	----	----	----	----
Phosgene			X	----	----	----	----	----	----	----	----	----
Propargite			X	----	----	----	----	----	----	----	----	----
Propylene oxide			X	----	----	----	----	----	----	----	----	----
Pyrethrins			X	----	----	----	----	----	----	----	----	----
Quinoline			X	----	----	----	----	----	----	----	----	----
Resorcinol			X	----	----	----	----	----	----	----	----	----
Strontium			X	----	----	----	----	----	----	----	----	----
Strychnine			X	----	----	----	----	----	----	----	----	----
Styrene			X	----	----	----	----	----	----	----	----	----
2,4,5-T (2,4,5-Trichlorophenoxy acetic acid)			X	----	----	----	----	----	----	----	----	----
TDE (Tetrachlorodiphenylethane)			X	----	----	----	----	----	----	----	----	----
2,4,5-TP[2-(2,4,5-Trichlorophenoxy) propanoic acid]			X	----	----	----	----	----	----	----	----	----
Trichlorfon			X	----	----	----	----	----	----	----	----	----

SECTION III – LABORATORY ANALYSIS

TABLE V:

TOXIC POLLUTANTS AND HAZARDOUS SUBSTANCES

OUTFALL NUMBER

009

☐ Grab ☐ Composite

POLLUTANT	MARK X			MQL (*) µg/L	EFFLUENT ANALYSIS						UNITS	
	TESTING REQUIRED	BELIEVED PRESENT	BELIEVED ABSENT		MAXIMUM DAILY VALUE		MAXIMUM 30 DAY VALUE		LONG TERM AVERAGE VALUE		CONCEN-TRATION	MASS
					CONCENTRATION	MASS	CONCENTRATION	MASS	CONCENTRATION	MASS		
Triethanolamine Dodecylbenzenesulfonate			X	----	----	----	----	----	----	----	----	----
Triethylamine			X	----	----	----	----	----	----	----	----	----
Trimethylamine			X	----	----	----	----	----	----	----	----	----
Uranium			X	----	----	----	----	----	----	----	----	----
Vanadium			X	----	----	----	----	----	----	----	----	----
Vinyl Acetate			X	----	----	----	----	----	----	----	----	----
Xylene			X	----	----	----	----	----	----	----	----	----
Xylenol			X	----	----	----	----	----	----	----	----	----
Zirconium			X	----	----	----	----	----	----	----	----	----

(*) Minimum Quantification Level (MQL)

SECTION III – LABORATORY ANALYSIS

TABLE VI:

OUTFALL NUMBER

301

DIOXINS

YOU ARE REQUIRED TO REPORT QUALITATIVE DATA , GENERATED USING A SCREENING PROCEDURE NOT CALIBRATED WITH ANALYTICAL STANDARDS FOR THE FOLLOWING PARAMETER IF IT USES OR MANUFACTURES 2,4,5-TRICHLOROPHENOXY ACETIC ACID (2,4,5,-T); 2-(2,4,5-TRICHLOROPHENOXY) PROPANOIC ACID (SILVEX, 2,4,5,-TP); 2-(2,4,5 TRICHLOROPHENOXY) ETHYL, 2,2-DICHLOROPROPIONATE (ERBON); O,O-DIMETHYL O-(2,4,5-TRICHLOROPHENYL) PHOSPHOROTHIOATE (RONNEL); 2,4,5-TRICHLOROPHENOL (TCP); or HEXACHLOROPHENE (HCP); OR IF YOU KNOW OR HAVE REASON TO BELIEVE THAT TCDD IS OR MAY BE PRESENT IN AN EFFLUENT

☐ Grab ☐ Composite

POLLUTANT	**MARK X**			**MQL (*) µg/L**	**EFFLUENT ANALYSIS**						**UNITS**	
	TESTING REQUIRED	BELIEVED PRESENT	BELIEVED ABSENT		MAXIMUM DAILY VALUE		MAXIMUM 30 DAY VALUE		LONG TERM AVERAGE VALUE		CONCEN-TRATION	MASS
					CONCENTRATION	MASS	CONCENTRATION	MASS	CONCENTRATION	MASS		
2,3,7,8-tetrachlorobenzo-p-dioxin (TCDD)			X	0.00001	----	----	----	----	----	----	----	----

(*) Minimum Quantification Level (MQL)

SECTION III – LABORATORY ANALYSIS

TABLE VI: **OUTFALL NUMBER** **401**

DIOXINS

YOU ARE REQUIRED TO REPORT QUALITATIVE DATA , GENERATED USING A SCREENING PROCEDURE NOT CALIBRATED WITH ANALYTICAL STANDARDS FOR THE FOLLOWING PARAMETER IF IT USES OR MANUFACTURES 2,4,5-TRICHLOROPHENOXY ACETIC ACID (2,4,5,-T); 2-(2,4,5-TRICHLOROPHENOXY) PROPANOIC ACID (SILVEX, 2,4,5,-TP); 2-(2,4,5 TRICHLOROPHENOXY) ETHYL, 2,2-DICHLOROPROPIONATE (ERBON); O,O-DIMETHYL O-(2,4,5-TRICHLOROPHENYL) PHOSPHOROTHIOATE (RONNEL); 2,4,5-TRICHLOROPHENOL (TCP); or HEXACHLOROPHENE (HCP); OR IF YOU KNOW OR HAVE REASON TO BELIEVE THAT TCDD IS OR MAY BE PRESENT IN AN EFFLUENT

☐ Grab ☐ Composite

POLLUTANT	MARK X			MQL (*) µg/L	EFFLUENT ANALYSIS						UNITS	
	TESTING REQUIRED	BELIEVED PRESENT	BELIEVED ABSENT		MAXIMUM DAILY VALUE		MAXIMUM 30 DAY VALUE		LONG TERM AVERAGE VALUE		CONCEN-TRATION	MASS
					CONCENTRATION	MASS	CONCENTRATION	MASS	CONCENTRATION	MASS		
2,3,7,8-tetrachlorobenzo-p-dioxin (TCDD)			X	0.00001	----	----	----	----	----	----	----	----

(*) Minimum Quantification Level (MQL)

SECTION III – LABORATORY ANALYSIS

TABLE VI:

OUTFALL NUMBER

002

DIOXINS

YOU ARE REQUIRED TO REPORT QUALITATIVE DATA , GENERATED USING A SCREENING PROCEDURE NOT CALIBRATED WITH ANALYTICAL STANDARDS FOR THE FOLLOWING PARAMETER IF IT USES OR MANUFACTURES 2,4,5-TRICHLOROPHENOXY ACETIC ACID (2,4,5,-T); 2-(2,4,5-TRICHLOROPHENOXY) PROPANOIC ACID (SILVEX, 2,4,5,-TP); 2-(2,4,5 TRICHLOROPHENOXY) ETHYL, 2,2-DICHLOROPROPIONATE (ERBON); O,O-DIMETHYL O-(2,4,5-TRICHLOROPHENYL) PHOSPHOROTHIOATE (RONNEL); 2,4,5-TRICHLOROPHENOL (TCP); or HEXACHLOROPHENE (HCP); OR IF YOU KNOW OR HAVE REASON TO BELIEVE THAT TCDD IS OR MAY BE PRESENT IN AN EFFLUENT

☐ Grab ☐ Composite

POLLUTANT	**MARK X**			**MQL (*) µg/L**	**EFFLUENT ANALYSIS**						**UNITS**	
	TESTING REQUIRED	BELIEVED PRESENT	BELIEVED ABSENT		MAXIMUM DAILY VALUE		MAXIMUM 30 DAY VALUE		LONG TERM AVERAGE VALUE		CONCEN-TRATION	MASS
					CONCENTRATION	MASS	CONCENTRATION	MASS	CONCENTRATION	MASS		
2,3,7,8-tetrachlorobenzo-p-dioxin (TCDD)			X	0.00001	----	----	----	----	----	----	----	----

(*) Minimum Quantification Level (MQL)

SECTION III – LABORATORY ANALYSIS

TABLE VI:

OUTFALL NUMBER

005

DIOXINS

YOU ARE REQUIRED TO REPORT QUALITATIVE DATA , GENERATED USING A SCREENING PROCEDURE NOT CALIBRATED WITH ANALYTICAL STANDARDS FOR THE FOLLOWING PARAMETER IF IT USES OR MANUFACTURES 2,4,5-TRICHLOROPHENOXY ACETIC ACID (2,4,5,-T); 2-(2,4,5-TRICHLOROPHENOXY) PROPANOIC ACID (SILVEX, 2,4,5,-TP); 2-(2,4,5 TRICHLOROPHENOXY) ETHYL, 2,2-DICHLOROPROPIONATE (ERBON); O,O-DIMETHYL O-(2,4,5-TRICHLOROPHENYL) PHOSPHOROTHIOATE (RONNEL); 2,4,5-TRICHLOROPHENOL (TCP); or HEXACHLOROPHENE (HCP); OR IF YOU KNOW OR HAVE REASON TO BELIEVE THAT TCDD IS OR MAY BE PRESENT IN AN EFFLUENT

☐ Grab ☐ Composite

POLLUTANT	MARK X			MQL (*) µg/L	EFFLUENT ANALYSIS						UNITS	
	TESTING REQUIRED	BELIEVED PRESENT	BELIEVED ABSENT		MAXIMUM DAILY VALUE		MAXIMUM 30 DAY VALUE		LONG TERM AVERAGE VALUE		CONCEN-TRATION	MASS
					CONCENTRATION	MASS	CONCENTRATION	MASS	CONCENTRATION	MASS		
2,3,7,8-tetrachlorobenzo-p-dioxin (TCDD)			X	0.00001	----	----	----	----	----	----	----	----

(*) Minimum Quantification Level (MQL)

SECTION III – LABORATORY ANALYSIS

TABLE VI: **OUTFALL NUMBER** **006**

DIOXINS

YOU ARE REQUIRED TO REPORT QUALITATIVE DATA , GENERATED USING A SCREENING PROCEDURE NOT CALIBRATED WITH ANALYTICAL STANDARDS FOR THE FOLLOWING PARAMETER IF IT USES OR MANUFACTURES 2,4,5-TRICHLOROPHENOXY ACETIC ACID (2,4,5,-T); 2-(2,4,5-TRICHLOROPHENOXY) PROPANOIC ACID (SILVEX, 2,4,5,-TP); 2-(2,4,5 TRICHLOROPHENOXY) ETHYL, 2,2-DICHLOROPROPIONATE (ERBON); O,O-DIMETHYL O-(2,4,5-TRICHLOROPHENYL) PHOSPHOROTHIOATE (RONNEL); 2,4,5-TRICHLOROPHENOL (TCP); or HEXACHLOROPHENE (HCP); OR IF YOU KNOW OR HAVE REASON TO BELIEVE THAT TCDD IS OR MAY BE PRESENT IN AN EFFLUENT

☐ Grab ☐ Composite

POLLUTANT	**MARK X**			**MQL (*) µg/L**	**EFFLUENT ANALYSIS**						**UNITS**	
	TESTING REQUIRED	BELIEVED PRESENT	BELIEVED ABSENT		MAXIMUM DAILY VALUE		MAXIMUM 30 DAY VALUE		LONG TERM AVERAGE VALUE		CONCEN-TRATION	MASS
					CONCENTRATION	MASS	CONCENTRATION	MASS	CONCENTRATION	MASS		
2,3,7,8-tetrachlorobenzo-p-dioxin (TCDD)			X	0.00001	----	----	----	----	----	----	----	----

(*) Minimum Quantification Level (MQL)

SECTION III – LABORATORY ANALYSIS

TABLE VI:

OUTFALL NUMBER

007

DIOXINS

YOU ARE REQUIRED TO REPORT QUALITATIVE DATA , GENERATED USING A SCREENING PROCEDURE NOT CALIBRATED WITH ANALYTICAL STANDARDS FOR THE FOLLOWING PARAMETER IF IT USES OR MANUFACTURES 2,4,5-TRICHLOROPHENOXY ACETIC ACID (2,4,5,-T); 2-(2,4,5-TRICHLOROPHENOXY) PROPANOIC ACID (SILVEX, 2,4,5,-TP); 2-(2,4,5 TRICHLOROPHENOXY) ETHYL, 2,2-DICHLOROPROPIONATE (ERBON); O,O-DIMETHYL O-(2,4,5-TRICHLOROPHENYL) PHOSPHOROTHIOATE (RONNEL); 2,4,5-TRICHLOROPHENOL (TCP); or HEXACHLOROPHENE (HCP); OR IF YOU KNOW OR HAVE REASON TO BELIEVE THAT TCDD IS OR MAY BE PRESENT IN AN EFFLUENT

☐ Grab ☐ Composite

POLLUTANT	MARK X			MQL (*) µg/L	EFFLUENT ANALYSIS						UNITS	
	TESTING REQUIRED	BELIEVED PRESENT	BELIEVED ABSENT		MAXIMUM DAILY VALUE		MAXIMUM 30 DAY VALUE		LONG TERM AVERAGE VALUE		CONCEN-TRATION	MASS
					CONCENTRATION	MASS	CONCENTRATION	MASS	CONCENTRATION	MASS		
2,3,7,8-tetrachlorobenzo-p-dioxin (TCDD)			X	0.00001	----	----	----	----	----	----	----	----

(*) Minimum Quantification Level (MQL)

SECTION III – LABORATORY ANALYSIS

TABLE VI:

OUTFALL NUMBER

008

DIOXINS

YOU ARE REQUIRED TO REPORT QUALITATIVE DATA , GENERATED USING A SCREENING PROCEDURE NOT CALIBRATED WITH ANALYTICAL STANDARDS FOR THE FOLLOWING PARAMETER IF IT USES OR MANUFACTURES 2,4,5-TRICHLOROPHENOXY ACETIC ACID (2,4,5,-T); 2-(2,4,5-TRICHLOROPHENOXY) PROPANOIC ACID (SILVEX, 2,4,5,-TP); 2-(2,4,5 TRICHLOROPHENOXY) ETHYL, 2,2-DICHLOROPROPIONATE (ERBON); O,O-DIMETHYL O-(2,4,5-TRICHLOROPHENYL) PHOSPHOROTHIOATE (RONNEL); 2,4,5-TRICHLOROPHENOL (TCP); or HEXACHLOROPHENE (HCP); OR IF YOU KNOW OR HAVE REASON TO BELIEVE THAT TCDD IS OR MAY BE PRESENT IN AN EFFLUENT

☐ Grab ☐ Composite

POLLUTANT	MARK X			MQL (*) µg/L	EFFLUENT ANALYSIS						UNITS	
	TESTING REQUIRED	BELIEVED PRESENT	BELIEVED ABSENT		MAXIMUM DAILY VALUE		MAXIMUM 30 DAY VALUE		LONG TERM AVERAGE VALUE		CONCEN-TRATION	MASS
					CONCENTRATION	MASS	CONCENTRATION	MASS	CONCENTRATION	MASS		
2,3,7,8-tetrachlorobenzo-p-dioxin (TCDD)			X	0.00001	----	----	----	----	----	----	----	----

(*) Minimum Quantification Level (MQL)

SECTION III – LABORATORY ANALYSIS

TABLE VI:

DIOXINS

OUTFALL NUMBER

009

YOU ARE REQUIRED TO REPORT QUALITATIVE DATA , GENERATED USING A SCREENING PROCEDURE NOT CALIBRATED WITH ANALYTICAL STANDARDS FOR THE FOLLOWING PARAMETER IF IT USES OR MANUFACTURES 2,4,5-TRICHLOROPHENOXY ACETIC ACID (2,4,5,-T); 2-(2,4,5-TRICHLOROPHENOXY) PROPANOIC ACID (SILVEX, 2,4,5,-TP); 2-(2,4,5 TRICHLOROPHENOXY) ETHYL, 2,2-DICHLOROPROPIONATE (ERBON); O,O-DIMETHYL O-(2,4,5-TRICHLOROPHENYL) PHOSPHOROTHIOATE (RONNEL); 2,4,5-TRICHLOROPHENOL (TCP); or HEXACHLOROPHENE (HCP); OR IF YOU KNOW OR HAVE REASON TO BELIEVE THAT TCDD IS OR MAY BE PRESENT IN AN EFFLUENT

☐ Grab ☐ Composite

POLLUTANT	**MARK X**			**MQL (*) µg/L**	**EFFLUENT ANALYSIS**						**UNITS**	
	TESTING REQUIRED	BELIEVED PRESENT	BELIEVED ABSENT		MAXIMUM DAILY VALUE		MAXIMUM 30 DAY VALUE		LONG TERM AVERAGE VALUE		CONCEN-TRATION	MASS
					CONCENTRATION	MASS	CONCENTRATION	MASS	CONCENTRATION	MASS		
2,3,7,8-tetrachlorobenzo-p-dioxin (TCDD)			X	0.00001	----	----	----	----	----	----	----	----

(*) Minimum Quantification Level (MQL)

SECTION III – LABORATORY ANALYSIS

TABLE VII: **OUTFALL NUMBER**

OTHER (AS NEEDED)

☐ Grab ☐ Composite

POLLUTANT	**MARK X**			**MQL (*) µg/L**	**EFFLUENT ANALYSIS**						**UNITS**	
	TESTING REQUIRED	BELIEVED PRESENT	BELIEVED ABSENT		MAXIMUM DAILY VALUE		MAXIMUM 30 DAY VALUE		LONG TERM AVERAGE VALUE		CONCEN-TRATION	MASS
					CONCENTRATION	MASS	CONCENTRATION	MASS	CONCENTRATION	MASS		

(*) Minimum Quantification Level (MQL)

E. Laboratory Accreditation.

If any of the analysis reported above were performed by a contract lab or consulting firm, provide the firm name, lab ID number, address, phone number and pollutants analyzed.

- Pace Analytical Services, LLC, Lab ID: LA00017, (504) 469-0333
1000 Riverbend Blvd, Suite F, St. Rose, LA 70087 (Analyses: BOD5, COD, TOC, O&G, Ammonia, TSS, TDS, Hardness as CaCO3, Metals, Cyanide, Total Phenols, VOCs, Acids, Base/Neutral, Pesticides, TKN, Nitrate/Nitrite, Phosphorus)
- ALS Environmental, Lab ID: LA03087, (281) 530-5887
10450 Stancliff Rd, Ste 210, Houston, TX 77099 (Analyses: BOD5, TSS, O&G, TDS, Hardness as CaCO3, Nickel, Copper, Zinc, VOCs, Acids, Base/Neutral, Pesticides, TRC)
- Entek Laboratories, Inc, Lab ID: LA02039, (225) 752-2900
14285 Airline Hwy, Baton Rouge, LA 70817 (Analysis: BOD5)

Laboratory procedures and analyses performed by commercial laboratories shall be conducted in accordance with the requirements set forth under LAC 33:I.Subpart 3, Chapters 49-55.

Laboratory data generated by commercial laboratories that are not accredited under LAC 33:I.Subpart 3, Chapters 47-57, will not be accepted by the department. Retesting of analysis will be required by an accredited commercial laboratory.

In the case where effluent testing was completed by an unaccredited laboratory, and where retesting is not possible (i.e. data reported on DMRs for prior month's sampling), the data generated will be considered invalid.

Regulations on the Environmental Laboratory Accreditation Program and a list of labs that have applied for accreditation are available on the department website located at:

http://www.deq.louisiana.gov/portal/tabid/2925/Default.aspx

Questions concerning the Louisiana Environmental Laboratory Accreditation Program may be directed to (225) 219-3247.

F. Additional Data

1. List any toxic materials that the applicant currently uses or manufactures as an intermediate, feedstock, final product, or by-product.
Methanol, Aqua Ammonia (in emissions control device), See **Section 4.3** of the accompanying Supplemental Report.

2. List pertinent physical and chemical properties that may be associated with the discharge.
(e.g., toxic components, taste and odor compounds, heavy metals, etc.)
N/A

3. Toxicity Data.
Attach the summary sheets for any bioassay tests conducted on the effluent from the facility within the last three (3) years. See **Appendix E** of accompanying Supplemental Report.

SECTION IV – COMPLIANCE HISTORY

Report the history of all water violations and enforcement actions for the facility, a summary of all permit excursions including those reported on the facility's Discharge Monitoring Reports (DMRs) and bypasses for the last three years. Using a brief summary, report on the current status of all administrative orders, compliance orders, notices of violation, cease and desist orders, and any other enforcement actions either already resolved within the past 3 years or currently pending. The state administrative authority may choose, at its discretion, to require a more in-depth report of violations and compliance actions for the applicant covering any law, permit, or order concerning pollution at this or any other facility owned or operated by the applicant.

Include summary of compliance for **ALL** water permits at this site (e.g. any general permits and individual permits).

Please see **Section 8** of accompanying Supplemental Report.

Is the permittee currently required to meet any implementation schedule for compliance or enforcement?

☐ Yes ☒ No

If yes, provide a brief summary of the requirements and a status update.

N/A

SECTION V – LAC 33.I.1701 REQUIREMENTS

A. Does the company or owner have federal or state environmental permits identical to, or of a similar nature to, the permit for which you are applying in other states? (This requirement applies to all individuals, partnerships, corporations, or other entities who own a controlling interest of 50% or more in your company, or who participate in the environmental management of the facility for an entity applying for the permit or an ownership interest in the permit.)

[X] Permits in Louisiana. List Permit Numbers: 2560-00295-V5, 3169-V3, LA0127367, LAG535491
(Include all media)

[ ] Permits in other states (list states):

[ ] No other environmental permits.

B. Do you owe any outstanding fees or final penalties to the Department? [ ] Yes [X] No

If **yes**, please explain
N/A

C. Is your company a corporation or limited liability company? [X] Yes [ ] No

If **yes**, is the corporation or LLC registered with the Secretary of State? [X] Yes [ ] No

SECTION VI - OTHER PERMIT HISTORY

Facilities located in the Louisiana Coastal Zone as mapped by the Louisiana Department of Natural Resources (LDNR) (http://dnr.louisiana.gov) must provide verification that the company has either obtained a Coastal Use Permit or is not required to obtain a Coastal Use Permit.

A. Is this facility located in the Louisiana Coastal Zone as mapped by LDNR? [X] Yes [ ] No

If yes:

B. Do you have a Coastal Use Permit issued by DNR: [X] Yes [ ] No

If yes, please list your Coastal Use Permit number: 20150795 (Extended)

C. Are there any operations at the facility that may impact coastal waters such as any project involving dredge or fill, water control structures, bulkheads, oil and gas facilities, marina or residential development?

[ ] Yes [X] No

If **yes**, you must contact DNR for a determination (225) 342-8955 or dnrinfo@la.gov.

I have contacted LDNR and this facility is not required to obtain a Coastal Use Permit. [X]

If a Coastal Use permit is required, an application was submitted on: ________________

SECTION VII – MAPS/DIAGRAMS

A. Site Diagram

Attach to this application a complete site diagram of your facility demonstrating how the wastewater flows through your facility into each clearly labeled discharge point (including all treatment points). Indicate stormwater flow pattern on this diagram or provide additional diagrams if needed. Please indicate the location of the facility, the front gate or entrance to the facility and all outfall locations on the site diagram.

B. Topographic Map

Attach to this application a map or a copy of a section of the map which has been highlighted to show the path of your wastewater from your facility to the first named water body. Include on the map the front gate, all outfalls, and area extending at least one mile beyond your property boundaries. Indicate the outline of the facility, the location of each of its existing and proposed discharge structures, any existing hazardous waste treatment storage or disposal facilities, each well where fluids from the facility are injected underground, and those wells, springs, other surface waterbodies, and drinking water wells listed in public records or otherwise known to the applicant.

A U.S.G.S. 1:24,000 scale map (7.5' Quadrangle) would be appropriate for this item. Appropriate maps can be obtained from local government agencies such as DOTD or the Office of Public Works. Maps can also be obtained online at www.map.ldeq.org or other online mapping service. Private map companies can also supply you with these maps. If you cannot locate a map through these sources you can contact the Louisiana Department of Transportation and Development at:

1201 Capitol Access Road
Baton Rouge, LA 70802-4438
(225) 379-1232

maps@dotd.louisiana.gov

C. Block type water flow diagram

Attach a block type flow diagram for the complete facility including treatment of each discharge. The flow used in this diagram should reflect the flow used in the Section II.C Outfall Identification page and should balance fully. This diagram shall show intake/water source contributions, processes, treatments, losses, final discharge, etc. The water balance must show average and maximum 30-day flows at intake and discharge points and between units, including treatment units. If flow-based guidelines are applicable to your facility, each contributing wastestream shall be identified in its own block. See Attachment B for an example flow diagram. Hand drawn maps are acceptable.

If a water balance cannot be determined, the applicant may provide instead a pictorial description of the nature and amount of any sources of water and any collection and treatment measures.

SECTION VIII – ENVIRONMENTAL ASSESSMENT STATMENT

Those applicants that are **(1) major new facilities or (2) existing major facilities applying for a substantial modification** to their permit must complete this questionnaire.

There is no requirement that the information furnished in response to this questionnaire be certified by a professional engineer or other expert. However, simple **"yes"** or **"no"** answers **will not be acceptable**. A measured response should be given for each question posed, taking into consideration appropriate factors such as: the environmental sensitivity of the area, both for the proposed site and alternative sites; impacts on the economy of the area, both favorable and unfavorable; availability of raw materials, fuels and transportation and the impact of potential sites on their availability and economics; relationship of the facility to other facilities, either within or independent of the company, and the effects of location on these relationships; and other factors which may be appropriate on a case-by-case basis. **(Attach any additional pages if needed.)**

1. Have the potential and real adverse environmental effects of the proposed facility been avoided to the maximum extent possible?

   Please see **Appendix B – Environmental Assessment Statement** of accompanying Supplemental Report.

2. Does a cost benefit analysis of the environmental impact costs balanced against the social and economic benefits of the proposed facility demonstrate that the latter outweighs the former?

   Please see **Appendix B – Environmental Assessment Statement** of accompanying Supplemental Report.

3. Are there alternative projects which would offer more protection to the environment than the proposed facility without unduly curtailing nonenvironmental benefits?

   Please see **Appendix B – Environmental Assessment Statement** of accompanying Supplemental Report.

4. Are there alternative sites which would offer more protection to the environment than the proposed facility site without unduly curtailing nonenvironmental benefits?

   Please see **Appendix B – Environmental Assessment Statement** of accompanying Supplemental Report.

5. Are there mitigating measures which would offer more protection to the environment than the facility as proposed without unduly curtailing nonenvironmental benefits?

   Please see **Appendix B – Environmental Assessment Statement** of accompanying Supplemental Report.

According to the Louisiana Water Quality Regulations, LAC 33:IX.2503.B, the following requirements shall apply to the signatory page in this application:

Chapter 25. Permit Application and Special LPDES Program Requirements

2503. Signatories to permit applications and reports

A. All permit applications shall be signed as follows:

1. For a corporation - by a responsible corporate officer. For the purpose of this Section responsible corporate officer means:

(a) A president, secretary, treasurer, or vice-president of the corporation in charge of a principal business function, or any other person who performs similar policy- or decision-making functions for the corporation, or

(b) The manager of one or more manufacturing, production, or operating facilities employing more than 250 persons or having gross annual sales or expenditures exceeding $25 million (in second-quarter 1980 dollars), if authority to sign documents has been assigned or delegated to the manager in accordance with corporate procedures.

2. For a partnership or sole proprietorship - by a general partner or the proprietor, respectively; or

3. For a municipality, parish, State, Federal or other public agency - either a principal executive officer or ranking elected official. For the purposes of this Section a principal executive officer of a Federal agency includes:

(a) The chief executive officer of the agency, or

(b) A senior executive officer having responsibility for the overall operations of a principal geographic unit of the agency (e.g., Regional Administrator of EPA).

B. All reports required by permits, and other information requested by the state administrative authority shall be signed by a person described in LAC 33:IX.2503.A, or by a duly authorized representative of that person. A person is a duly authorized representative only if:

1. The authorization is made in writing by a person described in LAC 33:IX.2503.A.

2. The authorization specifies either an individual or a position having responsibility for the overall operation of the regulated facility or activity, such as a position of plant manager, operator of a well or well field, superintendent, position of equivalent responsibility, or an individual or position having overall responsibility for environmental matters for the company. (A duly authorized representative may thus be either a named individual or any individual occupying a named position); and

3. The written authorization is submitted to the state administrative authority.

C. Changes to authorization. If an authorization under LAC 33:IX.2503.B is no longer accurate because a different individual or position has responsibility for the overall operation of the facility, a new authorization satisfying the requirements of LAC 33:IX.2503.B must be submitted to the state administrative authority prior to or together with any reports, information, or applications to be signed by an authorized representative.

D. Any person signing any document under LAC 33:IX.2503.A or B shall make the following certification:

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

SIGNATORY AND AUTHORIZATION

Pursuant to the Water Quality Regulations (specifically LAC 33:IX.2503) promulgated September 1995, the state permit application must be signed by a responsible individual as described in LAC 33:IX.2503 and that person shall make the following certification:

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

The applicant for this permit hereby authorizes the Department of Environmental Quality to publish the public notice for a draft permit once in the appropriate newspaper(s). In accordance with LAC 33:IX.6521.A, the applicant agrees to be responsible for the cost of publication. The newspaper(s) is authorized to invoice the applicant directly.

Signature J Wiggins

Printed Name Josh Wiggins

Title Vice President of Manufacturing and Plant Manager

Date 5/17/23

E-mail address Josh.Wiggins@kochind.com

Telephone 713-829-8742

Federal Tax ID 82-4020056

CHECKLIST

To prevent any unnecessary delay in the processing of your application, please take a moment and check to be certain that the following items have been addressed and enclosed:

1. ALL questions and requested information have been answered (N/A if the question or information was not applicable).
2. ALL required maps, drawings, lab analysis, and other reports are enclosed.
3. The appropriate person has signed the signatory page.
4. Forward the original and one copy of this application.

ANY APPLICATION THAT DOES NOT CONTAIN ALL OF THE REQUESTED INFORMATION WILL BE CONSIDERED INCOMPLETE. APPLICATION PROCESSING WILL NOT PROCEED UNTIL ALL REQUESTED INFORMATION HAS BEEN SUBMITTED.

NOTE: UPON RECEIPT AND SUBSEQUENT REVIEW OF THE APPLICATION BY THE WATER PERMITS DIVISION, YOU MAY BE REQUESTED TO FURNISH ADDITIONAL INFORMATION IN ORDER TO COMPLETE THE PROCESSING OF THE PERMIT.

ATTACHMENT A – PETROLEUM REFINERIES ONLY

OUTFALL NUMBER

N/A

Throughput Rate

Feedstock (Crude Oil & NGL) Rate to Topping Unit(s): **N/A**

Flow Rates (if applicable)

Ballast Flow (1,000 gals/day): **N/A**

Contaminated Water to Treatment System (1,000 gals/day): **N/A**

Stormwater Process Area (square feet): **N/A**

Processes	**Unit Process Rate in 1,000 bbls/day**
Crude Process:	**N/A**
Atmospheric Crude Distillation	**N/A**
Crude Desalting	**N/A**
Vacuum Crude Distillation	**N/A**
Cracking and Coking Processes:	**N/A**
Visbreaking	**N/A**
Thermal Cracking	**N/A**
Fluid Catalytic Cracking	**N/A**
Moving Bed Catalytic Cracking	**N/A**
Hydrocracking	**N/A**
Delayed Coking	**N/A**
Fluid Coking	**N/A**
Hydrotreating*	**N/A**
Lube Processes:	**N/A**
Hydrofining, Hydrofinishing, Lube Hydrofinishing	**N/A**
White Oil Manufacture	**N/A**
Propane: Dewaxing, Deasphalting,Fractioning, Derinsing	**N/A**
Duo Sol, Solvent Treating, Solvent Extraction Duotreating, Solvent Dewaxing, Solvent Deasphalt	**N/A**
Lube Vacuum Tower, Oil Fractionation, Batch Still (Naphtha Strip), Bright Stock Treating	**N/A**
Centrifuge & Chilling	**N/A**
Dewaxing: MEK, Ketone, MEK-Toluene	**N/A**
Deoiling (Wax)	**N/A**
Naphthenic Lube Production	**N/A**
SO2 Extraction	**N/A**
Wax Pressing	**N/A**
Wax Plant (with Neutral Separation)	**N/A**
Furfural Extracting	**N/A**
Clay Contacting - Percolation	**N/A**
Wax Sweating	**N/A**

ATTACHMENT A – PETROLEUM REFINERIES ONLY

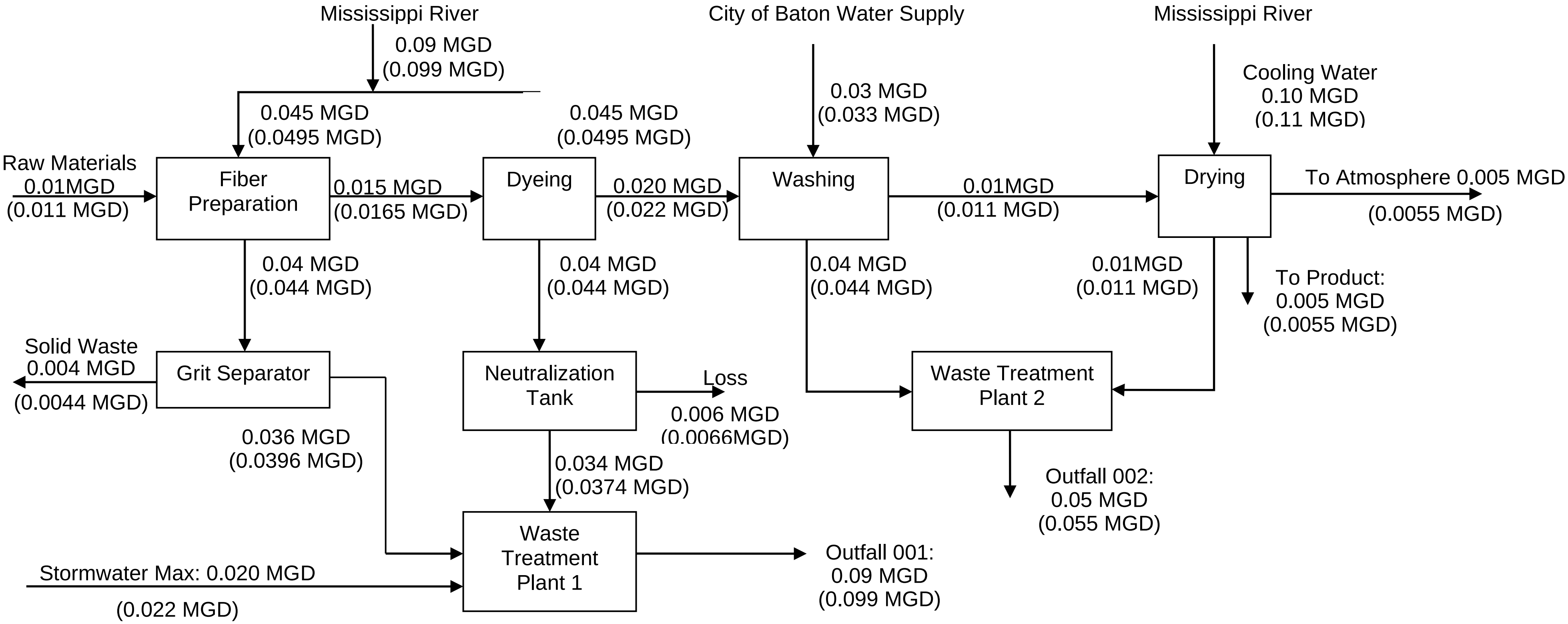
OUTFALL NUMBER

N/A

Processes	**Unit Process Rate in 1,000 bbls/day**
Acid Treating	**N/A**
Phenol Extraction	**N/A**
Asphalt Processes:	**N/A**
Asphalt Production	**N/A**
200 Deg. F Softening Point Unfluxed Asphalt*	**N/A**
Asphalt Oxidizing	**N/A**
Asphalt Emulsifying	**N/A**
Reforming and Alkylation Processes:	**N/A**
H2SO4 Alkylation*	**N/A**
Catalytic Reforming*	**N/A**

* These processes are not included in the refinery process configuration factor calculations.

ATTACHMENT B – BLOCK TYPE FLOW BALANCE EXAMPLE



Flow Legend:
Top number = Long Term Average (LTA)
Bottom Number (parentheses) = 30 Day Maximum

ATTACHMENT C – CLEAN WATER ACT SECTION 316(b) INFORMATION

Section 316(b) of the Clean Water Act regulations apply to facilities which use or propose to use one or more cooling water intake structures with a cumulative design intake flow greater than 2 MGD per day to withdraw cooling water from surface waters. Information can be found on the EPA website: http://water.epa.gov/lawsregs/lawsguidance/cwa/316b/

1. Is this a new facility with a new or modified cooling water intake structure? ☐ Yes [X] No

   If yes, supply information required in 40 CFR 122.21(r) in an attachment as applicable.

2. If this is an existing facility, is construction of a new unit planned? ☐ Yes [X] No

   If yes, supply information required in 40 CFR 125.95 (b) no later than 180 days before the planned commencement of water withdrawals for the new unit.

3. Existing Facilities
   Provide the following information for each cooling water intake structure (CWIS):

   Please see **Section 3** of accompanying Supplemental Report for more detail.

   (a) Number of intake structures

   Koch utilizes one (1) intake structure with three (3) pumps.

   (b) Type for each CWIS (open cycle cooling or closed cycle cooling)

   Closed-cycle recirculating cooling water system. Please see **Section 3** of accompanying Supplemental Report for more details.

   (c) Source of intake water for each CWIS - name and describe the quality of the source water below (e.g. fresh, brackish, salt, etc.)

   Please see **Section 3** of accompanying Supplemental Report.

   (d) Location of each CWIS (latitude/longitude, Mississippi River Mile, distance from bank)

   Please see **Section 3** of accompanying Supplemental Report.

(e) Description of each CWIS
(construction, depth of screens, type of screens at each intake, etc.)

Please see **Section 3** of accompanying Supplemental Report.

(f) How does the operation, location, or design of each CWIS minimize Adverse Environmental Impacts?

Please see **Section 3** of accompanying Supplemental Report.

(g) Design Intake Flow for each CWIS

Please see **Section 3** of accompanying Supplemental Report.

(h) Actual Intake Flow for each CWIS (prior to October 15, 2019, “actual intake flow” means the average volume of water withdrawn on an annual basis by the CWIS over the past three years)

Please see **Section 3** of accompanying Supplemental Report.

(i) What percentage of intake water is used for cooling purposes?

Please see **Section 3** of accompanying Supplemental Report.

(j) How long has the facility been withdrawing intake water?

The facility has been withdrawing intake water for two (2) years.

4. **NOTE:** The owner or operator of a facility subject to the 316(b) regulations for existing facilities must submit the information required in 40 CFR 122.21 (r), as applicable, with their permit renewal application. For permits which expire on or before July 14, 2018, an alternate schedule for submission of this information may be requested.

For permits which expire on or before July 14, 2018, are you requesting an alternate schedule for submission of the application information required by 40 CFR 122.21 (r) in accordance with 40 CFR 125.95 (a) (2)?

☐ Yes ☐ No

If you are requesting a waiver, please provide the justification below.

N/A

APPENDIX B
ENVIRONMENTAL ASSESSMENT STATEMENT (EAS)

APPENDIX B
ENVIRONMENTAL ASSESSMENT STATEMENT

CONTENTS

TABLES

FIGURES

ATTACHMENTS

1. INTRODUCTION AND OVERVIEW

Koch Methanol St. James, LLC (Koch) operates the Koch Methanol Plant and the adjacent Koch Methanol Terminal, collectively known as the KMe Facility, on 1,300 acres in St. James, St. James Parish, Louisiana. The KMe Facility has been designed and constructed with state-of-the-art pollution abatement equipment to meet applicable state and federal environmental standards. Construction of the facility began in 2017 and it has been fully operational since 2021, with portions of the plant starting operations in late 2020.

An initial Environmental Assessment Statement (EAS) for the KMe Facility was submitted for the initial Title V air permit application and reviewed by LDEQ prior to original construction. A subsequent EAS was completed for the initial LPDES permit application. Koch submitted an EAS with the application for a Significant Modification to the Title V Air Permit No. 2560-00295-V4 and Initial PSD Permit on November 2, 2022 ("November 2022 Application"), and a revised EAS was submitted with an addendum ("Addendum") to the application on February 1, 2023. This EAS has been further revised to accompany the application for a Renewal to the LPDES Industrial Wastewater Discharge Permit LA0127367 ("LPDES Renewal Application"), which is requesting authorization for anticipated wastewater-related changes at the KMe Facility as a result of the KMe Optimization Project ("the Project"). Koch is also seeking to reconcile the LPDES permit with the facility's as-built operations. These changes are described in Part 7 of the Supplemental Report of the LPDES Renewal Application.

Elements of the Project will result in an increase in the volume of wastewater flow sent to the KMe Facility's existing wastewater treatment facility as well as an increase in volume of boiler and cooling tower blowdown, demineralized regeneration wastewater, and return waters from the feed water treatment plant clarifier systems, with a commensurate increase in the volume of effluent discharged to the Mississippi River. Further detail is provided in Section 2.3.1 of this document and are also provided in the LPDES Renewal Application. Additionally, the as-built updates to the KMe Facility are detailed in the LPDES Renewal Application.

The requirement for an Environmental Assessment Statement (EAS) arose out of litigation involving the construction of a new proposed commercial hazardous waste incineration facility by International Technology Corp., also known as "IT". The "IT" Decision (Save Ourselves v. La. Env. Control Commission, Louisiana Supreme Court) in 1984 interpreted the Louisiana Constitution as reflecting a "public trust" doctrine that imposes a "rule of reasonableness" and requires the Louisiana Department of Environmental Quality (LDEQ) to determine, before granting approval of action affecting the environment, that any adverse environmental impacts resulting from the action have been minimized or avoided as much as possible consistent with the health, safety, and public welfare of Louisiana citizens.

The requirement derives from Article IX, Section 1 of the Louisiana Constitution which provides:

> *The natural resources of the state, including air and water, and the healthful, scenic, historic, and aesthetic quality of the environment shall be protected, conserved, and replenished insofar as possible and consistent with the health, safety and welfare of the people. The legislature shall enact laws to implement this policy.*

The "IT" Decision concluded that to satisfy the Constitution, LDEQ must adhere to statutes that the legislature has enacted to protect the environment. The Legislature enacted La. R.S. 30:2018 in 1997 to require that LDEQ affirmatively protect the environment by ensuring that permit applicants have addressed the five questions announced in the decision. This statute requires an EAS for all new major environmental permits issued by LDEQ and for major modifications to those permits. These five IT questions were largely based on the Court's interpretation that the review should be much like an environmental assessment under an analogous federal law – the National Environmental Policy Act (NEPA).

The remainder of this Introduction and Overview provides background information about Koch Industries, the KMe Facility and the proposed Project. The remaining sections of the EAS address the five IT Questions.

1.1 Koch Industries and the KMe Facility

Koch Industries, Inc. (KII) is a privately held multinational conglomerate corporation based in Wichita, Kansas and is the second largest privately held company in the United States. KII creates products to address life's basic necessities, while innovating ways to make them even better. The companies that are part of KII include Georgia Pacific, Guardian Glass, Flint Hills Resources, INVISTA, Infor, Molex, Koch Engineered Solutions, Koch Minerals and Trading, and Koch Ag & Energy Solutions (KAES), which owns and operates a number of ammonia, urea, and other fertilizer production operations. Koch Methanol St. James, LLC is a subsidiary of KAES and the KMe Facility is its only methanol production facility.

1.1.1 KII's Commitment to Environmental and Social Stewardship and its Governance Priorities

Through business and philanthropic endeavors, KII seeks to make society better through mutual benefit. KII contributes to creating the best possible environment where all people have the opportunity to develop their unique talents and abilities. The company provides engagement opportunities that enable employees to build relationships, have meaningful and fulfilling experiences, and make a positive difference in their communities based on what is important to them. More broadly, KII is committed to building mutually beneficial, long-term partnerships with customers, employees, suppliers, regulators, and the communities in which KII operates. KII gives preference to those who are principled and committed to creating value in society. KII's Stewardship Framework further defines the company's commitment and describes priorities around environmental and social stewardship and governance.[1]

1.1.1.1 Environmental Stewardship/Environmental Priorities[2]

With more than 300 manufacturing sites across the United States (US) – and about 100 more globally – KII is one of America's largest manufacturers. Every day, across those sites, KII strives to create more value, using fewer resources than the day before. KII does this through constant improvement and innovation – both in the products KII makes and how they are made, and by managing resources in a way that benefits customers, employees, partners, community members and society. *KII's five environmental stewardship priorities are: innovation, energy efficiency, air quality, water quality and consumption, and responsible resource management.*

Essential to stewardship, and KII's long-term success, is the discovery of new technologies and methods to create more value for customers while using fewer resources, minimizing waste and improving the environmental performance and effectiveness of products and processes. Since 2015, KII has invested more than $1.8 billion, and years of hard work and innovation, in energy efficiency projects across its US facilities. In addition, KII has invested another $1.7 billion toward energy transformation technologies, such as electric battery, energy storage and solar power infrastructure in the past two years.

Across operations, KII continually works to improve energy efficiency and develop innovative technologies. As an active partner and leader in the industry, KII was recognized as an Energy Star Partner of the Year in 2022.[3] The award recognizes organizations that have made outstanding contributions to protecting the environment through energy efficiency, and is the highest honor jointly bestowed by the United States Environmental Protection Agency (EPA) and United States Department of Energy.

KII continually seeks new ways to reduce and improve air emissions. KII companies have reduced criteria air pollutants — among those most common to industry — by

[1] https://www.kochind.com/KOCHInd-Dev/media/assets/files/koch-stewardship-framework.pdf, accessed October 31, 2022.

[2] https://www.kochind.com/stewardship/environmental-stewardship, accessed October 31, 2022.

[3] https://www.epa.gov/newsreleases/epa-recognizes-koch-industries-incorporated-energy-star-award-winner, accessed October 31, 2022.

48% from 2008-2021. And in the US, KII's greenhouse gas emissions are down by 18% since 2014 (approximately 5 million metric tons of CO_2e). KII companies are also applying new technologies to monitor certain types of emissions leaks and correct and prevent them in real time.

Because clean, plentiful water is vital to life – for humans and the countless plant and animal species with which we share this planet, KII continually explores new opportunities to reduce water consumption and to improve the quality of water discharges throughout operations.

Stewardship encompasses the responsible management of actions and the resources entrusted to the company's care in a manner that respects the rights of others. KII makes it a priority to ensure resources are managed to create value for KII's constituencies and for KII. From 2014 to 2021, the amount of production-related waste generated at our U.S. facilities is down by approximately 250 million pounds (~40%). In 2021, KII reporting facilities recycled, recovered for energy or treated 90% (369 million pounds) of all waste produced.

1.1.1.2 Social Stewardship/Social Priorities

KII's social stewardship priorities include health and safety, employee experience and community involvement/philanthropy.

The safety and well-being of KII's employees and communities is the company's first priority. KII makes this happen every day by building capability through employees and resilience in plant systems, so when the unexpected happens, employees, partners and communities stay safe.[4]

At KII's companies, an individual's character and contributions are valued over credentials, connections, or group affiliation. KII believes in helping all employees have opportunities that fit their gifts and abilities to contribute to society and improve their own lives – and KII rewards their individual contributions based on the value they create.[5]

KII believes everyone can discover and develop their innate abilities and apply them to contribute and succeed when empowered to do so. KII seeks to create opportunities based on each individual's unique gifts and potential to contribute. KII continually looks for mutually beneficial outcomes by providing employees with benefit choices aligned with their values and personal situations. KII strives to treat every person with dignity and respect, encourage and foster networking, and sponsor activities that are inclusive and focus on shared interests.

[4] https://www.kochind.com/stewardship/social-stewardship/health-safety, accessed October 31, 2022.
[5] https://www.kochind.com/stewardship/social-stewardship/employee-experience, accessed October 31, 2022.

KII celebrates the uniqueness of each individual and believes it is disrespectful to judge a person—positively or negatively— based on group identity. KII selects and empowers employees, including leaders, who have a variety of perspectives, aptitudes, skills, knowledge, experiences, and backgrounds. This diversity enables working together to identify opportunities, solve problems, and create greater value for others. KII solicits challenge consistently and respectfully from employees at all levels of the organization.

With community involvement and philanthropic endeavors, KII seeks to make society better through mutual benefit that gives people the opportunity to flourish. Through a multitude of programs and initiatives, KII works to help people discover, develop and unleash their true potential while removing barriers to opportunity in their lives and communities.[6]

KII focuses on creating the best possible environment where all people can develop their unique talents and abilities – empowering them to transform their lives, their work and their communities. Since 2018, KII has averaged more than 2,000 charitable contributions per year – contributing in nearly every US state as well as in countries around the world. KII's community involvement and philanthropy encompasses the following areas.[7]

Enhancing Education: KII supports an environment where students are able to discover, develop and apply their unique abilities, establishing a foundation for a life of contribution and fulfillment. KII partners with programs and institutions that support scholarships for qualifying students and offer curriculums that empower scholars to excel, as well as organizations that provide skilled and technical training.

Youth Development: Helping others find their innate gifts, passions and best path forward can make a life-changing difference. KII is honored to partner with organizations that do just that. KII supports community-based initiatives that help young people unlock their full potential through mentorship, educational support and social-emotional skill development.

Strengthening Workforce: KII supports partnerships that seek to develop a skilled workforce ready to continuously adapt to a rapidly changing world. KII seeks to empower entrepreneurs to launch and grow businesses, provide alternative educational opportunities for rapid skill development and remove barriers to entry for traditional employment opportunities.

[6] https://www.kochind.com/stewardship/social-stewardship/community-involvement-philanthropy, accessed October 31, 2022.

[7] https://www.kochind.com/stewardship/social-stewardship, accessed October 31, 2022.

Uplifting Communities: KII serves as an active and engaged community partner by developing effective and collaborative relationships, as well as contributing ideas and bottom-up solutions that lead to healthier communities. Through financial and employee volunteer support, KII seeks to strengthen the communities in which it operates.

1.1.1.3 Governance Priorities

In KII's business, being good stewards starts with acting with the proper regard for the rights of others, as well as complying with laws and regulations. Practicing stewardship and acting with integrity are how KII supports employees, protects the environment and invests in communities – today and into the future.[8] KII has several governance priorities including the following related to environmental protection and community engagement:

- Compliance and ethics standards – robust compliance standards and risk management systems, as well as a Global Code of Conduct that outlines expectations for all employees and third parties to raise issues and concerns.
- Oversight and continuous improvement – board-level oversight of audit and assurance programs. Tools used to learn and improve performance include audits, self-assessments, incident tracking, investigations, and knowledge sharing.
- Open communication – open and proactive communication with employees, the community, and customers about KII's principles and EHS performance.

As mentioned above, KII operates under a Global Code of Conduct[9] that emphasizes the company's, and its employees', commitment to integrity, stewardship and compliance as well as other company guiding principles.

1.1.2 KMe Facility Overview

Methanol is produced at the KMe Facility by combining steam, oxygen, and natural gas under high pressures and temperatures using the licensed Lurgi MegaMethanol® technology. The methanol production process consists of three main steps: synthesis gas (syngas) production, crude methanol synthesis and methanol distillation. Part 2 of the LPDES Renewal Application describes the production process in detail. The facility is designed to allow four modes of product distribution: truck, rail, barge, and ocean vessel. An advanced truck and rail terminal is operated by Koch, and an existing third-party dock facility located adjacent to the site is used for shipping along the Mississippi River.

[8] https://www.kochind.com/stewardship/governance, accessed October 31, 2022.

[9] https://codeofconduct.kochind.com/en-US/Front-cover, accessed October 31, 2022.

With the Project, which is described in more detail in Part 2, Section 2.3 of the LPDES Renewal Application, Koch is aiming to increase the KMe Facility design production rate from 4,950 to approximately 6,200 metric tons per day of refined methanol.

1.1.2.1 Methanol Chemical Information and Uses

As a naturally occurring and organic molecule, methanol is considered a building block of life. Methanol is a clear, colorless liquid that evaporates when exposed to air, is soluble in water, and is biodegradable.

Methanol occupies a critical position in the chemical industry as a highly versatile building block for the manufacture of countless products. The methanol produced at the KMe Facility is sent worldwide and used as a feedstock to make everyday products such as:

- High performance plastics
- Synthetic fabrics and fibers, including carpet
- Adhesives and solvents
- Paint
- Plywood
- Chemical agents in pharmaceuticals and agrichemicals
- Wastewater treatment plant additives

Methanol as a Fuel

In addition to the uses of methanol listed above, methanol is increasingly being considered a clean and sustainable fuel. Methanol is being employed around the globe in many innovative applications to meet growing energy demand. Methanol is used to fuel cars and trucks, marine vessels, boilers, cookstoves, and kilns, among a growing list of market applications. Its inherent clean-burning properties produce lower criteria pollutant emissions from land/marine vehicle combustion (while improving fuel efficiency) compared to many traditional fuels.[10]

Methanol's use as a fuel, including as a transportation fuel, is growing. Methanol is a versatile, affordable alternative to conventional transportation fuel due to its efficient and clean combustion, ease of distribution, and wide availability around the globe. Methanol is used in gasoline blends around the world, and as a diesel substitute for use in heavy-duty vehicles (HDVs).[11]

[10] https://www.methanol.org/applications/, accessed October 31, 2022.

[11] https://www.methanol.org/road/, accessed October 31, 2022.

Methanol-fueled vessels are on the water today, and more are on the way. There is a broad range of methanol-fueled vessels including pilot boats, tug/push boats, ferries, cruise ships, superyachts, crew transfer vessels, and multi-purpose ships. Also, more methanol-compatible engines are being developed by the major engine manufacturers and vessel designers. Methanol is a simple, safe liquid fuel, miscible in water, and is plentiful, available globally, and priced competitive to marine gas oil. Methanol benefits from safer handling characteristics compared to some other alternative fuels. It works with existing engine technologies as a drop-in or a dual fuel and requires only minor modifications to current bunkering infrastructure.[12]

Cooking with higher polluting fuels such as coal, biomass and waste has led to indoor air pollution being one of the leading health risk factors in developing countries. As a safe, clean burning fuel that is easy to handle (because it is a liquid at ambient temperature and pressure), methanol is suitable for regions that do not have access to gaseous fuels. Methanol's properties allow it to be used as a cooking fuel in industrial kitchens, households, refugee camps, and on ships. Most importantly, it is a cost-efficient fuel for households in developing countries that wish to transition to cleaner cooking solutions.[13]

Methanol as a Hydrogen Carrier
As the global economy prepares for an energy transition that will change the future of energy landscapes, new alternative fuels are coming to the fore. Hydrogen has been gaining traction as a clean alternative fuel as it only emits water upon combustion. However, there are a number of inherent challenges with the production, handling, and consumption of hydrogen with the state of technology today. It is still expensive to produce clean hydrogen from renewable sources. As a gas, hydrogen also requires capital-intensive infrastructure for its storage and transport.

Methanol is tomorrow's hydrogen, today. It is an extremely efficient hydrogen carrier. Being a liquid at ambient conditions, methanol can be handled, stored, and transported with ease by leveraging existing infrastructure that supports the global trade of methanol.[14] Methanol reformers are able to generate on-demand hydrogen from methanol at the point of use to avoid the complexity and high cost associated with the logistics of hydrogen as a fuel.

Fuel cells use hydrogen as a fuel to produce electricity that can power cars, trucks, buses, ships, cell phone towers, homes and businesses. Methanol is an excellent

[12] https://www.methanol.org/marine/, accessed October 31, 2022.

[13] https://www.methanol.org/heat/, accessed October 31, 2022.

[14] Shen Y, Zhan Y, Li S, Ning F, Du Y, Huang Y, He T, Zhou X. Hydrogen generation from methanol at near-room temperature. Chem Sci. 2017 Nov 1;8(11):7498-7504. doi: 10.1039/c7sc01778b. Epub 2017 Sep 20. PMID: 29163903, available at: https://www.ncbi.nlm.nih.gov/pmc/articles/PMC5676115/, accessed October 25, 2022.

hydrogen carrier fuel, packing more hydrogen in this simple alcohol molecule than can be found in hydrogen that has been compressed (350-700 bar) or liquified (-253°C).

Methanol can be "reformed" on-site at a fueling station to generate hydrogen for fuel cell powered vehicles,[15] or in stationary power units feeding fuel cells for mobile phone towers, construction sites, or ocean buoys. Methanol fuel cells can be fueled just as quickly as a gasoline or diesel vehicle, and can extend the range of a battery electric vehicle from 200 km to over 1,000 km.

1.1.3 Local Environmental and Social Commitments

Koch strives to minimize the environmental impact of its business activities and operations and maximize efficiencies in the methanol manufacturing process to reduce its environmental footprint to the maximum extent practicable. The sustainability of a business hinges on the responsible stewardship of resources and the environment. To the KMe Facility team, sustainability means keeping people safe, protecting the environment and constantly innovating to make products using fewer resources, while minimizing waste and reducing energy intensity.

1.1.3.1 Local Environmental Stewardship

Koch is committed to environmental stewardship and uses advanced technologies to produce methanol. Koch is committed to following all local, state and federal requirements and uses a variety of emissions controls.

The KMe Facility was designed to minimize methanol streams sent to its wastewater collection and treatment plant. Methanol-containing streams such as methanol tank scrubber water and off-spec methanol with high methanol content are routed to a methanol slop tank and reprocessed in the KMe Facility as useful product. Additionally, an extensive system of piping routes methanol-containing streams from maintenance and decommissioning activities to the closed methanol slop system for reprocessing. By designing the KMe Facility in this manner, fugitive drain emissions to air and effluent discharge impacts are minimized. For process wastewater streams that require treatment prior to discharge, the KMe Facility is equipped with a wastewater collection and treatment plant that is designed and operated to meet the stringent federal and state wastewater discharge requirements of the LPDES permit. This is achieved via equalization, pH adjustment, biological treatment, and clarification.

The KMe Facility utilizes and treats water from the Mississippi River as its source of process water; it does not use groundwater for process water. Additionally, only a

[15] https://www.offshore-energy.biz/methanol-to-hydrogen-generator-gets-approved-for-marine-use/, accessed October 25, 2022.

small amount of municipal water is utilized for potable water purposes, such as for safety shower and eye wash stations.

The facility has a stormwater pollution prevention plan (SWPPP) for the management and monitoring of stormwater, which incorporates Best Management Practices (BMP). The SWPPP also ensures that the potential adverse environmental effects associated with the generation of solid and/or hazardous wastes resulting from spills of oil or hazardous substances are minimized to the maximum extent possible. Section 2.3.2.2 provides further detail on the types of controls and BMPs implemented at the KMe Facility.

Air emissions controls include ultra-low and low nitrogen oxide (NOx) burners and selective catalytic reduction (SCR) systems for NOx control; catalytic oxidation for controlling carbon monoxide (CO) and volatile organic compounds (VOCs); modern cooling tower drift eliminators for particulate matter emissions minimization; a flare for controlling VOC emissions from process vents; a vapor control unit for controlling VOC emissions from truck and railcar loading operations; and internal floating roofs, the flare, or a vent gas scrubber to control VOC emissions from storage tanks. As part of the November 2022 Application and Addendum, whereby Koch is voluntarily undergoing PSD review, a Best Available Control Technology (BACT) analysis has been completed, which demonstrates that all air emissions sources at the KMe Facility are equipped with BACT for the control of air emissions (see Part 4 of the November 2022 Application, as well as Part 3 of the Addendum).

1.1.3.2 Local Social Commitments

The KMe Facility maintains the highest safety standards and ensures, through both facility design and operation, safe working conditions for employees. Safety performance is Koch's first order of business, with a goal of zero incidents. This, in turn, protects employees, partners, neighbors, and the community.

One of the many ways the KMe Facility demonstrates its commitment to the highest safety standards is by going above and beyond regulatory requirements for process safety and risk management by managing all process units consistent with EPA and Occupational Safety and Health Agency (OSHA) risk prevention program elements even though the regulations apply only to certain process units. This heightened commitment to process safety and risk management materially mitigates the potential for an unplanned release to the surrounding community. In the event there were to be a release or spill, trained facility personnel are available 24/7 to respond with portable monitors within the plant and along fence line areas as needed to determine if there are detectable levels of materials and to take other appropriate actions based on the monitor readings.

The KMe Facility also conducts joint drills with local emergency services and facility personnel. Last summer (August 18, 2022), Koch also had the local responders onsite to tour and learn important information about the facility. Affected employees are properly trained on the KMe Facility's Emergency Response Plan, which is reviewed annually and incorporated into site operations.

As mentioned previously, KII believes that strong communities are good for business. The company's core philosophy is anchored in a belief that for a business to survive and prosper long term, it must develop and use its capabilities to create sustainable value for both its customers and society. Working directly with local organizations is a key focus, and Koch is investing locally in the following four key areas.

Education: Supporting programs that give students and future workers the skills necessary for today's workplace. These programs include St. James Parish school initiatives, local scholarships, and Science, Technology, Engineering, Arts, and Math (STEAM) programs. For example, Koch has established two scholarships at River Parish Community College for students majoring in Industrial Trades, one for high school students and one for adult learners.[16]

Community Enrichment: Working with organizations that support community needs and allow for employee engagement through volunteering with various organizations. This includes financial and volunteer support for the Bonfire Festivals. An additional example, following Hurricane Ida in 2021, Koch and its employees engaged in hurricane relief efforts, which included supplying water, tarps, essential products, cooked meals and food items to community organizations.[17]

Entrepreneurship: Promoting entrepreneurial development while fostering economic and critical thinking skills, with a focus on initiatives that align with KII's Principled Based Management™ philosophy (as detailed in Section 3.1).

Environment: Assisting organizations that foster environmental responsibility and provide environmental learning opportunities (as detailed in Section 3.1).

Community outreach also includes engaging with local authorities and the community regarding ongoing facility operations and activities. The KMe Facility hosted a St. James Citizens Advisory Panel (CAP) meeting in April 2022 that was attended by industry representatives, local residents, elected officials and local emergency response personnel. Attendees were provided a tour of the facility. Additional community meetings were held in 2022 to discuss general community concerns, community views of industry, the KMe Facility, and the proposed Project

[16] https://www.rpcc.edu/news/1747275/rpcc-held-the-first-ever-rougarou-awards-breakfast, accessed October 31, 2022.

[17] https://www.csrwire.com/press_releases/744481-out-storm-koch-employees-resilient-spirit-helps-hurricane-stricken-neighbors, accessed October 31, 2022.

and other changes addressed in the November 2022 Application. Specifically, Koch arranged two focus group meetings that were held in St. James in July 2022 to solicit feedback about the St. James Parish community in general, including the most significant impactors on the community, the most prominent concerns about the future of the community, and the greatest opportunities for the St. James Parish community moving forward. During the second meeting, feedback regarding the KMe Facility and its operations was also solicited. Some key pieces of feedback received at these meetings included that the community highly values the ability to engage with industry directly on an ongoing basis, and that the community values the support Koch has provided to the community (e.g., support after Hurricane Ida, donating school resources, and providing scholarships). As a result of this feedback, Koch established an ongoing community advisory board (CAB) between the KMe Facility and the community so engagement can occur on a routine basis. Feedback from the 2022 focus group meetings was discussed at a reconvening of the focus group members on January 17, 2023. Although only a few of the original focus group members attended, the discussion regarding initiation of a CAB was very well received. The CAB subsequently met on March 21, 2023, for additional public engagement on the proposed Project and public input was received on matters of overall environmental stewardship as well as air emissions and water discharges from the KMe Facility.

Additionally, a Community Outreach Meeting was held on August 30, 2022, to provide local community members with information regarding the KMe Facility, including information regarding the proposed Project and Koch's plans to file air and wastewater discharge permit applications. Further detail of that meeting as well as the earlier meetings is included in Section 2.11.3.3, Meaningful Involvement with Community.

1.2 Description of Proposed Project and Water Permitting

Koch is requesting to authorize changes associated with the Project to address the increase in wastewater flowrates and loading at the final outfall that discharges to the Mississippi River due to increased production rates resulting from the Project. Increased production rates will result in additional process-generated wastewaters, increased blowdown waters from cooling and steam systems, and increased demineralized regeneration wastewater. Specifically, the Project will increase allowable discharge flows from Outfall 301 by approximately 25% to accommodate an increase in the design production rate. A 25% increase in allowable discharge flows from Outfall 201 is also reflected due to the increased discharge from the cooling tower and boiler blowdown that will result from the Project. Koch also requests to authorize reconciliations to reflect as-built operations at the KMe Facility, as detailed in Part 7 of the Supplemental Report.

1.3 Description of Proposed Project and Air Permitting

Koch is seeking both to revise certain existing air permit emission limits and authorize the construction of the Project as described in the November 2022 Application and Addendum. A detailed description of the proposed Project is included in Part 2, Section 2.2 of the November 2022 Application. Koch has applied for both a PSD permit and a significant modification to Title V Permit No. 2560-00295 as further discussed below.

1.3.1 Title V Major Source for Criteria Pollutants and HAP/LTAP

The KMe Facility is currently considered a major source of hazardous air pollutants (HAP) because potential HAP emissions exceed the applicable major source threshold of 10 tons per year (tpy) for a single HAP (including methanol and n-hexane) and 25 tpy for all combined HAP. The facility is also a major source of Louisiana Toxic Air Pollutants (LTAP) pursuant to the LAC 33:III. Chapter 51 – Comprehensive Toxic Air Pollutant Emission Control Program. As a result of the emissions increases proposed with the November 2022 Application and Addendum, facility-wide potential to emit (PTE) for NOx, CO, and VOC will exceed the major source threshold for criteria pollutants (100 tpy) under the Title V program.

1.3.2 PSD Review and Technical Analyses

The KMe Facility is located in St. James Parish, which is designated by the EPA as "attainment" or "unclassifiable" for all NAAQS. Therefore, LDEQ's Prevention of Significant Deterioration (PSD) regulations (LAC 33:III.509) potentially apply for all PSD-regulated pollutants. Part 3, Section 3.1 of the November 2022 Application includes a discussion of the PSD regulations. An updated PSD applicability review for the KMe Facility was included in Section 2.2.1 of the Addendum. As further explained in Section 3.1 of the November 2022 Application and Section 2.2.1 of the Addendum, Koch has voluntarily and conservatively elected to go through PSD review as part of this permitting action.

When PSD applies, LAC 33:III.509 requires the utilization of BACT to minimize the emissions of regulated PSD pollutants emitted in significant amounts. Therefore, because Koch has voluntarily elected to go through PSD review, a BACT analysis was included in Part 4 of the November 2022 Application and Part 3 of the Addendum. The analysis covers all existing emissions units (no new emissions units are being proposed) with the potential to emit NOx, CO, PM, PM_{10}, $PM_{2.5}$, VOC, and GHG. A BACT summary is also included in Section 2.3.3.3 of this EAS.

Similarly, a PSD Air Quality Impact Assessment (AQIA) was also conducted. As part of that assessment, facility-wide NOx, CO, VOC, $PM_{2.5}$, and PM_{10} emissions have been evaluated as the "net emissions increase" and modeled according to the protocol approved by LDEQ. The AQIA along with the approved protocol were contained in Appendix E of the November 2022 Application and a Revised AQIA was submitted February 8, 2023 (February 2023 Revised AQIA). A summary of the modeling results, which demonstrate that facility-wide emissions at the rates proposed will not cause or contribute to an exceedance of any air quality standard, is included in Section 2.3.3.2 of this EAS.

2. ENVIRONMENTAL IMPACTS

Have the potential and real adverse environmental effects of the proposed project been avoided to the maximum extent possible?

Yes. The KMe Facility was initially planned and designed such that the potential and real adverse environmental effects of the construction activities and operations were avoided to the maximum extent possible. As noted in Section 1, an EAS was completed for the initial construction of this facility and accompanied the initial air permit application, and a follow-up EAS was included with the LPDES permit application. Both were reviewed and considered by LDEQ. The proposed Project, which is the focus of this EAS, is being planned and designed consistent with the same desired outcome as initial construction and operation of the KMe Facility. Specifically, construction and operation of the Project are planned such that they will not cause or contribute to an exceedance of any ambient water quality standard; further impairment to receiving water bodies; an exceedance of any ambient air standard for any criteria pollutant or HAP/LTAP; material change in waste management; excess noise, light, or odors; significant degradation of wetlands; or adverse impacts that would disproportionately affect environmental justice (EJ) communities. Key points that demonstrate the real and potential adverse environmental impacts of the proposed Project have been and will be avoided to the greatest extent feasible are outlined below.

2.1 Environmental Impacts Related to Project Site Location

The proposed Project will be performed at the existing KMe Facility in St. James Parish. The facility is located along the West Bank of the Mississippi River, about 30 miles south of Baton Rouge. The KMe Facility started up and was fully operational in the third quarter of 2021. As discussed in Section 5, the site selection for the location of the KMe Facility considered avoidance of environmental impacts including use of existing infrastructure where practical. Such infrastructure at the current site includes access to the Mississippi River for transportation and as a water source, proximity to existing highways and railroads, established electrical systems, and proximity to existing pipelines for feedstock natural gas and ethane. Locating in areas of existing infrastructure significantly minimizes environmental impacts.

The proposed Project will primarily increase the design production rate at the existing Facility, which is located in an area currently zoned as industrial, and will utilize the existing manufacturing facility as well as the existing infrastructure. Because the proposed Project is a modification to the existing site, the environmental impacts related to the Project site location will be minimal. Existing roads will be used for access to the extent possible. Furthermore, the Project will not adversely affect wetlands or the geology, topography, soils, vegetation, or food production in the vicinity. Releases of pollutants to soils from the KMe Facility are unlikely due to the use of paved process areas and compliance with required spill containment and control regulations.

A review of the changes in effluent resulting from the proposed Project will be conducted by LDEQ during the LPDES permitting process. Effluent discharges are and will continue to be subject to stringent technology-based LPDES permit limits and will not cause any exceedance of any ambient water quality criteria. Such ambient water quality criteria have been established by EPA and LDEQ to be protective of human health, aquatic life, and to ensure receiving waters meet designated uses. The air emissions increases resulting from the Project will meet all applicable technology standards. Importantly, the air quality analysis demonstrates that the emissions increases associated with the proposed Project will not cause or contribute to any exceedance of a federal National Ambient Air Quality Standard (NAAQS) or Louisiana Ambient Air Standard (LAAS). These ambient air standards have been established by EPA and LDEQ to be protective of human health with a margin of safety.

2.2 Environmental Impacts During Construction Phase

As with the initial KMe Facility, construction of the proposed Project will incorporate best management practices (BMPs), engineering practices, and regulatory requirements to ensure that potential adverse environmental effects occurring as the result of construction activities are avoided to the maximum extent possible. The following BMPs, engineering practices, and regulatory requirements will be used and followed, as applicable, for the proposed Project.

- Safe work permits will be used to ensure work sites are returned to a clean and safe condition when work is completed.
- During the construction phase, air emissions will primarily consist of exhaust emissions from equipment and delivery vehicles. KMe Facility inspectors and construction supervisors will notify equipment operators and contractors if any equipment is observed to be performing poorly (e.g., as evidenced by dark exhaust emissions), and will require that the equipment be promptly repaired or replaced.
- Contractors will be required to develop and implement a dust management plan to minimize dust during construction. KMe Facility construction inspectors and contract construction supervisors will make observations regarding the contractors’ compliance with the plan. The facility will require that roads and high traffic areas be wetted as necessary to minimize the generation of dust due to vehicle traffic.
- General trash and debris generated during construction will be containerized and disposed of offsite in accordance with applicable regulatory requirements. Used oil and lubricants from equipment maintenance will be

stored in closed containers and managed in accordance with all applicable rules and will be sent to used oil recycling contractors.

- Solid and/or hazardous waste generated during construction may include waste such as construction material debris, used solvents, paint wastes, used lubricants and oils, and general trash. Any waste generated from construction will be stored temporarily onsite in accordance with all applicable federal and state regulations prior to transport off-site to an authorized treatment, storage, recycling, or disposal facility.
- Construction related activities will be performed in accordance with applicable state requirements of LAC 33:IX.Chapter 9 for Spill Prevention and Control (SPC) as well as federal Spill Prevention, Control, and Countermeasure (SPCC) requirements of 40 CFR Part 112. In tandem, these regulations cover all liquids and solids listed under LAC 33:I.3931 as well as oils that could be immediately transported to waters of the state in event of a release. Such rules apply to any container storing 55 gallons or more of subject fluids that may be present on site either permanently or temporarily. The facility's existing SPCC/SPC Plan will be amended to include any additional subject containers brought on site as a result of the Project.
- Given the current Project scope, the impact to soil is minimal and is not anticipated to exceed acreage thresholds for requiring coverage under a construction stormwater general permit; however, a permit will be pursued if scope changes such that one is required. Regardless, the facility maintains an operational Stormwater Pollution Prevention Plan (SWPPP) which incorporates BMPs to protect surface water bodies that traverse the site or receive stormwater discharges from the site. The SWPPP is a "living document" that will be updated as construction progresses and for operation of the facility once the Project is completed, to ensure appropriate and effective management practices are applied as site conditions change.

2.3 Environmental Impacts During Operations

2.3.1 Water Usage

The KMe Facility obtains the water it uses for process water, utility water, and fire water directly from the Mississippi River through an intake structure. The Project will result in an increase in water demand of up to 25%, but overall demand post Project will remain within the currently authorized limit of 10.8 MMgal/day (actual use has averaged approximately 4MM gal/day with peak withdrawal of 5.6 MMgal/day). The KMe Facility potable water is supplied from a public utility. From an environmental impact standpoint, compared to potential concerns related to groundwater aquifer resource availability, there are no identifiable concerns with the industrial use of Mississippi River water.

Section 316(b) of the Clean Water Act requires EPA to issue regulations governing the design and operation of water intake structures (the pipe and screens in the river connected to water supply pumps), in order to minimize potential adverse impacts to aquatic life. As part of the initial installation and commissioning of the site, Koch was required to perform testing on the facility's water intake structure pursuant to Section 316(b) to ensure that aquatic life would not be adversely impacted by the water intake structure. This initial testing was completed at maximum expected water intake flowrates and the results showed no adverse effects. To ensure no adverse effects during facility operation, an enforceable limit on the intake velocity across the intake screens was established. With this Project there will be an incremental increase of roughly 1 MMgal/day in water demand to supply additional cooling water and boiler feed water makeup (required to meet the increased steam demand). However, the increase in water demand will not require any physical modifications to the intake structure or installation of any additional pumps, and the existing intake velocity limit will not be exceeded. Therefore, no additional testing is expected to be required since the KMe Facility will continue to meet the existing intake velocity limit.

2.3.2 Wastewater and Stormwater Discharges

2.3.2.1 Wastewater

In Louisiana, the National Pollutant Discharge Elimination System (NPDES) program has been delegated to LDEQ, with federal oversight, and is called the LPDES permitting program. The KMe Facility operates under LPDES Permit Number LA0127367.

The facility discharges into two waterbodies, the Mississippi River (subsegment 070301) and the St. James Canal (subsegment 020101). The Mississippi River segment receiving the discharges is not impaired (i.e., it does not exceed any ambient water quality standard). Prior to discharge, the process wastewater streams are sent to a wastewater treatment facility, which includes equalization, pH adjustment, biological treatment, and clarification and is designed and operated to meet the stringent federal and state wastewater discharge requirements of the LPDES permit. The treated discharges to the Mississippi River are also subject to LPDES Technology Based Effluent Limits (TBELs) commensurate with the nature of the facility's operations, specifically the requirements under 40 CFR Part 414, Subparts F & I for the Organic Chemicals, Plastics and Synthetic Fibers production category. The treated process wastewater is combined with other wastewater streams, including boiler and cooling tower blowdown, demineralized regeneration wastewater, and return waters from the feed water treatment plant clarifier systems prior to discharge to the Mississippi River.

Non-process area stormwater, hydrostatic test water and other miscellaneous waters are discharged to the St. James Canal in accordance with EPA and Louisiana regulations, guidance and/or pertinent general permits. The St. James Canal is impaired for nitrates, phosphorous, fecal coliform, and dissolved oxygen, but the LDEQ has determined that the wastewater discharges to the canal from the KMe Facility are protective of human health, aquatic life, the environment and designated uses of the St. James Canal. The proposed Project will not impact discharges to the St. James Canal.

The Project will result in an increase in production rates, which will result in an increase in the volume of process-generated wastewaters sent to the wastewater treatment facility as well as an increase in the volume of blowdown waters from cooling and steam systems, demineralized regeneration wastewater, and return waters from the feed water treatment plant clarifier systems. The increase in volume of wastewater flow will result in a commensurate increase in volume of wastewater discharged to the Mississippi River. While a change in concentration of pollutants in the wastewater discharge is not anticipated, there will be an associated increase in pollutant loading (lb/day) from the final outfall that discharges to the Mississippi River due to the increase in discharge volume. The LPDES Renewal Application accounts for these changes and Koch will ensure that the facility's WWTP is designed and operated to comply with all permit conditions. As part of this permitting process, Koch is also requesting changes to the LPDES permit to better reflect the as-built operation of the KMe Facility. These changes include narrative updates, updates to represented streams routed to each permitted outfall, updates to the layout and location of permitted stormwater outfalls, and other minor changes.

The site will continue to perform annual Whole Effluent Toxicity (WET) testing on the final outfall to the Mississippi River. This testing is in place to ensure that wastewater effluent discharged into the Mississippi River does not negatively impact aquatic ecosystems.

2.3.2.2 Stormwater Pollution Prevention Plan (SWPPP) Including Best Management Practices (BMPs)

Koch recognizes how critical the water quality of the nearby St. James Canal is to area residents using the waterway in a variety of ways. As a result, Koch is committed to responsibly managing its permitted discharge of stormwater to the St. James Canal. Stormwater associated with industrial activity at the site is managed and monitored in accordance with a Stormwater Pollution Prevention Plan (SWPPP) as required under the permit LA0127367. The SWPPP incorporates Best Management Practices (BMPs) to protect nearby surface water bodies that traverse the site or receive stormwater discharges from the site. BMPs can include both structural and non-structural measures. The SWPPP is a "living document" and is updated routinely to ensure appropriate and effective management practices are applied as site conditions change.

The SWPPP also ensures that the potential adverse environmental effects associated with the generation of solid and/or hazardous wastes resulting from spills of oil or hazardous substances are minimized to the maximum extent possible. Some areas of the facility have very specific controls/BMPs in place due to the nature of the activity performed and to protect the quality of the stormwater leaving the site. As listed in the SWPPP, these specific BMPs and/or good housekeeping measures include, but are not limited to:

- Containment dikes provided for chemical storage tanks, with visual inspections prior to release of accumulated stormwater;
- Minimization of exposed bare soils;
- Wastes and chemicals are stored in covered containers or designated storage areas under roofing to prevent contact with stormwater;
- Immediate cleanup of spills prior to next storm event; and,
- Maintenance operations conducted under roof where practicable, and maintenance related fluids stored indoors or within covered containers.

If necessary, the KMe Facility will obtain coverage under an LPDES General stormwater permit for construction activities associated with the proposed Project. Regardless, Koch will update its existing SWPPP as necessary to ensure appropriate and effective best management practices are applied and implemented to address activities during construction as well as to address post-project changes related to operations.

To minimize the quantity of stormwater leaving the KMe Facility, the site's original footprint includes permeable surfaces in areas of low contamination potential. While impermeable surfaces are utilized directly in the process block areas to provide proper containment, the outlying areas are majority gravel and/or grass, thus reducing the runoff coefficient and thus the volume of runoff that leaves the site. The proposed Project will have minimal impact to impermeable surfaces and therefore minimal impact to the quantity of stormwater runoff.

The containment areas in the process block have a higher potential for contamination and therefore the site utilizes a "first-flush" protocol to protect against potentially contaminated stormwater being sent directly to offsite waters. This protocol requires stormwater that is generated within the process block area from the first inch of rainfall to be collected in a separate, segregated sewer system (the Potentially Contaminated Sewer System, or PCSS) and to be routed to the onsite WWTP for treatment prior to discharge to the Mississippi River. After the first inch of rainfall, to prevent overwhelming the wastewater treatment plant, the PCSS is diverted to a lined pond that can discharge to the Mississippi River (this stream is not discharged to the St. James Canal). Note that after the first inch of rainfall, the potential for contamination is low and, therefore, treatment at the WWTP is not necessary. Stormwater management practices are further detailed in Part 6 of the Supplemental Report.

2.3.2.3 Spill Prevention, Control, and Countermeasure (SPCC) Plan

The KMe Facility operates under an SPCC/SPC Plan in accordance with requirements of 40 CFR 112 and LAC 33:IX.Chapter 9 to aid in the prevention of spills of subject fluids at the facility. This includes routine inspection of containers of stored oils and chemicals to ensure that all are in working order with no signs of maintenance needs or imminent failure. The facility's existing SPCC/SPC Plan will be amended to include any Project related equipment, as necessary.

2.3.3 Air Quality

Potential adverse environmental effects from air emissions increases resulting from the Project will be avoided, minimized, or mitigated to the maximum extent practicable. Although this EAS is in support of the proposed Project, Koch has voluntarily and conservatively evaluated total facility-wide emissions (not just the proposed emissions increases) by conducting an air quality impact assessment (AQIA) pursuant to PSD regulations, which are designed to protect public health and welfare and ensure that economic growth occurs in a manner consistent with the preservation of existing clean air resources (i.e., without allowing significant deterioration of existing good air quality). That AQIA demonstrates that total facility-wide emissions will not cause or contribute to an exceedance of any National Ambient Air Quality Standards (NAAQS) and thus will not have a significant impact on air quality.

As part of the voluntary and conservative PSD review, Koch also performed a Best Available Control Technology (BACT) evaluation for all emission sources authorized by the permit. In addition to meeting BACT, the KMe Facility emission sources will meet all applicable New Source Performance Standards (NSPS) and Maximum Achievable Control Technology (MACT) Standards, and all state emissions limitations and work practice requirements.

2.3.3.1 Local Ambient Air Monitors

LDEQ operates a network of ambient monitoring stations approved by EPA that continually monitor and record ambient concentrations of certain air pollutants. For the criteria pollutants evaluated as part of the AQIA (see Appendix E of the November 2022 Application and February 2023 Revised AQIA), the following are the closest monitoring stations to the KMe Facility that monitor each pollutant.[18]

[18] LDEQ's Air Assessment and Planning Division won a competitive EPA air-monitoring grant announced in November 2022 that will provide funding to add two temporarily located community (TLC) monitors, including one in St. James Parish.

Table D-1: LDEQ Monitoring Stations Closest to the KMe Facility	
Monitoring Station	**Pollutants Monitored**
Geismar	$PM_{2.5}$
Dutchtown	NOx
Convent	Ozone
Capitol	CO, PM_{10}

Monitored concentrations of criteria pollutants at these stations show that the design value for each pollutant is less than the respective NAAQS. The monitored design values in the form of the NAAQS[19] over the 3-year period 2019-2021[20] for each relevant pollutant and averaging period are shown below and compared to the NAAQS.

Table D-2: LDEQ Monitoring Station Monitored Values Compared to the NAAQS				
Pollutant	**Averaging Period**	**Units**	**Monitored Design Value**	**NAAQS**
CO	1-Hour	µg/m³	1,610	40,000
	8-Hour	µg/m³	1,266	10,000
NO_2	1-Hour	µg/m³	56.4	188
	Annual	µg/m³	11.5	100
Ozone	8-Hour	µg/m³	116	137
$PM_{2.5}$	24-Hour	µg/m³	17.6	35
	Annual	µg/m³	7.9	12.0
PM_{10}	24-Hour	µg/m³	53	150

2.3.3.2 Air Quality Impact Assessment (AQIA)

The AQIA presented in Appendix E of the November 2022 Application, and revised in February 2023, evaluated whether emissions from the KMe Facility would cause

(https://deq.louisiana.gov/assets/docs/DiscoverDEQ/2022/DiscoverDEQNewsletter-Issue131-December2022.pdf, accessed Feb. 14, 2023.)

[19] The appropriate "rank" of data chosen for comparison to the NAAQS depends on the pollutant and averaging period. For example, for the 1-hour CO data, the appropriate choice of data for comparison to the NAAQS is the second-highest observation recorded over the year. This is what is referred to in air quality analyses as the "form of the NAAQS".

[20] Evaluation of ambient air data versus the NAAQS requires an average of the most recent three years of the appropriate rank of data. This 3-year average has been calculated and listed in each case.

or contribute to an exceedance of the applicable National Ambient Air Quality Standards (NAAQS) and PSD increments. The NAAQS include both primary standards, which are designed to protect the health of sensitive populations such as asthmatics, children and the elderly, as well as secondary standards, which are designed to protect the environment. The NAAQS is a maximum allowable concentration "ceiling." A PSD increment, on the other hand, is the maximum allowable increase in concentration that is allowed to occur above a baseline concentration for a pollutant. The baseline concentration is defined for each pollutant and, in general, is the ambient concentration existing at the time that the first complete PSD permit application affecting the area is submitted. LTAP emissions increases, specifically ammonia and methanol emissions increases from the Project, were also evaluated in the AQIA.

St. James Parish is designated as “attainment” or “unclassifiable” for all NAAQS, meaning the air quality meets these standards. PSD review was completed for the following pollutants emitted from the KMe Facility: NOx, CO, $PM/PM_{10}/PM_{2.5}$, VOC, and GHG.

Rather than evaluate just the Project emissions increases, Koch has conservatively evaluated total facility emissions of each criteria pollutant where such emissions exceed the PSD significance threshold. The AQIA is performed primarily through conducting computer modeling of the dispersion of air emissions from the facility. PSD Significance Modeling is the first step in conducting the PSD AQIA. The results of the significance modeling determine whether the maximum off-site impact resulting from the KMe Facility exceeds the PSD significant impact level (SIL) for any NAAQS. For each NAAQS pollutant and averaging period for which the PSD significance modeling results exceed the SIL, full NAAQS modeling and PSD Increment modeling (where applicable) are performed. These more refined analyses require the development of an inventory of offsite emissions sources (i.e., other facilities) that affect the air quality in the area included in the modeling. The area of the offsite inventory is determined during the significance modeling and inventory data is provided by LDEQ. The significant impact analysis modeling results are summarized in Table D-3.

Table D-3: Significant Impact Analysis – Modeling Results

Pollutant	Averaging Period	Maximum Modeled Concentration[a,b] (μg/m³)	SIL (μg/m³)	> SIL?
CO	1-hour	1453.56	2,000	No
	8-hour	441.48	500	No
NO_2	Annual	0.40[c]	1	No

Table D-3: Significant Impact Analysis – Modeling Results				
Pollutant	**Averaging Period**	**Maximum Modeled Concentration[a,b] (μg/m³)**	**SIL (μg/m³)**	**> SIL?**
	1-hour	11.86[c]	7.5	Yes
PM_{10}	Annual	0.16	1	No
	24-hour	1.32	5	No
$PM_{2.5}$[d]	Annual	0.11	0.2	No
	24-hour	1.01	1.2	No

Notes:

a. For the annual averaging period, modeled concentrations represent the maximum annual average concentration over five years.
b. For the short-term averaging periods, modeled concentrations represent the maximum highest first high (H1H) value over five years, except for the 1-hour NO_2 and 24-hour $PM_{2.5}$, which represent the highest five-year average.
c. Tier 3 (OLM) was used for 1-hour modeling. Tier 1 (full conversion) was used for annual modeling.
d. The modeled concentrations for $PM_{2.5}$ include secondary concentrations calculated using the MERP methodology as presented in Section 2.3 of the AQIA.

The only pollutant and averaging period for which modeling indicated that the SIL was exceeded is 1-hour NO_2. Thus, refined modeling for 1-hour NO_2 was required. (There is no PSD Increment associated with 1-hour NO_2; therefore, PSD increment analysis is not required.) Refined modeling including emissions from nearby sources was performed to assess impacts for the 1-hour NO_2 NAAQS; the results of the NAAQS analysis are shown in the following table.

Table D-4: Full-Impact NAAQS Analysis Results						
Pollutant	**Averaging Period**	**Modeled Concentra-tion (μg/m³)**	**Background Concentration (μg/m³)[a]**	**Modeled + Background (μg/m³)**	**NAAQS (μg/m³)**	**> NAAQS?**
NO_2	1-hour	117.6	56.4	174.0	188	NO

Notes:

a. The background concentration for 1-hour NO_2 was based on the 2019-2021 design values for the Dutchtown Station (AQS # 22-005-0004).

In summary, the PSD modeling demonstrates that potential impacts from the KMe facility-wide emissions are below the SIL except for 1-hr NO_2. For 1-hr NO_2, the refined modeling results do not exceed the NAAQS; therefore, the AQIA demonstrates that emissions from the facility will not cause or contribute to exceedance of any NAAQS or PSD increment and thus will not result in significant deterioration of ambient air quality.

The Louisiana Ambient Air Standards (LAAS) for ammonia and methanol were also considered as part of the AQIA. Because prior permitting actions for the KMe Facility have included AQIAs that evaluated impacts from facility LTAP emissions, the AQIA has evaluated LTAP emissions increases proposed in the November 2022 Application and the Addendum (note, however, that portions of the EJ analysis included in Section 2.11 of this EAS are based on total LTAP emissions from the facility). Per LDEQ LTAP modeling guidance, ambient modeling is assessed in steps. In Step 1, emissions from the facility alone are modeled and if the resulting modeled concentration is $\leq$ 7.5% of the LAAS, no further modeling is required. If Step 1 modeling shows that the modeled concentration is > 7.5%, then additional modeling is required. The LTAP analysis modeling results are summarized in Table D-5. Modeled concentrations were below 7.5% of the LAAS.

Table D-5: LTAP Analysis – Modeling Results

Pollutant	Averaging Period	Maximum Modeled Concentration (µg/m^3)	LAAS (µg/m^3)	Modeled Concentration as Percent of LAAS	>7.5%?
Ammonia	8-hour	44.04	640	6.9%	No
Methanol	8-hour	72.02	6,240	1.2%	No

Additional analyses were conducted in accordance with the PSD requirements of LAC 33:III.509.O and P. These analyses evaluated the potential air quality impacts projected for the area as a result of general commercial, residential, industrial and other growth associated with the KMe Facility as well as the potential for impairment to soils, vegetation, and visibility as a result of the KMe Facility and general commercial, residential, industrial and other growth associated with the facility. An analysis of the potential for impacts on nearby Class I areas was also performed. Per the growth analysis, the Project is not expected to result in significant air quality impacts as a result of associated general commercial, residential, industrial and other growth because such growth is expected to be minimal. The analysis of soil and vegetation impacts demonstrates that the KMe Facility emissions will not result in harmful effects to soils and vegetation because emissions from the facility will not cause or contribute to an exceedance of any secondary NAAQS.[21]

[21] United States Environmental Protection Agency. New Source Review Workshop Manual: Prevention of Significant Deterioration and Nonattainment Area Permitting. Web. 1990.

A Level 1 visibility screening was conducted that showed that the level of proposed facility-wide emissions will not yield significant impairment to local visibility. Finally, the potential for Class I area impacts resulting from the KMe Facility was considered. The review determined that neither a notification to the Federal Land Manager nor an evaluation of Class I Air Quality Related Values is required. A detailed Air Quality Impact Assessment Report was included in Appendix E to the November 2022 Application and revised in February 2023.

2.3.3.3 BACT Summary

The KMe Facility will minimize any potential impact from air emissions associated with not just the proposed Project but also with operation of the overall facility by voluntarily applying BACT to all emission units authorized by the permit. The detailed BACT analysis is presented in Part 4 of the November 2022 Application and Part 3 of the Addendum. Applying BACT means that a facility is controlling emissions to the extent demonstrated to be technically feasible and economically reasonable, without causing adverse energy and environmental impacts.

Under the PSD program as voluntarily and conservatively applied to this permitting action, Koch has proposed BACT for each emissions unit at the facility to minimize the emissions of each PSD-regulated pollutant for which the facility potential to emit will be greater than or equal to the pollutant-specific PSD "significance" level following the proposed Project. BACT may be an add-on control device or a design, equipment, work practice or operational standard. The BACT determination process for each emissions unit involves identifying all available and technically feasible emission control options for each pollutant and, selecting as BACT, the option that will achieve the maximum degree of reduction after consideration of cost and any associated economic, energy, or environmental impacts that would result from application of the control option. A technically feasible technology that is more effective at reducing emissions can be rejected as BACT in favor of a less effective control option if it is determined that the more effective technology is not cost effective or would cause economic, energy or environmental impacts that render it undesirable. The permit applicant is responsible for conducting and documenting the BACT analysis and presenting the proposed BACT selection for each emissions unit-pollutant combination to LDEQ in the permit application. Evaluations of capital cost, operating costs, and any energy, environmental or economic impacts must be included if any top-ranked technically feasible control options are rejected as BACT. The minimum BACT standard that must be used ("floor") is either an applicable Maximum Achievable Control Technology (MACT) Standard or a New Source Performance Standard (NSPS). MACT and NSPS standards are federal regulations

https://www.epa.gov/sites/production/files/2015-07/documents/1990wman.pdf, accessed October 31, 2022.

intended to limit emissions of hazardous and criteria air pollutants, respectively, from facilities in various manufacturing categories or defined emission units.

The following summarizes the proposed controls and work practice standards for the KMe Facility emission sources to meet BACT (see Part 4 of the November 2022 Application and Part 3 of the Addendum for the detailed BACT analysis):

- The steam methane reformer (SMR) and boiler (BLR) are equipped with selective catalytic reduction (SCR), which is the top-ranked control option for NOx; they are also equipped with an oxidation catalyst, which is the top-ranked control option for both CO and VOC. Good combustion practices are used to minimize PM, PM_{10} and $PM_{2.5}$ emissions, and energy efficiency measures, including good combustion practices, and clean burning fuels, are used to minimize GHG emissions. Also, the Lurgi MegaMethanol® process is inherently carbon efficient relative to other methanol technologies, as described in the BACT analysis.
- The flare, used as a control device for various process vents, will be operated in accordance with 40 CFR 60.18 (NSPS) and 40 CFR 63.11 (MACT) for control of VOC emissions.
- Truck and rail loading vapors are routed to a vapor control unit (VCU) for destruction of VOC emissions; use of natural gas as fuel, energy efficiency, and good operating practices minimize combustion emissions, including GHGs, from the VCU.
- The wastewater treatment plant (WWTP) operates in compliance with the stringent MACT requirements of 40 CFR Part 63, Subpart G.
- The fugitive components are managed with a leak detection and repair (LDAR) program in accordance with NSPS 40 CFR 60, Subpart VVa and MACT 40 CFR 63, Subpart H to reduce VOC emissions.
- Fugitive components containing greater than 5% methane or carbon monoxide will be managed with an LDAR program to reduce GHG and CO emissions.
- Emergency engines, generators and fire water pumps comply with applicable NSPS and MACT standards, including work practices.
- The cooling tower uses high-efficiency drift eliminators for control of particulate matter emissions. The cooling tower is designed as direct-contact and monitoring and repair of leaks is performed in accordance with the MACT standards of 40 CFR 63, Subpart F to minimize VOC, CO, and GHG emissions from HON-regulated heat exchange systems.
- The methanol tanks and slop vessel are equipped with vapor collection and are routed to a scrubber and flare, respectively, to minimize VOC emissions. As noted, the flare will comply with applicable NSPS and MACT standards.

- Terminal tanks are equipped with internal floating roofs to control VOC emissions.
- The gasoline tank is equipped with submerged fill pipe to control VOC emissions.

2.3.4 Greenhouse Gas Emissions

The Project consists of a number of activities with the collective primary goal of increasing utilization of the existing KMe Facility assets and achieving a 25% increase of the KMe Facility design production rate. Accordingly, the Project will leverage the existing energy and carbon efficiency that has been integrated into the KMe Facility's Combined Reforming process design as described below.

Energy and carbon efficiency have been integrated into the Combined Reforming (SMR+ATR) process design. Specifically, with Combined Reforming, adding an AutoThermal Reactor (ATR) downstream of steam methane reforming (SMR) optimizes the carbon monoxide to hydrogen stoichiometry/ratio (key components to produce methanol), and thus carbon efficiency. As a result, the Combined Reforming process design is inherently carbon efficient converting nearly 80% of the carbon entering the facility into methanol (final product).[22] This contrasts significantly with other industrial processes that leverage SMR, such as on purpose Hydrogen (H_2) plants which typically convert all carbon from feedstocks/fuels to carbon dioxide emissions (process is selective for H_2 product). Natural gas-based methanol production via Combined Reforming is estimated to emit 10-20% of the GHG emitted by coal-based methanol produced internationally and is also more carbon efficient than more traditional SMR based natural gas to methanol production common in U.S. and other global markets. According to the International Panel for Climate Change (IPCC) Guidance for National Inventories summarized in IPCC's Emission Factor Database (EFDB), the carbon emissions intensity of the Lurgi MegaMethanol® process utilized at the KMe Facility is roughly half that of conventional natural gas-based SMR methanol production on a MT CO_2/MT of methanol basis.[23]

In its September 2022 Net Zero Tracking Report on Chemicals[24], the International Energy Agency (IEA) highlights the importance of private and public sector investments in energy efficiency and conversion from coal- to natural gas-based chemical processing, stating:

> "*The coal-based chemical industry, particularly prevalent in China, poses a significant environmental challenge, as emission intensities are considerably*

[22] "Table 3: Overall Carbon Balance of the Plant": Demonstrating Large Scale Industrial CCS through CCU – A Case Study for Methanol Production – ScienceDirect.

[23] https://www.ipcc-nggip.iges.or.jp/EFDB/find_ef.php, accessed October 31, 2022.

[24] https://www.iea.org/reports/chemicals, accessed October 31, 2022.

higher than in natural gas-based production. Methanol can be produced far more affordably from coal in China, which has in turn facilitated the large-scale (and rapidly growing) route of producing plastics from coal…. Increased energy efficiency – achieved both through incremental improvements to existing methods and step changes resulting from switching to fundamentally more efficient methods (e.g. from coal- to natural gas-based processing) is also important in the Net Zero Scenario."

Koch's continued investment in the KME Facility's Combined Reforming process is consistent with IEA's stated step change goal noted above as it not only reflects investment in low carbon feedstock-based methanol production, but also investment in the Combined Reforming process design, which is fundamentally more carbon efficient than other more traditional natural gas-based methanol production that relies solely on SMR.

The fraction of carbon that is not converted into product is emitted as carbon dioxide at low concentrations in the post combustion exhaust stream. Greenhouse gas emissions are regulated under PSD regulations, thus utilizing carbon capture and sequestration (CCS) to further reduce GHG emissions was evaluated as part of the BACT analysis (see Part 4 of the November 2022 Application).

For the KMe Facility, a CCS process would include equipment to capture the carbon dioxide from the dilute combustion stream. This can be accomplished by running the combustion gases through a tower (vessel) where they come into contact with an amine solution that preferentially absorbs the carbon dioxide while the rest of the gases are emitted. Then a separate process would use heat to remove the relatively pure carbon dioxide as a concentrated stream, essentially regenerating the amine to be used again to capture CO_2 in a recycle loop. The carbon dioxide stream would then be pressurized and transported to a location where it could be injected into a geologic formation where it would be sequestered, unless sequestration is available on the facility property. Each of these processes (capture, concentration, compression, transport, and sequestration) requires significant capital equipment/investment and energy to pump fluids, compress them, heat them (to remove CO_2 from the amine), and ultimately sequester them in an underground cavern. Additionally, as noted in more detail in the BACT analysis presented in Part 4 of the November 2022 Application, this process becomes a significant GHG producer as well and, therefore, reduces overall carbon capture efficiency unless the system is sized to not only capture emissions from the facility, but also from the additional boiler emissions associated with the steam generation needed to regenerate the amine, which would add further significant cost.

To further evaluate the technical feasibility and cost effectiveness of CCS technology specifically for the KMe Facility, Koch contracted two outside engineering firms, one to conduct preliminary engineering to estimate the capital expenditures, annual utilities and operating expenditures, and develop equipment lists for the capture and compression components of CCS (the Capture and Compress Study), and the other to evaluate the geological fit for sequestration below the site property (the Sequestration Study). The Capture and Compress Study determined that the dilute post combustion streams could likely be captured via amine but would require approximately 5 million MMBtu of natural gas firing annually for the generation of steam to regenerate the amine resulting in additional CO_2 and traditional criteria pollutant emissions. An electricity-based heat pump option was considered, which would use electricity rather than a natural gas fired boiler to regenerate the amine. However, this option was found to be both less cost efficient than a natural gas fired boiler and not commercially demonstrated at the size required.

The Sequestration Study evaluated cost but also focused on the geological fit for sequestration below site property. While the Sequestration Study found the geological conditions at the site to be a strong fit for sequestration potentially making onsite sequestration feasible, the Capture and Compress Study found that capture and compression of the available post combustion, dilute and low-pressure CO_2 streams dominate the economic assessment and proved consistent with BACT precedent – i.e., that CCS is not a cost effective option for the KMe Facility's process. The findings were also directionally consistent with the recently published Louisiana State University (LSU) study on Carbon Capture potential in Louisiana's Industrial Corridor.[25] That study quickly ruled out low quality industrial candidates with dilute, post combustion streams such as the KMe Facility and found that CCS was not likely economically feasible for even the most ideal industrial sites with more than 10 times the emissions and availability of concentrated CO_2 streams, noting:

> *"However, industrial CCS is expensive. The capture component of an industrial CCS project is the largest individual cost item and can account for as much as half of an industrial CCS investment (Simbolotti, 2010). Industrial CCS investment costs, however, are a little more nuanced than those associated with coal-fired power plants since they are driven in part by the CO_2 emissions purity and, as noted earlier, the partial pressure of the CO_2 source. Higher CO_2 concentrations and pressures allow for capture systems with lower operational and capital costs."*

As for transportation costs associated with offsite sequestration, they are a very small portion of total annualized cost given the significant capital and operating costs associated with capture.

[25] https://www.lsu.edu/ces/publications/2019/doe_carbonsafe_02-18-19.pdf, accessed October 31, 2022.

As noted above, the inherent carbon efficiency of the combined reforming process (SMR with ATR), which has a natural incentive to maximize conversion of feed carbon into carbon monoxide building blocks for methanol production, does not result in waste streams rich in CO_2. The KMe Facility continues to evaluate advances in the technology and potential future market incentives to competitively implement CCS and plans to meet with the LDEQ periodically to share learnings.

BACT for greenhouse gas emissions will be implemented in the form of energy efficient operations and maintenance that will be made enforceable through a permit condition limiting emissions of CO_2e per ton of methanol produced on an annual basis,[26] which is similar to what has been determined as BACT for other chemical processing sites, including methanol facilities. The proposed two-tiered limit is reflective of the inherent carbon efficiency of KMe's Combined Reforming process and will ensure energy efficient operation. Furthermore, the limit recognizes that onsite steam generation results in higher emissions of CO_2e per ton of methanol produced compared to sites that purchase steam from an offsite supplier.

As noted in the BACT analysis, Koch will also be implementing a new leak detection and repair (LDAR) program for monitoring and minimizing leaks from piping components in methane (natural gas) service to reduce fugitive GHG emissions.

Additionally, as noted in Section 1.1.1.1, KII continues to focus on energy efficiency and energy intensity, which has resulted in recognition by EPA with corporate Energy Star Partner of the Year award in 2022. Consistent with KII's focus on energy efficiency, Koch has invested in and is in the process of commissioning a steam condensing electrical generation turbine to leverage excess process steam (otherwise released to atmosphere) to reduce grid electricity consumption by 30-50% and is working to optimize up to 90% reduced grid electricity consumption under normal operation. Leveraging EPA's latest regional Egrid factors, a 50-75%

[26] As noted above, the IEA has recognized that the increase in energy efficiency achieved through step changes resulting from switching to fundamentally more efficient methanol production methods, including conversion from coal- to natural gas-based methanol production, is key to GHG emissions reductions goals. Therefore, while the Project itself will result in a relatively modest increase in GHG gas emissions from the KMe Facility, it is very possible that the Project increase will be more than offset by global reductions resulting from the displacement of less efficient, coal-based methanol production and/or more traditional natural gas-based methanol production that relies solely on SMR. Moreover, even if only the direct Project GHG emissions increases were considered, quantifying any potential impacts from such emissions is not possible and, therefore, has not been attempted. As EPA states in its PSD and Title V Permitting Guidance for Greenhouse Gases, "[C]limate change modeling and evaluations of risks and impacts of GHG emissions currently is typically conducted for changes in emissions orders of magnitude larger than the emissions from individual projects that might be analyzed in PSD permit reviews. Quantifying these exact impacts attributable to the specific GHG source obtaining a permit in specific places is not currently possible with climate change modeling." PSD and Title V Permitting Guidance for Greenhouse Gases, EPA-457/B-11-001, March 2011 at p. 42 (available at https://www.epa.gov/sites/default/files/2015-08/documents/ghgguid.pdf, accessed October 28, 2022).

annualized reduction in purchased electricity would reduce KMe's Scope 2 (indirect) GHG emissions by 15,000-25,000 Metric Tons CO_2e/year plus approximately 5% associated distribution line losses which would be avoided with onsite power generation.

2.3.5 Solid and Hazardous Waste

The KMe Facility is registered with LDEQ as a Small Quantity Generator (SQG), as the facility produces less than 2,200 lb/month of hazardous waste. This is not anticipated to change as a result of the Project. The KMe facility does not own or operate a hazardous waste treatment, storage or disposal unit on-site. All hazardous wastes are properly managed under the generator rules and are manifested for off-site treatment, disposal or recycle.

Koch is also registered with the LDEQ as a generator of industrial solid wastes (G-093-13828). Koch complies with the LDEQ solid waste regulations by appropriately managing solid wastes prior to off-site disposal and by submitting annual generator reports.

Solid and hazardous waste minimization practices are implemented facility-wide through a variety of best management practices, from generation minimization to reuse where possible.

Wastes generated during normal operation of the facility are characterized, transported and disposed of in compliance with all applicable solid and/or hazardous waste regulations. The KMe Facility produces a number of routine "wastes" and also materials that are reused/recycled, including:

- Used Oil that is shipped offsite and reused in compliance with used oil regulations (thus not considered a "waste")
- Non-Hazardous Industrial Solid Waste
  - Oily rags and debris wastes, such as clean up from oil spills, absorbent pads, contaminated gravel and debris
  - Plant water treatment lab testing wastes, which do not contain methanol
  - Wastewater Treatment Plant centrifuge cake, which is a solid waste and stored in a lined roll-off box prior to off-site disposal
- Hazardous Waste
  - Methanol lab testing wastes
  - Off-Spec methanol (when <5,000 BTU/lb) waste, such as methanol spill clean ups and methanol purges
  - Aerosol can liquid waste/unpunctured aerosol cans

  - Waste paint, coatings, and thinner waste
- Universal waste
  - Batteries (non-alkaline), lamps/bulbs (i.e., fluorescent), mercury-containing equipment, and pesticides

All KMe Facility wastes are managed in appropriate tanks or containers located on concrete surfaces so as to preclude any potential for impacts to soils and underlying groundwater resources. After being containerized, industrial wastes are taken to the onsite Central Accumulation Area (CAA) and stored properly until disposal. The proposed Project is not anticipated to generate any new wastes, change the facility's generator status from SQG, or require any updates to current waste management practices. Wastes generated during construction of the Project will be managed as described above in accordance with applicable regulations.

2.4 Noise, Odor, Light, and Aesthetics – Minimization of Impacts

The methanol manufacturing process is not prone to excessive noise that would create a public nuisance, and standard operational procedures have been implemented to minimize any noise from railcar coupling and decoupling. Compliance with OSHA noise standards for employee hearing protection serves to minimize noise as well. Through these and other measures, the KMe Facility complies with generally accepted noise ordinance standards. The proposed Project will be executed (constructed and operated) within the existing facility, thus within the current operating footprint, with no discernable change in noise level. Furthermore, the KMe Facility implements standard practices for hearing conservation for all employees and contractors. The standard practices set forth criteria used to develop safe work practices necessary to minimize the impact of exposure to workplace noise and that outline procedures to anticipate the potential for hazardous exposures, control exposures, and verify the effectiveness of control measures.

No offensive odors are associated with current operations, nor anticipated in connection with the Project. Notably, the odor threshold for methanol is approximately 2,000 ppm.[27] The modeling analysis conducted as part of this permit action predicted a maximum increase in ground level concentration of methanol at or beyond the property boundary of 0.072 ppm. In the event an incident occurs resulting in a release or spill that leads to detection of odors, the KMe Facility will use an air monitoring team trained to use air monitoring instruments to determine if there are detectable levels of odors at the fence line. Data will be gathered to investigate and take any necessary corrective actions.

[27] https://kochfertilizer.com/Communities/kochfertilizer/getsds.ashx?ID=1150, accessed October 31, 2022.

Facility area lighting required for safe, 24/7 operations of the facility is consistent with the industrial zoning for the site[28]. This includes the process area lighting as well as lighting on the flare and other elevated structures. Minimization of non-routine flaring is a priority both from the standpoint of minimizing associated emissions and visual aesthetics and is inherently driven by the desire to minimize the lost production and product that may be associated with non-routine flaring events.

2.5 Impacts to Traffic and Local Infrastructure

A traffic study[29] conducted in 2016 prior to construction of the KMe Facility, showed that existing roadways and intersections had adequate capacity to handle all traffic associated with the original construction of the facility and with plant operations out to the year 2026. Nonetheless, two additional turn lanes were constructed on the Highway 3127 entrance to the facility to minimize any potential traffic impacts. Additionally, in response to a community member request, lighting was recently installed on the underside of the heavy haul bridge over Highway 18 to increase traffic visibility at that location.

The long-term impact of the proposed Project on roads and vehicle traffic is expected to be minimal compared to current conditions. Raw materials will continue to arrive at the facility primarily by pipeline, but also by truck. Products will continue to leave via truck, rail, and the marine dock adjacently located up-river of the marine offloading facility. The materials transported will be of the same types that are already handled by the facility and its transporters. Although there will be some increased volume via these modes of transportation, there will be no significant changes that would impact public resources. This is due to the fact that although production rate is increasing, the additional production volume is expected to primarily serve non-local customers and thus be shipped by rail and marine vessel.

There may be an increase in road traffic during construction expected to last a number of months; however, increased traffic on nearby roadways is anticipated to be manageable, as Highway 3127 is a two-lane highway with adequate shoulders and turn lanes, including the turn lanes added as part of the initial construction of the KMe Facility. During construction on the Project, the KMe Facility will have a traffic control plan in effect, and project teams will work with the St. James Parish Sheriff's Office to provide traffic control and assistance, as needed, at the facility entrances as well as within the local community. State and parish permit procedures will be followed and coordinated with the Louisiana State Police to minimize the traffic impact. Adequate privately-owned existing roadways leading

[28] https://www.stjamesla.com/DocumentCenter/View/690/Land-Use-Map-PDF, accessed October 31, 2022.

[29] Traffic Analysis Report, 138643-0000-RPT-CS-0001, YUHUANG CHEMICAL, INC., METHANOL PLANT, ST. JAMES PARISH, LOUISIANA.

from Highway 3127 to the facility are suitable for handling the traffic volumes and no additional accesses are required. Additionally, the KMe Facility does not foresee or anticipate the need for off-site or remote parking.

Infrastructure to the surrounding communities will not be impacted by the proposed Project due to the following factors:

- There will be no need for additional medical facilities in the surrounding communities. There is a hospital in St. James Parish (located in Lutcher approximately 20 miles from the KMe Facility), as well as several urgent care and medical clinics within near proximity. Additional metropolitan hospitals and specialty health services are available within close proximity in the New Orleans and Baton Rouge areas. St. James Parish is also located within the Acadian Ambulance service area.[30]
- There are no anticipated significant additional costs for schools as a result of this Project. In fact, the economic impact from additional taxes generated by the Project will provide increased long-term funds to improve local schools (see more details in Section 3.1 of this EAS). Further, Koch's community efforts with its partner schools and other local area schools will continue.

2.6 Louisiana Department of Natural Resources (LDNR) and Louisiana Coastal Protection and Restoration Authority (CPRA) Requirements

The KMe Facility is located within the Louisiana Coastal Zone. Certain work within the Coastal Zone is regulated by the Louisiana Department of Natural Resources – Coastal Management Division (LDNR) per Louisiana Administrative Code Title 43, Part I. Unless otherwise exempt, activities that may impact coastal resources within the Coastal Zone require authorization from LDNR in the form of a Coastal Use Permit. Coastal Use Permitting is pursued through a Joint Permit Application submitted online to both the LDNR and the United States Army Corps of Engineers (USACE).

The majority of the KMe Facility site is above the 5-foot elevation contour (considered to be "fastland"), and thus is exempt from Coastal Use Permitting per LAC 43:I.723.B.1. The initial construction of the landward side of the facility (work performed within the Mississippi River levee flood protection area) was determined to be exempt from LDNR Coastal Use Permitting through issuance of Coastal Use Permit Exemption P20141674 dated January 20, 2015. The heavy haul road and marine offloading ramp were not exempt from permitting and their construction was approved by LDNR through issuance of Coastal Use Permit P20150795 dated January 27, 2016. Installation of a water intake structure adjacent to the marine offloading ramp was authorized by LDNR through Coastal Use Permit P20170424 issued October 9, 2017. To reflect final facility design plans, updates were

[30] https://acadianambulance.com/locations/louisiana/, accessed October 31, 2022.

proposed, and the exemption was confirmed through issuance of Coastal Use Permit Exemption P20161140 on January 10, 2017, for the landward side of the facility, and the timeline for Coastal Use Permit P20150795 was extended on February 24, 2021 for the heavy haul bridge, road and marine offload facilities. A previously authorized onsite marine barge loading dock was not constructed. Instead, the KMe Facility uses the marine loading dock located adjacent to the site that is operated by Plains Marketing LP.

The proposed Project will not require onsite physical construction activities, such as dirt work, that could impact coastal resources. Thus, a Coastal Use Permit is not required for the Project.

The Coastal Protection and Restoration Authority (CPRA) was established as the single state entity with authority to articulate a clear statement of priorities and to focus development and implementation efforts to achieve comprehensive coastal protection for Louisiana. It currently operates under the Louisiana Coastal Management Zone Master Plan implemented in 2017, with plans to update the Master Plan in 2023.[31] The 2017 Master Plan includes one project within the KMe Facility area, known as the St. James – Vacherie Nonstructural Risk Reduction (Project ID: STJ.02N). The project is focused on properties that are at risk for future flood damage based on their location within flood-prone areas and encompasses a large area of the west bank of the parish beyond the KMe Facility area. It includes floodproofing of non-residential properties where 100-year flood depths are 1-3 feet, elevating residential properties where 100-year flood depths are 3-14 feet, and acquiring residential properties where 100-year flood depths are greater than 14 feet. The project specifications currently include mitigation of two non-residential properties and ten residential properties.[32]

No other CPRA projects were identified within the vicinity of the KMe Facility.

The existing KMe Facility does not impact the current CPRA Master Plan as described above. The November 2022 Application and Addendum do not propose any changes to the site that would impact the current CPRA Master Plan. Koch will review the new 2023 Master Plan when available to stay apprised of any future planned projects in the area in relation to the KMe Facility site and operations, including the proposed Project.

[31] https://coastal.la.gov/our-plan/, accessed October 31, 2022.

[32] See 2017 Louisiana Comprehensive Master Plan for a Sustainable Coast at p. 125, available at http://coastal.la.gov/wp-content/uploads/2017/04/2017-Coastal-Master-Plan_Web-Book_CFinal-with-Effective-Date-06092017.pdf, accessed November 1, 2022

2.7 Cultural and Historical Resources Effects

The following sections summarize actions that have been and will be taken to ensure that the proposed Project does not impact previously identified historic resources.

2.7.1 Sugar Mill Remains

A Phase I Cultural Resource Survey was performed prior to construction of the site in August and September 2014. The survey identified remnants of a historic sugar mill at the site, referred to as Site 16SJ82. The survey was reviewed and approved by the State Historic Preservation Officer (SHPO) in letters dated February 20 and April 17, 2015. Phase II Archeological Testing and Evaluation to further define Site 16SJ82 with respect to its eligibility for nomination to the National Register of Historic Places was conducted in February 2015, under a site investigation plan approved by SHPO. Based on the results of the Phase II Evaluation, an Avoidance Plan was developed to set aside the area of archeological Site 16SJ82 to protect it from any future ground-disturbing activities. The area has been fenced off and secured to prevent entry by unauthorized personnel, and the area has been fallow since completion of the historic resource evaluation. SHPO approved the Avoidance Plan by letter dated July 22, 2015.

Koch is not proposing any construction activities near Site 16SJ82 in connection with the proposed Project. The area will remain protected in accordance with the Avoidance Plan.

2.7.2 Graugnard Farms Plantation House

The Phase I Cultural Resource Survey also identified the Graugnard Farms Plantation House, a property listed on the National Register of Historic Places, located on property near the KMe Facility that is not owned by Koch. In a letter dated July 22, 2015, the State Historic Preservation Office (SHPO) concurred that the initial construction of the KMe Facility would not adversely impact the plantation home. Subsequently, in August 2016, the Graugnard Farms Plantation House was sold to a new owner who planned to relocate the home. The house was lifted from its original pier foundation and placed on steel girders in preparation for moving. All plumbing and electrical connections were disconnected.

At the current time, the house is on steel girders in preparation for moving but has not been relocated and remains on the property that KMe does not own, near the KMe Facility. We understand that ownership of the house may have reverted to the Graugnard family. Koch is not proposing any construction activities near the house in association with the proposed Project.

2.7.3 Other Historic Resources

The September 2014 Phase I Cultural Resource Survey included evaluation of cultural resources situated within or immediately adjacent to the site. With respect to cemeteries and historic structures, the survey included a review of the area within 1 mile of the site location. Other than the Graugnard Farms Plantation House described previously, no other identified historic structures met the criteria for listing in the National Register of Historic Places. SHPO agreed with these findings in a letter dated April 17, 2015. With the November 2022 Application and Addendum, Koch is not proposing expansion of the site or any construction activities that would require further evaluation of potential cultural resources in the area.

2.8 Wetlands/Waters of US

USACE issued a Jurisdictional Determination (JD) on July 29, 2015, identifying the extent of wetlands and other waters of the US (WOUS) on the property subject to USACE jurisdiction. With the exception of the Mississippi River levee batture, the JD documents that there are no wetlands regulated under Section 404 of the Clean Water Act on the property. Some portions of the drainage ditches on the property were documented as being jurisdictional WOUS.

The November 2022 Application and Addendum do not propose onsite construction activities that are anticipated to impact jurisdictional wetlands or WOUS that would require USACE permitting by Koch. A scope item that is part of the Project includes connecting an existing, off-property, third-party ethane supply pipeline to new piping at the KMe Facility. The third party that will be constructing the ethane supply piping will secure any necessary wetland permits for its work on or off Koch property.

2.9 Threatened, Endangered, Protected Species Impacts

Prior to the initial construction of the KMe Facility, the site consisted of land that was in agricultural service for decades. No threatened or endangered species or sensitive habitats were identified in the field as part of the initial site surveys conducted prior to the initial construction of the facility. In addition, in conjunction with the USACE jurisdictional review in 2015, a review of the Project area (landward) was conducted using the Information for Planning and Consultation (IPaC) online tool provided by the US Fish and Wildlife Service (USFWS) to determine whether critical habitat or species would be adversely impacted by the initial construction of the facility. The USFWS-based review determined that the new facility would not have an effect on Federal trust resources under USFWS jurisdiction and protected by the Endangered Species Act of 1973. The USFWS IPaC tool was used again in 2017 to access the potential for impacts to listed species as a result of construction of the marine offloading facility, heavy haul bridge and heavy haul road. The IPaC tool noted three listed species that have the potential to occur in the Project vicinity. These include the West Indian Manatee (*Trichechus* *manatus*), the Pallid Sturgeon (*Scaphirhynchus albus*), and the Monarch Butterfly (*Danaus plexippus*). The manatee (listed as threatened) and sturgeon (listed as endangered) are both aquatic species; therefore, only where construction is proposed in the marine environment (i.e., in the Mississippi River) would there be a potential impact to these species. Currently, the Monarch Butterfly is listed as a candidate species and, as such, there are no regulatory requirements related to this particular species at this time.

The proposed Project will not involve construction activities in the Mississippi River thus there are no potential impacts to manatee or sturgeon. In addition, the only construction is landward construction primarily associated with existing equipment (within the developed/industrial footprint) that would not impact any listed species.

2.10 Emergency Response and Prevention

Potential adverse environmental effects associated with operation of the KMe Facility could result from a fire, an explosion, a hazardous materials release, a spill, a security breach, or a combination of these. Any of these incidents can affect any or all of the three environmental media: air, water, and land. The KMe Facility implements regulatory requirements and best practices to avoid these incidents to the maximum extent. Following implementation of the Project, the KMe Facility operations will continue to be addressed by the following security and emergency response related requirements and practices:

- Compliance with OSHA's Process Safety Management (PSM) rules at 29 CFR Part 1910, Subpart H
- Compliance with EPA's Risk Management Program (RMP) regulations (40 CFR Part 68) and the equivalent LDEQ program (LAC 33:III.Chapter 59)
- Compliance with the federal, state, and local requirements of the Emergency Planning and Community Right-to-Know Act as set forth in 40 CFR Parts 355 to 372 and LAC 33:V.10101 to 10123
- Adoption of and conformance with voluntary best practices including partnering with local, state, and federal authorities
- Design to meet applicable fire codes

The PSM program, implemented pursuant to OSHA regulation 29 CFR 1910, is a comprehensive program designed to prevent or minimize the consequences of catastrophic releases of toxic, reactive, flammable, or explosive chemicals to employees and contractors of a regulated facility.[33] The PSM regulations require that process safety information be developed and that such information be used to prepare safe operating procedures and to train persons who will be involved with

[33] For more information on the OSHA PSM program, see https://www.osha.gov/SLTC/processsafetymanagement/, accessed October 31, 2022.

such processes. In addition, a process hazard analysis is required to be conducted for each process initially and updated periodically. The PSM program entails the development of a written plan of action regarding employee participation as well as consulting with employees on the conduct and development of process hazard analyses and on the development of other elements of PSM required under the rule. The KMe Facility will fully comply with these regulations with respect to the proposed Project, including any new equipment and project modifications.

Key elements of the PSM rule are the requirement to implement a Management of Change (MOC) program for any changes to a process and to conduct a pre-startup safety review. As required by these PSM regulations, the KMe Facility employs a comprehensive and proactive MOC system. Any "changes" to existing processes occurring as a result of the Project will be identified via the MOC process and will undergo the appropriate review and documentation. Prior to startup of the facility following construction of the proposed Project, a safety review will be conducted and documented. Any identified unsafe condition will be mitigated prior to startup.

Piping and instrumentation diagrams/drawings (P&IDs) as well as operating procedures and instructions will be updated, as necessary, to reflect implementation of the proposed Project. If the changes made by the Project affect the operating and/or maintenance procedures, then operating personnel as well as employees engaged in routine and non-routine work in the process area will receive refresher or additional training. Any incident investigation recommendations, compliance audit findings, or process hazard analysis recommendations will be reviewed and addressed, as necessary, before initiating startup following implementation of the proposed Project.

The KMe Facility is also subject to EPA rules in 40 CFR Part 68 - called the Risk Management Program (RMP). Many of the compliance components of the RMP rules are identical to the requirements of the OSHA PSM rules. However, while the PSM rules are intended to protect facility employees, the RMP rules are intended to protect surrounding communities.[34] One requirement of RMP that differs from PSM regulations is the requirement for a facility to determine its worst-case and alternative release scenarios and provide those to the EPA for the purpose of planning emergency response. The LDEQ has adopted the EPA RMP rules by reference, with a few additional requirements, at LAC 33:III.Chapter 59. The KMe Facility is currently a Program Level 1 facility under RMP, which is the lowest level, because no public receptors are predicted to be impacted in the event of a worst-case scenario.

Koch has ensured that the facility is prepared and that emergency response services are available in the unlikely event of potential environmental releases

[34] For more information on the EPA RMP program, see https://www.epa.gov/rmp/risk-management-program-rmp-rule-overview, accessed October 31, 2022.

and/or fire. Koch has adopted a policy that it will respond to all emergencies within the facility 24 hours per day, 365 days per year, using on-duty facility Emergency Response Teams. The KMe Facility maintains an Emergency Response Plan (ERP) that describes the planning and capabilities of the facility and provides the Emergency Action Plan (EAP) to inform employees of the required actions in the case of an emergency. Appropriate updates will be made to the ERP to address the proposed Project.

The KMe Facility Emergency Response Plan also provides emergency health care information on the proper first aid treatment for exposure, as well as employee training for informing the public and response agencies (e.g., the fire department) should an incident occur. Information regarding the Emergency Response Plan is also routinely shared with the St. James Parish Emergency Preparedness Department. KMe Facility personnel will contact and maintain communications with the St. James Local Emergency Planning Commission if and when there is a potential for direct impact to the public.

2.11 Environmental Justice (EJ)

An environmental justice assessment was performed to ensure that any adverse environmental effects of the proposed Project, including any adverse environmental effects on communities of color or people living with low income, have been avoided to the maximum extent possible. This assessment was performed utilizing the EPA's Environmental Justice Screening and Mapping Tool (EJScreen), Version 2.1 (October 2022).[35] While this EAS and thus this environmental justice assessment are both focused on assessing the potential impacts from the proposed Project, because the EJScreen results do not account for the existing KMe Facility, this analysis conservatively addresses the potential impacts on the surrounding community from the entire KMe Facility following implementation of the proposed Project.

Accordingly, throughout this environmental justice assessment, potential impacts from the KMe Facility are considered and assessed.

This Section is organized as follows:

- Section 2.11.1 provides an overview of environmental justice and relevant federal policies guiding this analysis;
- Section 2.11.2 summarizes the baseline environmental justice analysis conducted using EPA's EJScreen version 2.1 to identify the baseline burdens and vulnerabilities in the community surrounding the KMe Facility;

[35] US Environmental Protection Agency (EPA). EJScreen: Environmental Justice Screening and Mapping Tool (version 2.10). Oct 11, 2022.

- Section 2.11.3 identifies potential adverse and beneficial impacts from the Facility and assesses these impacts in the context of baseline conditions to understand potential cumulative impacts to the community.
- Section 2.11.4 describes how Koch fosters meaningful engagement and involvement in the community, and describes the specific activities conducted to engage the community with respect to this permit application; and
- Section 2.11.5 provides conclusions of the environmental justice analysis.

2.11.1 Definition of Environmental Justice and Applicable Regulations

Currently, there is no specific regulatory requirement or guidance from the EPA or LDEQ requiring an environmental justice analysis for this major air permitting effort. This following federal policy summary is provided as a general framework guiding consideration of environmental justice within this EAS.

In 1994, in response to growing concern that minority[36] and low-income populations bear a disproportionate amount of adverse health and environmental effects, President Clinton issued Executive Order 12898 on environmental justice formally focusing federal agency attention on this issue. Executive Order 12898, *Federal Actions to Address Environmental Justice in Minority Populations and Low-Income Populations,* requires federal agencies to assess the potential for their actions to have disproportionately high and adverse environmental and health impacts on minority and low-income populations, and directs them to develop strategies for implementing environmental justice.

The EPA defines "environmental justice" as follows:[37]

> *The fair treatment and meaningful involvement of all people regardless of race, color, national origin, or income with respect to the development, implementation, and enforcement of environmental laws, regulations, and policies.*

The EPA defines "fair treatment" as follows:[37]

> *No group of people, including a racial, ethnic, or a socioeconomic group, should bear a disproportionate share of the negative environmental consequences resulting from industrial, municipal, and commercial operations or the execution of federal, state, local, and tribal programs and policies.*

[36] To utilize more inclusive language, for the remainder of this assessment the terms "people of color" or "communities of color" are used instead of the term "minority;" the EPA has also adopted similar phrasing updates in EJScreen 2.1.

[37] EPA. 1998. Final Guidance for Incorporating Environmental Justice Concerns in EPA's NEPA Compliance Analyses.

The EPA defines "meaningful involvement" as follows:[37]

1) Potentially affected community residents have an appropriate opportunity to participate in decisions about a proposed activity that will affect their environment and/or health;

2) The public's contribution can influence the regulatory agency's decision;

3) The concerns of all participants involved will be considered in the decision-making process; and,

4) The decision-makers seek out and facilitate the involvement of those potentially affected.

Recently, EPA provided *Principles for Addressing Environmental Justice in Air Permitting,*[38] which provides suggested direction to guide federal, state, and local permitting programs that can inform this EAS process. Additional guides, *Environmental Justice and Civil Rights in Permitting Frequency Asked Questions*[39] and *EPA Legal Tools to Advance Environmental Justice*[40] provide additional direction, specifically addressing questions related to permitting processes and cumulative impacts analysis. This environmental justice analysis takes into account these and other guidance documents and provides an environmental justice perspective of potential environmental effects of the proposed Project being evaluated in this EAS.

In this analysis, impacts are defined as adverse or beneficial health or environmental effects of the KMe Facility on the surrounding community. This includes cumulative impacts on the surrounding community that could result when any impacts from the KMe Facility combine with other impacts. Disproportionate impacts are defined as adverse impacts borne disproportionately on the basis of race, color, or national origin.

2.11.2 Baseline Environmental Justice Assessment Using EJScreen

This section presents a screening-level review of the baseline conditions, burdens, and vulnerabilities for the community in the area surrounding the KMe Facility using EJScreen (Version 2.1, released October 2022).[3735] EJScreen is the most widely used federal assessment tool for evaluating potential impacts to communities facing environmental justice-related concerns. It provides a nationally consistent dataset and approach for combining environmental and demographic socioeconomic indicators used to assess potential exposure in vulnerable communities. In this

[38] EPA. 2022. Principles for Addressing Environmental Justice in Air Permitting. Memorandum from Joseph Goffman, Principal Deputy Assistant Administrator, Office of Air and Radiation, to Air and Radiation Division Directions, EPA Regions I-X. December 22, 2022.

[39] EPA. 2022. Environmental Justice and Civil Rights in Permitting Frequency Asked Questions. Office of General Counsel. August 2022.

[40] EPA. 2022. EPA Legal Tools to Advance Environmental Justice. Office of General Counsel. May 2022.

analysis, the results of the tool were used to identify potential baseline environmental concerns present in the community that warrant additional review and guide further assessment of whether the KMe Facility might contribute to adverse and disproportionate impacts.

2.11.2.1 EJScreen Overview

EJScreen calculates 12 "Environmental Justice Indexes (EJ Indexes)," one for each of 12 individual environmental indicators, where the EJ Index is a percentile ranking among two comparison populations: state and US. Each EJ Index is available at state and US comparison levels within the standard reports (Attachment D-1) exportable from the tool.

As recommended by EPA, the 80th percentile is a suggested starting point for the purpose of identifying geographic areas in the US that may warrant further consideration, analysis, or outreach.[41] That is, if any of the EJ Indexes are at or above the 80th percentile, then further review may be appropriate. LDEQ also has used the 80th percentile as the threshold for assessing the need for further evaluation.[42,43] In this analysis, EJ Indexes equal to or greater than the 80th percentile among either of the two comparison populations are scrutinized to assess the potential for disproportionate impacts.

An EJ Index for a particular environmental indicator (e.g., $PM_{2.5}$ or Air Toxics Cancer Risk) combines the following information for the user-specified study area:

- the environmental indicator percentile for a Census block group,
- a demographic index for a Census block group, consisting of percent low-income population[44] and percent people of color, and
- population size for block group.

The EJ Index results are intended to represent the average resident within the study area; however, the data used to calculate the index are based on a combination of Census tract- and Census block group-levels, which can be larger geographic areas than the user-defined study area. In this way, the EJ Indexes

[41] EPA. 2022. EJSCREEN Technical Documentation; EPA. 2019. EJSCREEN Technical Documentation (note: both guides remain relevant as the 2022 update does not provide the comprehensive level of information that the 2019 version includes).

[42] LDEQ. June 3, 2022. Basis for Decision, Magnolia Power LLC – Magnolia Power Generating Station Unit 1, AI No. 222431. LDEQ-EDMS Document 13323744, see discussion of "EJSCREEN," on page 22.

[43] LDEQ. April 29, 2022. Basis for Decision, Indorama Ventures Olefins, LLC – Westlake Ethylene Plant, AI No. 5337. LDEQ-EDMS Document 13275727, see discussion of "EJSCREEN," on page 22.

[44] The low-income population metric is developed using a threshold of two times the federal poverty level.

represent the closest approximation to the average resident in the study area but are estimates only, with some imprecision.

2.11.2.2 Study Area Definition

Figure D-1 shows the 30.18 square mile study area for this environmental justice analysis, which is defined as a 3.1-mile (5 kilometer [km]) ring centered around the KMe Facility. Use of a 3.1-mile radius is consistent with LDEQ[42,43] and EPA practice,[45] and is also the maximum distance recommended by EPA.[41] The 3.1-mile study area is large enough to encompass multiple census blocks near the KMe Facility, thereby reducing uncertainties in demographic estimates, while also not including areas that are too distant and not representative of the area closest to the Facility.

EJScreen was used to generate reports for the study area encompassed within a 3.1-mile distance from the KMe Facility. As an alternate point of comparison, a study area defined by a 1-mile radius was also evaluated. Comparisons across different study area sizes may suggest large differences are present in environmental vulnerabilities though this is not necessarily an accurate interpretation. The EJScreen technical guide indicates, "…EJ index values are often very uncertain at block group resolution. Therefore, modest differences in percentile scores between block groups or small buffers should not be interpreted as meaningful because of the uncertainties in demographic and environmental data at the block group level."[46]

The study area defined by a 3.1-mile (5 km) ring is located at a point between the KMe Plant production unit (M1) and the KMe Terminal (T1) (29.984221,-90.850335) (see Figure D-1 and the EJScreen Reports in Attachment D-1). The smaller, 1-mile study area was centered around the same point. The 1-mile radius is comprised of Census block group 220930405001 within Census tract 22093040500. The same Census tract and block group are included within the 3.1-mile study area along with Census block groups 220930405002 and 220930404002 in Census tract 22093040400.

The EJScreen analysis based on the 3.1-mile ring is more representative and relevant for characterizing the environmental justice vulnerability of the communities surrounding the KMe Facility than the 1-mile ring based on the following rationale:

- The 3.1-mile ring covers 30.18 square miles and an approximate population of 1,142 and incorporates the nearest communities in St. James Parish. The 1-mile ring does not provide adequate coverage of neighboring communities

[45] https://www.epa.gov/system/files/documents/2022-07/Valero%20Houston%20Order_6-30-22_0.pdf, accessed February 17, 2023.

[46] EPA. 2019. EJSCREEN Technical Documentation.

further away from the KMe Facility or the east bank of the river, covering only 3.14 square miles and an approximate population of 41.

- EPA cautions on use of smaller study areas (e.g., less than one mile) with smaller population counts due to uncertainties in the spatial resolution of the Census and environmental datasets that are used in EJScreen. The 1-mile study area population count of 41 may introduce uncertainties due to small sample size.

This environmental justice analysis will focus on the EJScreen results for the 3.1-mile study area. However, the EJScreen report for both the 3.1- and 1-mile radii are included in Attachment D-1.

2.11.2.3 EJ Indexes

The demographic index and population count are combined with each of the 12 individual environmental indicators to yield 12 EJ Indexes. An EJ Index is higher for Census block groups where the demographic index is higher, where there are more people living with low income and/or a higher percentage of people of color. As discussed previously, EJ Indexes equal to or greater than the 80th percentile, when compared with state or US populations are highlighted in this analysis. Table D-6 provides a summary of the EJ Indexes exceeding the 80th percentile among the state or US for the 3.1-mile study area; 7 of 12 EJ Indexes are included in this table. The complete EJScreen results are provided in Attachment D-1.

Table D-6: EJ Indexes Exceeding the 80th Percentile

EJ Indexes > 80th Percentile	State Percentile	US Percentile
Area: 30.18 square miles; Population: 1,142		
EJ Index for 2017 Air Toxics Cancer Risk	91	95
EJ Index for Air Toxics Respiratory HI	90	94
EJ Index for Diesel Particulate Matter	86	90
EJ Index for Lead Paint	80	81
EJ Index for Particulate Matter 2.5	83	89
EJ Index for RMP Facility Proximity	79	87
EJ Index for Wastewater Discharge	87	90

Notes:
HI = hazard index
RMP = Risk Management Program
*These values do not take into account any impact from the KMe Facility or Project.

The EJ Indexes representing the 2017 Air Toxics Cancer Risk, Air Toxics Respiratory Hazard Index (HI), diesel particulate matter (DPM), Lead Paint, $PM_{2.5}$, Risk

Management Program (RMP) Facility Proximity, and Wastewater Discharge exceed the 80th percentile in the state and/or US comparison populations. These percentiles do not necessarily indicate health concerns but rather the need to review site-specific data or perform additional analysis for the study area. In addition to the percentiles, EPA also suggests considering the following:

- if and to what extent the environmental data show values above relevant health-based or regulatory thresholds,
- the significance of said thresholds, severity of health or impacts of environmental concern, and,
- the degree of any disparity amongst various groups exposed to environmental pollutants.

These EJ Indexes are further discussed in the context of the KMe Facility-specific impacts in Section 2.11.3.

2.11.2.4 Environmental Indicators for Baseline Assessment

EJScreen evaluates 12 environmental indicators that range from estimates of human health risk to proxies for potential exposure such as proximity to hazardous waste sites. These indicators are presented without consideration of the socioeconomic/demographic indicators. The environmental indicators associated with the EJ Indexes exceeding the 80th percentile as highlighted in Table D-6, are presented in Table D-7. These values do not take into account any impact from the KMe Facility or Project.

Table D-7: Baseline Environmental Indicators of Interest for the Study Area

Environmental Indicators of Interest	Environmental Indicator Value*	State Percentile	US Percentile
Area: 30.19 square miles; Population: 1,142			
2017 Air Toxics Cancer Risk (risk per million people)	54	92	95-100th
Air Toxics Respiratory HI (unitless)	0.5	90	95-100th
Diesel Particulate Matter (μg/m^3)	0.388	73	70-80th
Lead Paint (% Pre-1960 Housing)	0.23	65	51
Particulate Matter 2.5 (μg/m^3)	9.29	58	71
RMP Facility Proximity (facility count/km distance)	0.75	61	68
Wastewater Discharge (toxicity-weighted concentration/meter distance)	0.0065	69	65

Notes:

HI = hazard index

RMP = Risk Management Program
*These values do not take into account any impact from the KMe Facility or Project.

2.11.2.4.1 2017 Air Toxics Cancer Risk

The air toxics cancer risk indicator provides a numerical estimate of the probability of "excess lifetime cancer" in terms of cases of cancer per million people. Excess lifetime cancer relates to the potential for developing cancer over the course of a lifetime, apart from the existing background cancer rate. The significance of the cancer risk indicator value is assessed through comparison of the estimated excess lifetime cancer risk to EPA's acceptable range for cancer risk of 1 in one million to 100 in one million.[47] This range reflects a *de minimis* or negligible increased cancer risk level above background cancer risk, which is approximately 400,000 in one million, or 1 in 2.5 people, based on 2017-2019 data.[48] EPA's risk assessment methodology applied in calculating cancer and noncancer risks incorporates multiple factors representing a reasonable maximum exposure and applies toxicity values for each chemical that are modified by uncertainty and sensitivity factors that account for and are protective of sensitive subpopulations.[49] If estimated cancer risks are within or lower than this range, cancer risk is considered negligible.[49,49] If cancer risks are greater than EPA's acceptable risk range, then additional analysis is recommended. Typically, this includes refining data inputs and assumptions to reflect "site-specific" conditions.[51]

The air toxics cancer risk indicator value presented in EJScreen is based on EPA's AirToxScreen 2017[50] (Air Toxics Screening Assessment), which provides modeled health risks at the Census tract resolution level. The AirToxScreen cancer risk represents an upper-bound baseline risk level, for which it is conservatively assumed that someone is breathing the air toxics continuously over a 70-year lifetime. The health risks are based on modeling National Emissions Inventory and other emissions data sources for each Census tract. A Census tract is comprised of Census block groups and is oftentimes a larger geographic area than the 3.1-mile study area. Therefore, risks provided for the Census tract may reflect risks associated with emissions from facilities that are distant from the KMe Facility. In

[47] This range is derived from the National Oil and Hazardous Substances Pollution Contingency Plan (40 CFR Part 300), which states that "acceptable exposure levels are generally concentration levels that represent an excess upper bound lifetime cancer risk to an individual of between 10^{-4} and 10^{-6} using information on the relationship between dose and response." For reference, the nomenclature used by the EPA, 10^{-4} and 10^{-6}, is equivalent to the terms '1 in one million to 100 in one million.'

[48] National Cancer Institute, Surveillance, Epidemiology, and End Results Program https://seer.cancer.gov/statfacts/html/all.html, accessed October 28, 2022.

[49] EPA. 1989. Risk assessment guidance for Superfund Volume I, Human health evaluation manual (Part A), Interim Final. EPA/540/1-89/002.

[50] EPA. 2022. 2017 AirToxScreen Mapping Tool. Available at: https://www.epa.gov/AirToxScreen/2017-airtoxscreen-assessment-results, accessed October 27, 2022.

addition, EJScreen uses 2017 AirToxScreen information for any Census tract that intersects with the study area (i.e., Census tracts 22093040400 and 22093040500, shown as Census tracts "404" and "405" in Figure D-1), which can also result in ascribing air toxics cancer risks to the study area that are not necessarily representative. For example, only a small portion of tract 404 is included in the study area, but these results nevertheless influence the total cancer risk estimate calculated in EJScreen.

The EJScreen air toxics cancer risk indicator score of 54 in one million is well within EPA's acceptable cancer risk range of 1 in one million to 100 in one million. The cancer risk estimate in EJScreen is from the 2017 AirToxScreen and represents the baseline risk level in the study area, which does not account for contribution from the KMe Facility. These baseline risks are largely attributable to emissions of formaldehyde (39%), ethylene oxide (35%), chloroprene (7%), and carbon tetrachloride (6%),[50] with facilities emitting the greatest amounts of these chemicals located 16 to 20 miles from the KMe Facility (see facility locations in Figure D-1). While distant from the KMe Facility, the sources of these air toxics emissions are relevant because they influence the Census tracts in which the study area is located.

Results from 2018[51] and 2019[52] AirToxScreen are available for the Census tracts within which the study area lies (22093040400 and 22093040500), though these results have not yet been incorporated into the EJScreen tool. The KMe Facility lies within Census tract 22093040500, which also makes up the majority of the study area evaluated in EJScreen, with a small portion of Census tract 22093040400 making up the remainder of the study area (refer to Census tracts "404" and "405" in Figure D-1 for Census tract boundaries). 2018 and 2019 AirToxScreen results were reviewed to understand potential changes in baseline air toxics cancer risks that are incorporated in more recent versions of AirToxScreen but not yet reflected in EJScreen, which relies on the 2017 AirToxScreen results. 2018 and 2019 AirToxScreen results for the individual Census tracts within the study area must be reviewed because the environmental indicator value for the study area cannot be replicated outside of EJScreen.

[51] EPA. 2022. 2018 AirToxScreen Mapping Tool. Available at: https://www.epa.gov/AirToxScreen/2018-airtoxscreen, accessed October 27, 2022. The 2018 AirToxScreen used the 2017 National Emissions Inventory (NEI) as a starting point and updated these data for 2018 from comments provided by state, local and tribal agencies during the AirToxScreen review.

[52] EPA. 2022. 2019 AirToxScreen Mapping Tool. Available at: https://www.epa.gov/AirToxScreen/2019-airtoxscreen, accessed January 20, 2023. The 2019 AirToxScreen used the 2017 National Emissions Inventory (NEI) as a starting point and updated these data for 2019 from comments provided by state, local and tribal agencies during the AirToxScreen review.

With respect to Census tract 22093040500, where the KMe Facility is located and which makes up the majority of the study area, the 2018 results indicate that the total air toxics cancer risk remained similar to the 2017 results; although, the relative contributions from the air toxics changed, with an increase in ethylene oxide cancer risk contribution and decreases in carbon tetrachloride, chloroprene, and formaldehyde cancer risk contributions (see Table D-8). The 2019 air toxics cancer risks, the most recent available, are substantially lower (26%) than those reported in EJScreen, reported at 39 in one million. From 2018 to 2019, air toxics contributions show a decrease in chloroprene and ethylene oxide risk contributions and an increase in carbon tetrachloride and formaldehyde risk contributions (see Table D-8). Air toxics cancer risks also decreased substantially (26%) between 2017 and 2019 in Census tract 22093040400, a small portion of which comprises the remainder of the study area evaluated in EJScreen. While distant from the KMe Facility (see Figure D-1), the sources of these air toxics emissions are relevant because they influence the Census tracts in which the study area is located.

The KMe Facility does not and will not contribute to emissions of ethylene oxide, chloroprene, or carbon tetrachloride, but will emit up to 0.47 ton per year of formaldehyde. The cancer risk from the KMe facility's formaldehyde emissions (0.021 in one million) is nearly two orders of magnitude less than the lower end of EPA's acceptable cancer risk range (1 in one million). Facility-specific emission rates and related cancer risk contributions are presented in Section 2.11.3.1.1.

Table D-8: Baseline Cancer Risk Reported in AirToxScreen 2017-2019 in Vicinity of KMe Facility

Year	Cancer Risk (per million people)	Cancer Risk Contribution by Chemical (%)[a]			
		Ethylene Oxide	**Chloroprene**	**Carbon Tetrachloride**	**Formaldehyde**
Census Tract 22093040500[b]					
2017	53	35	7	6	39
2018	54	47	3	4	34
2019	39	30	1	8	47
Census Tract 22093040400[c]					
2017	57	35	9	5	37
2018	60	49	4	4	31
2019	42	32	2	7	44

Notes

a. KMe Facility does not and will not contribute to existing emissions of ethylene oxide, chloroprene, or carbon tetrachloride.

b. The cancer risk estimates are based on Census Tract 22309040500, where the KMe Facility is located.

c. The cancer risk estimates are based on Census Tract 22309040400, a small portion of which is included in the KMe Facility 3.1-mile study area.

2.11.2.4.2 Air Toxics Respiratory HI

The EJ Index for air toxics respiratory HI is a measure of estimated noncancer health impacts specific to the respiratory system. The environmental indicator for this EJ Index is an HI value of 0.5 (90th percentile in state and 95-100th percentile in US). EPA uses a risk management threshold HI of 1 to assess potential noncancer health impacts, wherein HIs less than 1 indicate exposures are below levels of concern. The HI of 0.5 reported for the 3.1-mile study area is substantially below EPA's threshold of 1, which indicates no potential for adverse noncancer health impacts.

The air toxics noncancer HI indicator value presented in EJScreen is based on EPA's AirToxScreen 2017.[50,53] As with the cancer risk estimate provided in AirToxScreen, the noncancer HI value provided in EJScreen is associated with all Census tracts within which the study area lies (i.e., Census tracts "404" and "405", as shown in Figure D-2) and may reflect noncancer hazards associated with emissions from facilities that are distant from the KMe Facility and may not accurately reflect hazards in the vicinity of the facility.

The 2017 AirToxScreen HI value of 0.5 represents an upper-bound baseline hazard level and is largely attributable to emissions of formaldehyde (35%), acetaldehyde (26%), acrolein (20%), and DPM (7.6%),[50] with facilities emitting the greatest amounts of these chemicals located 16 to 20 miles from the KMe Facility (see facility locations in Figure D-2). Formaldehyde, acetaldehyde, and DPM are associated with cancer risk, but are also evaluated for noncancer health impacts. Acrolein is not a carcinogen. While distant from the KMe Facility, the sources of these air toxics emissions are relevant because they influence the Census tracts in which the study area is located. Compared to 2017 HI values, the 2018 and 2019 AirToxScreen results for Census tracts 22093040500 and 22093040400 have trended downward and remained well below EPA's risk management threshold HI of 1, each with HIs of 0.4 (2018) and 0.3 (2019). These values, which are a fraction of EPA's threshold HI of 1, demonstrate that exposure is well below noncancer health impact levels of concern. For both Census tracts (see Table D-9), relative

[53] Although EJScreen currently only uses results from 2017 AirToxScreen, results from more recent versions of AirToxScreen (i.e., 2018 AirToxScreen and 2019 AirToxScreen) which use the 2017 NEI data as a starting point but were updated for 2018 or 2019 based on comments provided by agencies during the AirToxScreen review are also publicly available for individual Census tracts and are referenced in this document.

contributions of acrolein and DPM to the HI have decreased between 2017 and 2019, but relative contributions of acetaldehyde and formaldehyde to the HI have increased. While distant from the KMe Facility (see Figure D-2), the sources of these air toxics emissions are relevant because they influence the Census tracts in which the study area is located.

Table D-9: Baseline Air Toxic Respiratory HI Reported in AirToxScreen 2017-2019 in Vicinity of KMe Facility

Year	Hazard Index	Air Toxic Respiratory HI Contribution by Chemical (%)[a]			
		Acetaldehyde	Acrolein	DPM	Formaldehyde
Census Tract 22093040500[b]					
2017	0.5	26	20	8	35
2018	0.4	27	12	10	37
2019	0.3	30	10	7	42
Census Tract 22093040400[c]					
2017	0.5	26	20	8	35
2018	0.4	27	12	10	37
2019	0.3	29	10	7	41

Notes
a. KMe Facility does not and will not contribute to existing emissions of acrolein.
b. The air toxic respiratory HIs are based on Census Tract 22093040500, where the KMe Facility is located.
c. The air toxic respiratory HIs are based on Census Tract 22093040400, a small portion of which is included in the KMe Facility 3.1-mile study area.
DPM = diesel particulate matter
HI = hazard index

The KMe Facility does not and will not contribute to existing emissions of acrolein. Facility-specific emissions and associated impacts to air toxic respiratory risks are discussed further in Section 2.11.3.1.2.

2.11.2.4.3 DPM

The EJ index for DPM (86th percentile in state and 90th percentile in US) is based on an estimated DPM air concentration of 0.388 μg/m^3. This estimated air concentration is greater than the state (0.297 μg/m^3) and US (0.294 μg/m^3) average concentrations. This value is derived from 2017 AirToxScreen and reflects commercial marine vessel emissions; on-road, heavy duty diesel vehicle emissions; locomotive emissions; and other sources. When evaluated in the absence of the demographic index, this environmental indicator is ranked at or below the 80th percentile for both the state (73rd percentile) and US (70-80th percentile) (Table D-7). 2017, 2018, and 2019 AirToxScreen data show that the ambient air concentrations of DPM were 0.39 μg/m^3, 0.43 μg/m^3 and 0.26 μg/m^3, respectively, in the Census tract 22093040500 where the KMe Facility is located, which reflects fluctuations in ambient concentrations, and a substantial reduction in predicted DPM air concentrations between 2017 and 2019. Emissions of DPM from the KMe Facility are due to emergency engines only and modeled off-property concentrations resulting from these emissions represent less than two percent of the baseline DPM concentration of 0.388 μg/m^3 reported in EJScreen. Facility-specific DPM emissions are discussed further in Section 2.11.3.1.3.

2.11.2.4.4 Lead Paint

The EJ Index for lead-based paint (80th percentile in state and 81st percentile in US) is based on the percent of homes within the study area that were constructed prior to 1960, a time preceding the removal of lead from paint. Lead-based paint is of concern in communities with older homes because chipped and worn paint contributes to lead in house dust. Dust on home indoor surfaces, such as floors and toys, may be contacted by young children who then incidentally ingest the dust, including lead paint chips in house dust, through skin-to-mouth contact. There is a well-established relationship between elevated lead exposure and developmental health effects in children. The Louisiana Department of Health (LDH) lists the Lead-Based Paint Hazard Control Grant from Housing and Urban Development (HUD) as providing no cost lead abatement services to qualifying applicants.[54] LDEQ's website also lists references for controlling and addressing lead in residential buildings.[55] These programs serve to reduce potential lead exposures in older homes.

The environmental indicator value for this index is 23%, which means that the lead in house dust may be a concern in 23% of homes within the study area, and is comparable to the fraction of older homes (pre-1960) reported for the state (20%) and US (27%). When evaluated in the absence of the demographic index, this environmental indicator is ranked below the 80th percentile for both the state and US. The KMe facility does not emit lead or use lead-based paints, as discussed in Section 2.11.3.1.4.

2.11.2.4.5 Particulate Matter ($PM_{2.5}$)

The EJ index for $PM_{2.5}$ (83rd percentile in state and 89th percentile in US) is based on an estimated $PM_{2.5}$ air concentration of 9.3 μg/m^3. When evaluated in the absence of the demographic index, this environmental indicator is ranked below the 80th percentile. The annual $PM_{2.5}$ concentration of 9.3 μg/m^3 provided in the EJScreen

[54] Louisiana Department of Health (LDH). 2022. Lead Abatement Services. Available at: https://ldh.la.gov/page/3163, accessed February 17, 2023.

[55] LDEQ. 2022. Lead-Based Paint. Available at: https://deq.louisiana.gov/page/lead-based-paint, accessed February 17, 2023.

tool for the 3.1-mile study area is derived from a 2018 analysis using the tool's downscaler model. EPA's model uses monitored data and community-scale model data to develop a relationship between observed concentrations from monitors and modeled concentrations to predict concentrations in unmonitored regions.

To assess how well EJScreen predicts air concentrations, monitoring data from the State and Local Air Monitoring Station (SLAMS) site nearest the KMe Facility (Geismar, AQSID 22-047-0005) were reviewed and contrasted with the EJScreen prediction for this location. The Geismar station is located approximately 20 miles northwest of the facility and had an annual $PM_{2.5}$ concentration of 8.9 µg/m^3 in 2018. The 2018 EJScreen downscaler model concentration for the location of the monitor is 10.1 µg/m^3. This comparison indicates the downscaler model is overpredicting $PM_{2.5}$ concentrations by approximately 13%. This suggests that the $PM_{2.5}$ concentrations for the KMe study area reported in EJScreen may be similarly overpredicted.

In addition, review of air monitoring data for the Geismar station indicate that $PM_{2.5}$ concentrations between years 2010 and 2022[56] are generally decreasing, as shown in Figure D-3. The current design value for the Geismar monitor is 7.9 µg/m^3 based upon the three-year 2019 to 2021 average, which is substantially lower than the 2018-based EJScreen concentration of 10.1 µg/m^3 for this location. Given that EJScreen relies on a 2018 analysis and area $PM_{2.5}$ concentrations are trending downward, it is possible that the EJScreen tool may further overestimate current $PM_{2.5}$ concentrations for the study area.

To understand the facility-specific $PM_{2.5}$ impacts, $PM_{2.5}$ concentrations were estimated using air dispersion modeling. A maximum off-property concentration of 0.11 µg/m^3 was predicted; this concentration is roughly one percent of the baseline $PM_{2.5}$ concentration predicted in EJScreen, as discussed further in Section 2.11.3.1.5.

2.11.2.4.6 RMP Facility Proximity

The EJ Index for proximity to facilities with RMPs (79th percentile in state and 87th percentile in US) is based on a total count of facilities within 5 km (or nearest facility beyond 5 km) of the study area, each divided by distance. The environmental indicator value for this index is 0.75 facilities per kilometer. This indicator is below the average indicator values calculated for the state (0.96) and US (0.77), and when evaluated in the absence of the demographic index, this environmental indicator is ranked below the 80th percentile for the state and US. In a query of EPA's Facility Registry Service (FRS)[57] database, no RMP facilities were

[56] As noted in Figure D-3, data for 2022 are not full-year values and only include data collected between the first three quarters (January 1-September 30) of the year.

[57] https://www.epa.gov/frs/frs-query, accessed February 17, 2023.

found within 5 km of the KMe Facility. The nearest RMP facility, a Program Level 3 facility, is located 6.67 km from KMe.

The RMP Facility Proximity EJ Index is included in EJScreen because these facilities represent a *potential* for accidental releases, explosions, or fires that could impact surrounding communities. Importantly, EPA has found a reduction in the frequency of accidents at RMP facilities since the RMP Rule became effective in 1996.[46] Moreover, recently, EPA proposed revisions to its RMP rules, some of which are intended to "advance fair treatment of those populations by reducing the disproportionate damages that RMP-reportable accidents might otherwise inflict on those populations," where the 'populations' are those that are historically underserved and overburdened populations living in close proximity to RMP facilities.[58] Once final, EPA's regulatory actions should, therefore, reduce impacts on overburdened communities. The KMe facility is required to maintain an RMP and has a robust process safety management (PSM) program in place, including a comprehensive emergency response plan, as described in Section 2.10. Facility-specific RMP considerations are discussed in Section 2.11.3.1.6.

2.11.2.4.7 Wastewater Discharge

The EJ Index for wastewater discharge ranked in the 80th percentile or greater; however, the environmental indicator for wastewater discharge evaluated in the absence of the demographic index did not result in an elevated percentile. This indicator takes into account the proximity of the average resident in the study area to a stream or river reach receiving Louisiana Pollutant Discharge Elimination System (LPDES) loadings reported to the Toxic Release Inventory (TRI). This discharge information is used in EPA's Risk Screening Environmental Indicators (RSEI)[59] model which combines information on chemical concentrations, fate and transport factors, weighted toxicity values, and other factors to allow users to perform comparative analyses of specific facilities, industries, or geographies. EJScreen relies on RSEI modeled outputs to generate a toxicity-weighted stream concentration for segments within 500 meters of the study area, divided by distance between the study area and stream segment.

The environmental indicator value of wastewater discharge in the study area is 0.0065, which is two to three orders of magnitude lower than the state average value (0.37) and the US average (12). Despite the very low environmental indicator value for the study area relative to the state and US comparison populations, the percentiles for this environmental indicator in the study area range between the 65th to 69th percentiles among all comparison populations, and the EJ Indexes for

[58] EPA. 2022. Regulatory Impact Analysis, Safer Communities by Chemical Accident Prevention, Proposed Rule. April 19, 2022. https://www.regulations.gov/document/EPA-HQ-OLEM-2022-0174-0003, accessed February 17, 2023.

[59] EPA 2022 Risk-Screening Environmental Indicators (RSEI) Model. https://www.epa.gov/rsei, accessed October 28, 2022.

wastewater discharge are even higher and greater than the 80th percentile threshold (87th percentile in state and 90th percentile in US, see Table D-7).

In an email from EPA responding to questions about the EJScreen wastewater indicator posed by LDEQ for an analysis associated with a permitting action for a facility owned by Entergy Louisiana, EPA explained that the high percentiles of this EJ Index and the underlying environmental indicator are due to:

> 1) a 3 km cutoff around stream segments for processing, which results in a large number of block group values being set to zero (for Louisiana, 29% of block groups have a wastewater discharge indicator of zero), and
>
> 2) the data having a logarithmic distribution, with most values being very small, so even a very low environmental indicator value for wastewater discharge ends up being high on the distribution curve.[60]

Given the very low environmental indicator value for wastewater discharge relative to state and US averages, the high percentiles for this EJ Index are not accurate representations of the baseline wastewater discharge condition in the study area surrounding the KMe Facility. Instead, the very low environmental indicator value for wastewater discharge evidences that the baseline wastewater discharge condition in the study area does not pose an environmental justice concern for the communities surrounding the KMe Facility. This is discussed further in Section 2.11.3.1.7.

2.11.2.5 Socioeconomic/Demographic Indicators

EJScreen evaluates seven socioeconomic/demographic indicators that represent the social vulnerability characteristics of a population that does not have equitable access to environmental protections afforded to other populations. These factors are listed in the EJScreen standard report (Attachment D-1). EJScreen calculated a demographic index of 68% for the study area, as compared to the state of Louisiana average of 41% and the US average of 35%. The demographic index is at the 81st percentile when compared to the rest of the state. In addition to the demographic index, three out of the seven socioeconomic/demographic indicators

[60] 2022. LDEQ. Basis of Decision, Entergy Louisiana, Michoud Electric Generating Plant and New Orleans Power Station, Permit No. LA0004324. https://edms.deq.louisiana.gov/app/doc/view?doc=12303187, accessed October 31, 2022. In August 4, 2020 email from EPA, questions raised regarding low wastewater treatment metric resulting in elevated EJ Index, "The numbers look odd for 2 reasons. First, the data has a logarithmic distribution, with most values being very small, so this example ends up being high on the distribution curve even though it is a fairly small number. This characteristic is then reinforced because there is a 3 km cutoff around stream segments for the processing. This results in a large number of block group values being set to Zero. For Louisiana, 29% of block groups have a Wastewater Discharge Indicator of Zero."

ranked at or greater than the 80th percentile in the state or US comparison populations as listed below:

- People of color (80th percentile in state and 83rd percentile in US)
- Low income (74th percentile in state and 86th percentile in US)
- Less than high school education (70th percentile in state and 80th percentile in US)

The influence of the KMe Facility on community socioeconomics, through investments in the economy, education, and outreach, are summarized in Section 2.11.3.2 and discussed in Sections 3.1 and 3.2 of the EAS. Examples of how the KMe Facility is making a positive impact on socioeconomic indicators include additional local employment opportunities and providing scholarships and services to schools in the area.

2.11.3 Assessment of Project Impacts

EJScreen provides a screening-level assessment of baseline characteristics for a given area based on environmental and socioeconomic/demographic indicators. As noted above, there are seven EJ Indexes ranked in the 80th percentile or greater for the study area defined as the area encompassed within a 3.1-mile mile radius of KMe facility.

The KMe Facility started operation in 2020 and, as a result, the environmental data sets used in the EJScreen analysis do not account for the KMe Facility emissions or other factors. Therefore, while the EAS and this environmental justice assessment are focused on assessing the potential impacts of the proposed Project, the following assesses the potential impact of the entire KMe Facility post Project.

2.11.3.1 Impacts Pertaining to Elevated EJ Indexes

EJ Indexes are greater than the 80th percentile threshold when compared with the state and/or US populations for air toxics cancer risk, air toxics respiratory HI, DPM, lead paint, $PM_{2.5}$, RMP facility proximity, and wastewater discharge. Potential impacts of the KMe Facility related to these indexes are discussed in the following sections.

2.11.3.1.1 Air Toxics Cancer Risk

The EJ Index for air toxics cancer risk (91st percentile in state and 95th percentile in US) for the 3.1-mile study area, based on an estimated cancer risk of 54 in one million, exceeds the 80th percentile when comparing to both the state and the US.

To understand the KMe Facility impacts in the context of baseline risks, cancer risks were calculated based on total facility-wide emissions post Project and air dispersion modeling techniques described in the AQIA of this application with modeling inputs as shown in Tables 1 through 5 of Attachment D-2. The modeled off-property air concentrations were used to estimate potential cancer risks for the study area, conservatively assuming that someone is continuously breathing the evaluated pollutants at the modeled concentrations. Annual average air concentrations within the study area were estimated for carcinogenic air toxics associated with KMe Facility operations: aldehydes, benzene, cadmium, dichlorobenzene, ethylbenzene, formaldehyde, naphthalene, and nickel, in addition to DPM which contains carcinogenic compounds. As shown in Table D-10, the maximum off-property annual average concentrations of carcinogenic air toxics predicted by air modeling are all well below the LAAS, which are established at concentrations protective of daily exposure over a lifetime.[61]

Based on EPA methodology for modeling health risks, the potential cancer risk associated with KMe Facility total emissions ranges from 0.02 to 2 excess lifetime cancer cases in one million at the current residence with the highest modeled air toxics concentrations (Table D-11). This estimated cancer risk is near or below the lower threshold of EPA's acceptable cancer risk range of 1 to 100 in one million excess lifetime cancer cases.

In this analysis, a cancer risk range rather than a single cancer risk estimate is presented due to uncertainty in estimating DPM carcinogenic potency.[62] The impact of this uncertainty is significant because DPM is the largest contributor from the KMe Facility to total cancer risk. In EPA's toxicity assessment for DPM, EPA concluded that DPM is carcinogenic but that the available human and animal studies supporting this assessment are inadequate to allow for quantifying the carcinogenic potency for use in risk assessment.[62] California EPA has nevertheless proposed a quantitative estimate of carcinogenic potency for DPM that is used to derive the EPA Regional Screening Levels (RSLs) and is used to estimate DPM cancer risk in the EJScreen tool. The California EPA estimate of DPM toxicity was used to represent the "midpoint" of estimated cancer risks for DPM presented in Table D-11 and depicted in Figure D-4. The lower and upper ends of the cancer risk range are based on order-of-magnitude toxicity estimates previously proposed, but later withdrawn, by EPA.[62]

The maximum KMe Facility air toxics residential cancer risk is approximately 0.04% to 4% of the 2017 cancer risk of 54 in one million predicted by EJScreen for the 3.1-mile study area, and the combined "baseline" and KMe Facility total air toxics cancer risk is 54 to 56 in one million people. Thus, the cumulative cancer risk for the residential area with highest predicted cancer risk within the study area may be unchanged, or modestly increased above the 2017 baseline reported in EJScreen

[61] Louisiana Register, Vol 17, pg. 1204, Dec 20, 1991.

[62] EPA. 2003. Integrated Risk Information System (IRIS) Chemical Assessment Summary, Diesel Engine Exhaust https://iris.epa.gov/ChemicalLanding/&substance_nmbr=642, accessed February 17, 2023.

after the addition of the cancer risk based on KMe Facility emissions, indicating that the cancer risks associated with KMe Facility emissions have little to no impact. When more recent AirToxScreen results are considered, i.e., 2019 cancer risk of 39 in one million for Census tract 22093040500 where the KMe facility and a majority of the study area are located (see Table D-8), the maximum residential cumulative cancer risks for the study area are lower, ranging from 39 to 41 in one million. Regardless of which AirToxScreen cancer risk estimate is considered, the maximum predicted total cancer risks for nearby residential areas is well within EPA's acceptable cancer risk range of 1 to 100 in one million.

In summary, air toxics cancer risk reported in EJScreen for the study area, 54 in one million, may be unchanged or increase slightly to 56 in one million people with consideration of emissions from the KMe Facility, which result in a facility-specific estimated cancer risk range of 0.02 to 2 in one million. The predicted cancer risks are primarily attributable to DPM emissions from six emergency engines and firewater pumps, which are essential to safe operation of the facility. These risks are well within EPA's risk management range of 1 to 100 in one million people, indicating that cumulative risks for the study area are below levels of concern. Furthermore, predicted air concentrations are below the LAAS, which are protective of daily exposure over a lifetime, and recent EPA AirToxScreen results for 2019 indicate that air toxics cancer risks for this area are lower than that reported in EJScreen, indicating cumulative risks presented here provide a conservative estimate of total air toxics cancer risk.

Table D-10: Comparison of Maximum Off-Property Carcinogenic Air Toxic Annual Average Concentrations to Louisiana Ambient Air Standards			
Chemical	**Maximum Annual Average Air Concentration (µg/m^3)**	**Louisiana Ambient Air Standard - Annual Average (µg/m^3)**	**Louisiana Ambient Air Standard - 8 Hour Average (µg/m^3)**
Acetaldehyde	0.00085	46	NA
Other Aldehydes	0.0028	46	NA
Arsenic	<0.00001	0.02	NA
Benzene	0.00039	12	NA
Cobalt	<0.00001	NA	NA
1,4-Dichlorobenzene	0.00001	NA	1,430
DPM	0.0065	NA	NA
Ethylbenzene	0.00019	NA	10,300
Formaldehyde	0.0054	7.7	NA
Naphthalene	0.00002	NA	1,190
Nickel	0.00002	0.21	NA

Notes:

NA = not available

µg/m^3 = microgram per cubic meter

LDEQ = Louisiana Department of Environmental Quality (LDEQ 2013)

References:

LDEQ. 2013. Title 33 Environmental Quality. Table 51.2. Louisiana Toxic Air Pollutant Ambient Air Standards. May.

Table D-11: Estimated Facility Cancer Risks at Maximally Exposed Current Residential Location	
Chemical	**Cancer Risk[a]**
DPM	1.6E-07 (midpoint of potential cancer risk range; ideally presented as 2E-08 to 2E-06)[b]
Formaldehyde	2.1E-08
Acetaldehyde	1.1E-09
Other Aldehydes	6.2E-10
Benzene	3.1E-10
Ethylbenzene	2.5E-11
1,4-Dichlorobenzene	NC
Arsenic	NC
Cadmium	NC
Chromium VI	NC
Cobalt	NC
Naphthalene	NC
Nickel	NC
Total Cancer Risk	**2E-07** (i.e., 0.2 in one million) (midpoint of 2E-08 to 2E-06 estimated cancer risk)

Notes:

a. Cancer risks presented for the residence with the highest predicted risk, UTM: 708807, 3319335.

b. The DPM cancer risk presented here is based on a toxicity estimate proposed by California EPA (3E-04 per μg/m^3) and has not been formally adopted for use in baseline risk assessment by EPA. EPA has determined that the existing literature is lacking and does not support quantitative dose-response evaluation of DPM carcinogenic potency.[62] Due to uncertainty in quantifying DPM potency, risks are better represented as a range using an analysis initially presented and then withdrawn by EPA (10^{-3} to 10^{-5} per μg/m^3). The use of this range underscores the lack of confidence expressed by EPA in assessing the carcinogenic potency of this chemical mixture.

NC: risks not calculated due to extremely low (i.e., <0.00001 μg/m^3) predicted air concentration.

2.11.3.1.2 Air Toxics Respiratory HI

The EJ Index for noncarcinogenic air toxics (90th percentile in state and 94th percentile in US) is based on estimated air toxics noncancer HI of 0.5. As shown in Table D-12, the maximum off-property annual average concentrations predicted by air modeling of the KMe Facility non-carcinogenic air toxic emissions are all well below LAAS, which are established at concentrations that are protective of daily exposure over a lifetime.

Maximum air concentrations were modeled based on proposed Facility emission limits and used to calculate a Facility-specific noncancer HI, presented in Table D-13. The maximum estimated HI for a current residence is 0.04, which is well below the EPA's risk management threshold of 1. Hydrogen sulfide is the primary contributor to this HI, followed by ammonia and DPM. When adding the HI estimated for the Facility to the HI predicted by EJScreen for the 3.1-mile radius study area, the maximum cumulative HI is 0.54, which represents little to no change relative to the baselinlevel reported in EJScreen. Additionally, the cumulative noncancer HI metric is well below EPA's risk management threshold of 1 for noncancer health hazards. The actual noncancer HI contribution from the KMe Facility is expected to be lower than that reported in Table D-13, as recent changes in wastewater treatment processes have improved solids management and are expected to have substantially reduced emissions of hydrogen sulfide. While the site anticipates that some hydrogen sulfide emissions will still be present, the predicted noncancer HI for the Facility would be as low as 0.0006 without the influence of hydrogen sulfide emissions. The noncancer HIs for the vicinity of the Facility are depicted in Figure D-5**.**

In summary, all modeled chemical concentrations are below LAAS, and when the HI of 0.04 estimated for the Facility is added to the HI of 0.5 predicted by EJScreen for the 3.1-mile radius area, the maximum cumulative HI is 0.54, which is well below EPA's risk management threshold of 1 for noncancer health hazards and represents a noncancer hazard of essentially zero. With recent changes to the wastewater treatment processes likely having resulted in a decrease in hydrogen sulfide emissions, the noncancer HI contribution from the Facility is likely reduced further thereby likely further reducing any potential noncancer hazard associated with air toxics emitted from the Facility.

Table D-12: Comparison of Maximum Off-Facility Annual Average Noncarcinogenic Air Toxics Concentrations to Louisiana Ambient Air Standards		
Chemical	**Maximum Annual Average Air Concentration ($\mu g/m^3$)**	**Louisiana Ambient Air Standard - 8 Hour Average ($\mu g/m^3$)**
Ammonia	1.2	640
Barium	0.00004	12
Hydrogen sulfide	1.7	330
Manganese	<0.00001	4.8
Mercury	<0.00001	1.2
Methanol	40	6,240
n-Hexane	0.0081	4,190
Toluene	0.00044	8,900

Notes:

NA = not available

$\mu g/m^3$ = microgram per cubic meter

LDEQ = Louisiana Department of Environmental Quality (LDEQ 2013)

References:

LDEQ. 2013. Title 33 Environmental Quality. Table 51.2. Louisiana Toxic Air Pollutant Ambient Air Standards. May.

Table D-13: Estimated Facility Respiratory HI	
Chemical	**Maximum Residential Exposure Location**
Hydrogen sulfide	0.037
Ammonia	0.00012
DPM	0.00010
Methanol	0.000068
Other Aldehydes	0.000056
Nickel	NC
Barium	0.000020
Formaldehyde	0.00017
2,2,4-trimethylpentane	0.0000015
Acetaldehyde	0.000056
n-Hexane	0.0000024
Benzene	0.0000013
Naphthalene	NC
Ethylbenzene	2.0E-08
Toluene	6.0E-09
Naphthalene	NC
Nickel	NC
Total Facility HI	**0.04**

Notes:

a. Noncancer HI presented for the residence with the highest predicted risk, UTM: 708807, 3319335

HI = Hazard Index

NC: HI not calculated due to extremely low (i.e., <0.00001 μg/m^3) predicted air concentration.

2.11.3.1.3 DPM

The EJ index for DPM (86th percentile in state and 90th percentile in US) is based on an estimated DPM air concentration of 0.388 μg/m^3. This air concentration is greater than the state (0.297 μg/m^3) and US (0.294 μg/m^3) average concentrations. Emissions of DPM from the KMe Facility are from six emergency engines and firewater pumps only, which are essential to safe operation of the facility.

Figure D-6 presents modeled DPM concentrations in the vicinity of the KMe Facility. The predicted maximum DPM Facility-specific fence line concentration is 0.0065 μg/m^3, which is 1.7% of the baseline air concentration of 0.388 μg/m^3. The concentration at the nearest residence is even lower, at 0.0005 μg/m^3. The cumulative DPM concentration, the sum of EJScreen DPM air concentration and Facility-specific maximum modeled prediction, is 0.394 μg/m^3. The cumulative DPM concentration is even lower at the nearest residence, 0.389 µg/m^3, and represents a very small increase above baseline conditions. DPM is a mixture of carcinogenic and noncarcinogenic compounds, which are accounted for in EJScreen's Air Toxics Cancer and Air Toxics Respiratory HI metrics. As discussed in Sections 2.11.3.1.1 and 2.11.3.1.2, cancer risk and noncancer HI attributable to all air toxics emitted from the Facility, including DPM, are below or near the lower risk management thresholds established by EPA.

2.11.3.1.4 Lead Paint

The EJ Index for lead-based paint (80th percentile in state and 81st percentile in US) is based on the percent of homes within the study area that were constructed prior to 1960, a time preceding the removal of lead in paint. Lead in house dust may be a concern in older homes within the study area; however, this environmental indicator will not be influenced by the KMe Facility. Planned updates to the KMe Facility will not use lead-based paint or coatings. In addition, the KMe Facility will not emit lead into air as part of operations; therefore, there are no anticipated impacts from the KMe Facility on this environmental indicator or EJ Index.

2.11.3.1.5 $PM_{2.5}$

The EJ Index for $PM_{2.5}$ (83rd percentile in state and 89th percentile in US) is based on the annual average $PM_{2.5}$ levels in the air identified through EPA modeling and monitoring efforts. The $PM_{2.5}$ concentration of 9.29 µg/m^3 provided in EJScreen for the 3.1-mile study area is greater than both the state and US averages reported in EJScreen (9.2 and 8.67 µg/m^3, respectively). As noted in Section 2.11.2.4.5, these values are extremely conservative as the EJScreen downscaler model is shown to overestimate ambient $PM_{2.5}$ levels and actual 2019 to 2021 design value for the closest ambient monitor is only 7.9 µg/m^3.

Using estimated emissions information for the Facility, the maximum annual average $PM_{2.5}$ concentrations were modeled (see Figure D-7). The first step in this process is to model project emissions (in this case, all emissions from the Facility (post Project) and compare the result to the SIL for each pollutant and averaging period. The SIL is a de minimis threshold or level below which air quality impacts from the new or modified facility are considered insignificant.[63]

The SIL for annual $PM_{2.5}$ is 0.2 µg/m^3. Modeling of Facility emissions produced a maximum impact of 0.11 µg/m^3, which is below the level of the SIL (see Table D-3). This result includes the contribution from the secondary formation of particulates, calculated according to EPA guidance.[64] As noted previously in Section 2.11.2.4.5, this maximum impact is roughly 1 percent of the baseline $PM_{2.5}$

[63] "Guidance on Significant Impact Levels for Ozone and Fine Particles in the Prevention of Significant Deterioration Permitting Program," April 17, 2018.

[64] "Guidance on the Development of Modeled Emission Rates for Precursors (MERPS) as a Tier 1 Demonstration Tool for Ozone and PM2.5 under the PSD Permitting Program", April 30, 2019.

concentration predicted by EJScreen. Additionally, the 24-hour maximum predicted $PM_{2.5}$ concentration is 1.01 μg/m^3, which is below the 24-hour SIL of 1.2 μg/m^3 (see Table D-3). Because conservatively modeled Facility impacts are projected to be below the SILs, the Facility will not contribute to a significant increase in annual $PM_{2.5}$ concentrations in the area surrounding the Facility.

The present design value from the closest ambient monitor is 7.9 μg/m^3, well below the level of the NAAQS, which was established to provide public health protection. The Facility will not cause or contribute to an exceedance of the NAAQS.

2.11.3.1.6 RMP Facility Proximity

The EJ Index for RMP Proximity (79th percentile in state and 87th percentile in US) is based on a count of facilities subject to RMP requirements within 5 km of the study area, divided by distance from the KMe Facility, yielding an environmental indicator value of 0.75 facilities per kilometer. Although this EJ Index is greater than the 80th percentile for the US comparison population, the environmental indicator for this index (0.75) is well below the indicator value calculated for the state (0.96) and just below the value calculated for the US (0.77) comparison populations. Furthermore, when evaluated in the absence of the demographic index, this environmental indicator is ranked below the 80th percentile.

As noted in Section 2.10, KMe is currently subject to EPA's RMP regulations (40 CFR Part 68) and the equivalent LDEQ program (LAC 33:III.Chapter 59).[65] KMe is currently a Program Level 1 facility under RMP (the lowest program level) because no public receptors are predicted to be impacted in the event of a worst-case release scenario. KMe maintains an Emergency Response Plan (ERP) that describes the planning and capabilities of the facility to provide emergency response services in the unlikely event of potential environmental releases and/or fire. Information regarding the ERP is routinely shared with the St. James Parish Emergency Preparedness Department, and KMe Facility personnel will contact and maintain communications with the St. James Local Emergency Planning Commission if and when there is a potential for direct impact to the public.

KMe will continue to comply with federal RMP requirements and the equivalent LDEQ program and will remain a Program Level 1 facility under RMP after the Project because the worst-case release scenario following the Project also would not impact public receptors. Also, note that, in 2022, amendments to the federal RMP regulations were proposed to include "several changes and amplifications to the accident prevention program requirements, enhancements to the emergency preparedness requirements, increased public availability of chemical hazard information, and several other changes to certain regulatory definitions or points of

[65] EPA. 2022. Risk Management Program (RMP) Rule Overview https://www.epa.gov/rmp/risk-management-program-rmp-rule-overview, accessed February 17, 2023.

clarification."[66] With these changes, the EPA determined that there will be a reduction in "disproportionate damages that RMP-reportable accidents might otherwise inflict on those populations," with "those populations" referring to historically underserved or overburdened populations living in the vicinity of RMP facilities. Once finalized, EPA's regulatory actions should, therefore, reduce impacts on overburdened communities.

2.11.3.1.7 Wastewater Discharge

The EJ Index for wastewater discharge is 87th percentile in the state and 90th percentile in US. However, as explained above, the high percentiles for this EJ Index are not accurate representations of the baseline wastewater discharge condition in the study area surrounding the KMe Facility. Instead, the very low environmental indicator value for wastewater discharge (a value of 0.0065, which is nearly two orders of magnitude lower than the average indicator values reported for the state [0.37] and three orders of magnitude lower than that for the US [12]) signifies that the baseline wastewater discharge condition in the study area does not pose an environmental justice concern for communities surrounding the KMe Facility. Additionally, continued compliance with the facility's LPDES permit will ensure that wastewater discharges do not result in adverse environmental effects.

The KMe Facility operates under the LPDES program for its wastewater discharges and raw water intake. Specifically, LPDES permit number LA0127367 includes provisions under the Clean Water Act (CWA) for both point source discharges to nearby waterways, as well as surface water intake requirements as governed by CWA Section 316(b). The permit includes discharge limits along with specific monitoring and reporting requirements and other provisions to protect receiving waterways, the Mississippi River and St. James Canal. The permit includes allowances for discharge of treated process wastewaters as well as industrial stormwater, hydrostatic test waters, sanitary system effluents, boiler and cooling tower blowdowns, demineralized regeneration wastewater, and return waters from the feed water treatment plant clarifier systems to the Mississippi River. The St. James Canal receives only stormwater and previously monitored hydrostatic test wastewater. The LPDES permit limits are established at concentrations that have been determined by LDEQ to maintain compliance with applicable water quality criteria for each receiving waterbody. For this reason, discharges within permit limits do not cause adverse environmental effects.

As a result of the Project, there will be an increase in the volume of wastewater flow sent to the KME Facility's existing wastewater treatment facility as well as an increase in volume of boiler and cooling tower blowdown, demineralized

[66] EPA. 2022. Accidental Release Prevention Requirements: Risk Management Programs Under the Clean Air Act; Safer Communities by Chemical Accident Prevention (Proposed Rule). Docket (EPA-HQ-OLEM-2022-0174). August. Available at: https://www.regulations.gov/document/EPA-HQ-OLEM-2022-0174-0003, accessed February 17, 2023.

regeneration wastewater, and return waters from the feed water treatment plant clarifier systems, with a commensurate increase in the volume of effluent discharged to the Mississippi River. While a change in concentration of pollutants in the wastewater discharge is not anticipated, there will be an associated increase in pollutant loading (lb/day) from the final outfall that discharges to the Mississippi River due to the increase in discharge volume. Accordingly, Koch is submitting a permit renewal application to update the LPDES permit to authorize the increase in wastewater discharge volume and corresponding increase in pollutant loading. The LPDES permit limits will be established at concentrations determined by LDEQ to maintain compliance with applicable water quality criteria for each receiving waterbody, and the KMe Facility will be required to comply with monitoring requirements to ensure that discharges are within permit limits. For this reason, discharges will not cause adverse environmental effects and will remain protective of receiving water quality.

The very low environmental indicator value for wastewater discharge (a value of 0.0065, which is nearly two orders of magnitude lower than the average indicator values reported for the state [0.37] and three orders of magnitude lower than that for the US [12]) signifies that the baseline wastewater discharge condition in the study area does not pose an environmental justice concern for communities surrounding the KMe Facility. Additionally, continued compliance with the facility’s LPDES permit as revised to account for the Project and as-built changes will ensure that wastewater discharges do not result in adverse environmental effects.

2.11.3.2 Beneficial Impacts

The optimized KMe Facility will provide significant beneficial impacts to the community, influencing social structures and economics, as detailed in Sections 3.1 and 3.2 below. Social benefits will be realized through investments by Koch in the areas of education, community enrichment, entrepreneurship, and environment. Long-term economic benefits to the community will be gained through job creation and labor income during Project construction and continued operations. As discussed previously, these benefits directly and positively impact two of the three demographic categories that are highlighted by EJScreen: education level and income.

2.11.4 Meaningful Involvement with Community

As noted in Section 1.1.3.2 of this EAS, Koch utilizes a variety of different venues and practices to foster regular meaningful engagement and involvement with the community on an ongoing basis. Examples of such engagement/involvement include joint training with local emergency services personnel, employee outreach through volunteer activities, KMe’s participation with the St. James Citizens Advisory Panel and the focus group and community advisory board meetings described below. Examples of key community engagement activities leading up to the filing of this permit application are further discussed below.

The KMe Facility hosted the St. James Citizens Advisory Panel (CAP) meeting in April 2022, which was attended by industry representatives and community members. KMe provided an overview and a tour of the facility and received strong, positive feedback. In mid-August 2022, KMe held a separate joint meeting with emergency agency personnel including the Parish President along with sheriff, fire department and emergency planning representatives to provide information about the KMe Facility and a tour of the site.

In June and July 2022, Koch hosted meetings with two small focus groups made up of residents of St. James Parish and the 5th District. The members of these focus groups were chosen by an outside firm who solicited input from the parish president, a local councilmember, school board members, and other local leaders. The objective of these focus groups was to engage with the community to learn more about what residents value within the St. James Parish community, what most concerns them about the community, and what opportunities they see for the community into the future. The June 2022 meeting focused on general industry in the area, and the July 2022 meeting focused more specifically around operations at the KMe Facility. Feedback from these focus groups included the following:

- Environment and Health: community residents desire more information from industry on impacts from emissions and help understanding EPA and LDEQ website information related to spills and permit exceedances; comments from the June meeting included "not knowing what they are breathing," "seems like a lot of people dying from cancer," "seems like a lot of spills and permit exceedances," "balancing staying here with potential health risks"
- Employment: residents would like for industry to better publicize job openings and foster more local hiring and educational support to enable local hiring
- Communication: include all media venues (online newsletters, mailings, website, social media), initiate recurring KMe CAP meetings/open houses
- Community Involvement: more engagement with High Schools, publicize community giving, looking to partner with industry for support of youth and other local resources (e.g., fire department), many were unaware of KMe community giving programs
- Community Resources: lack of recreational and other resources for youth in the community, industry pays taxes to the parish, but the community does not see the benefits
- KMe specific: increased communication on environmental and health matters and safety incidents as well as community involvement activities,

transparency in communication, jobs, and follow-through on the focus group meetings

As a follow-up to the information received through the focus group meetings, on August 30, 2022, Koch Methanol hosted a Community Outreach Meeting at the Westbank Reception Hall in Vacherie, Louisiana. Invitations were communicated via newspaper advertisements, postcards (over 570 residents; entire 5th District), email and telephone, and local community residents along with local emergency response personnel and community leaders were invited to attend. The purpose of the meeting was to provide the community the opportunity to connect with personnel from the KMe Facility; to learn about Koch, the KMe Facility and its operations, including its hiring practices, job opportunities, community engagement, safety practices, emergency response capabilities and environmental performance in the areas of air emissions, wastewater discharges, and waste management; and to inform the community of Koch's plans to submit the air permit application and this LPDES Renewal Application to authorize the KMe Optimization Project and other changes to the permits. Feedback regarding the KMe Facility, its operations and the plan to submit the permit applications was solicited so that Koch could better understand and respond to community questions and concerns and communicate Koch perspective where not well understood. Pertinent feedback received along with Koch's actions to address this feedback include the following:

- *The community highly values the ability to directly engage with industry on an ongoing basis.* Continued involvement in the community that allows the community to provide feedback outside of permit actions is appreciated. A reconvening of the original focus group members from the July 2022 meetings occurred on January 17, 2023. Although only a few of the original focus group members attended, the discussion regarding initiation of a community advisory board (CAB) was very well received. In February 2023, Koch completed the process of selecting board members for a CAB to foster regular and sustained engagement between the KMe Facility and the community and so that community feedback can be received on a routine and ongoing basis. The first CAB meeting was held on March 21, 2023, and the second meeting was held on April 18, 2023.
- *The community values the support Koch provides to the community (e.g., support after Hurricane Ida, donating school resources), including increased opportunities for scholarships.* As noted in this EAS, Koch is committed to investing in a variety of community enrichment opportunities; and, by further optimizing the KMe Facility operations, the proposed Project will allow Koch to continue those investments.
- *Transparency regarding operations and emissions is highly valued.* During the Community Outreach Meeting, Koch personnel shared estimates of total authorized air emissions under the current air permit compared to the levels

that are being requested with the air permit application. Information regarding modeled off-site pollutant concentration levels was also communicated. Additionally, Mobile Area Monitoring Lab (MAML) air quality data from recent, nearby LDEQ monitoring was provided during the meeting and was very much appreciated by the community.[67] In an effort to provide ongoing transparency, Koch is evaluating options for "fence line" monitoring at the site with the full intention to install such monitoring. Additionally, as explained in the air permit application, Koch has voluntarily performed a PSD review for this permit application, which includes a demonstration that all emissions units authorized by the permit meet BACT and that emissions of PSD-regulated pollutants will not cause or contribute to an exceedance of any NAAQS.

- *One commenter was concerned that the "fruits of these focus groups would not be listened to."* The CAP noted above provides a forum for continuing dialogue and challenge between industry and the community. In addition, as noted earlier, KMe has established an ongoing CAB between the KMe Facility and the community so engagement can occur, and feedback can be received, on a routine and ongoing basis. The CAP is an industry/community forum for the St. James area whereas the CAB is a KMe/community-focused forum. Additionally, Koch is evaluating options for "fence line" monitoring at the site with the full intention to install such monitoring.

As noted above, Koch sponsored the kick-off of the CAB on March 21, with a follow-up meeting on April 18, 2023. The CAB was created as a community-led board intended to provide a forum for direct communication between the KMe Facility and the community. An external facilitator led the initial meeting, and is scheduled to facilitate future meetings, which was attended by six KMe Facility employees including the plant manager, technical manager, and environmental personnel, as well as eight community Board members. The initial meeting was intended to set the foundation for future discussion and expectations, and included updates on the Optimization Project. The current schedules for the air permit application and LPDES water permit application were both discussed. Information for accessing the KMe Facility website was shared with the CAB, including information regarding how to access the air permit and water permit applications and supporting documents and the different ways to provide feedback. Time was provided on the agenda to respond to questions on the Project and permit applications. Some points of discussion include:

[67] LDEQ's Air Assessment and Planning Division won a competitive EPA air-monitoring grant announced in November that will provide funding to add two temporarily located community (TLC) monitors, including one in St. James Parish. (https://deq.louisiana.gov/assets/docs/DiscoverDEQ/2022/DiscoverDEQNewsletter-Issue131-December2022.pdf, accessed Feb. 14, 2023.)

- *Details regarding the site's water management system were provided to answer questions*. Specifically, questions regarding where the water the KMe Facility uses comes from, where the water that leaves the KMe Facility is discharged, and what wastewater treatment technologies the KMe Facility uses were answered. Information regarding operator certification and training for water sampling was provided along with information on sample analyses performed onsite versus offsite by third party labs. Conversations also covered the site's stormwater and drainage, including discussion of permeable versus impermeable surfaces. Information regarding the site's water use and water discharges was summarized in a user-friendly "brief" and made available on the KMe Facility website so that the community is better educated throughout this permitting process.

- *Details regarding air emissions sources were provided for clarity, specifically regarding methanol emissions, ammonia use in the emissions control devices, and the use of the flare*.

- *Miscellaneous items such as taxes, permit status, and general feedback were brought up as well*. A detailed follow up discussion on taxes was provided at the second CAB meeting (April 18), and permit updates have been and will be provided at each CAB meeting. Lastly, a couple members of the CAB reflected on instances where they appreciated the KMe facility's personal interaction with neighbors (e.g., Hurricane Ida support).

2.11.5 Conclusions

This environmental justice analysis was performed to ensure that any adverse environmental effects of the proposed Project, including any adverse environmental effects on environmental justice communities, have been identified and avoided to the maximum extent possible. Among the 12 EJ Indexes calculated by EPA's EJScreen tool for the study area surrounding the KMe Facility, seven ranked at or equal to the 80th percentile threshold used by EPA and LDEQ to assess the need for further evaluation: 2017 air toxics cancer risk, air toxics respiratory HI, DPM, lead paint, $PM_{2.5}$, RMP facility proximity, and wastewater discharge. The remaining five EJ Indexes ranked below the 80th percentile threshold. Based on the EJScreen report, additional analysis of each of the seven EJ Indexes ranked at or equal to the 80th percentile threshold was performed to further evaluate potential facility-specific impacts. This analysis of environmental indicators indicates that the KMe Facility will not cause adverse impacts and, therefore, will not result in disproportionate impacts and is based on review of data relied upon in EJScreen, facility-specific air modeling, and other facility characteristics as follows:

- <u>2017 Air Toxics Cancer Risk and Respiratory HI:</u> Risks from overall KMe Facility emissions are below or well within EPA's acceptable risk management ranges.
    - EJScreen reports a cancer risk of 54 in one million for the study area, which is well within the 1 to 100 in one million risk management range established by EPA. KMe's maximum contribution is 0.02 to 2 additional cancer cases per million people, largely due to DPM emissions from the periodic use of emergency engines. This estimated cancer risk is near or below the lower threshold of EPA's acceptable cancer risk range of 1 to 100 in one million excess lifetime cancer cases. The maximum cumulative cancer risk of 54 to 56 in one million is also well within EPA's risk management range. Furthermore, recent EPA AirToxScreen results for 2019 indicate that air toxics cancer risks for this area are lower than that reported in EJScreen, indicating that the cumulative risks presented here provide a conservative estimate of total air toxics cancer risk.
    - EJScreen reports a respiratory HI (i.e., noncancer hazard) of 0.5, which is below EPA's risk management threshold of 1. KMe's maximum contribution for a current residence is an HI of 0.04, resulting in a cumulative HI of 0.54, which is below EPA's threshold of 1 and represents little to no change to the baseline level and a noncancer hazard of essentially zero. Additionally, with the implementation of recent changes to the KMe Facility's wastewater treatment processes and the likely reduction in hydrogen sulfide emissions, the noncancer HI contribution from the KMe Facility may be as low as 0.0006, which again, reflects a noncancer hazard of essentially zero.
- <u>DPM:</u> The predicted maximum DPM Facility-specific concentration at a current residence is 0.0005 $\mu g/m^3$, which is 0.13% of the baseline air concentration of 0.388 $\mu g/m^3$ reported in EJScreen. The maximum predicted DPM Facility-specific concentration at the fence line is 0.0065 $\mu g/m^3$, which is 1.7% of the baseline air concentration reported in EJScreen. The cumulative DPM concentration, the sum of EJScreen DPM air concentration and Facility-specific modeled prediction, is 0.389 $\mu g/m^3$ at the nearest residence and 0.394 $\mu g/m^3$ at the fence line, both of which represent small increases above baseline conditions. DPM is a mixture of carcinogenic and noncarcinogenic compounds, which are accounted for in the air toxics modeled for the KMe Facility. As noted above, air toxics health risks associated with the KMe Facility are well below EPA risk management ranges.
- <u>Lead Paint:</u> The majority of the KMe Facility was newly constructed starting in 2017 and did not require use of lead-based paint or coatings, and planned updates to the KMe Facility will not use lead-based paint or coatings.

Furthermore, the facility will not emit lead into the air as part of operations. Therefore, there are no anticipated impacts from the KMe Facility on this environmental indicator or EJ Index.

- $PM_{2.5}$: Modeling of Facility emissions produced maximum annual average and 24-hour average impacts of 0.11 μg/m^3 and 1.01 μg/m^3, respectively, which are below the levels of the respective SILs. Because conservatively modeled Facility impacts are below the SILs, they are considered insignificant and demonstrate that emissions from the Facility will not cause or contribute to an exceedance of the NAAQS for $PM_{2.5}$, which have been established at concentrations that are protective of public health.
- RMP Proximity: KMe is currently a Program Level 1 facility under RMP because no public receptors are predicted to be impacted in the event of a worst-case release scenario. Additionally, KMe will continue to comply with federal RMP requirements and the equivalent LDEQ program and will remain a Program Level 1 facility under RMP after the Project because the worst-case release scenario following the Project also would not impact public receptors.
- Wastewater Discharge: The very low EJScreen indicator value for wastewater discharge (a value of 0.0065, which is nearly two orders of magnitude lower than the average indicator values reported for the state [0.37] and three orders of magnitude lower than that for the US [12]) signifies that the baseline wastewater discharge condition in the study area does not pose an environmental justice concern for communities surrounding the KMe Facility. Furthermore, KMe operates in compliance with LPDES permit limits established at concentrations that have been determined by LDEQ to maintain compliance with applicable water quality criteria for each receiving waterbody. Discharges within permit limits do not cause adverse environmental effects. Continued compliance with the facility's existing and future revised LPDES permit will ensure that wastewater discharges do not result in adverse environmental impacts.

While the KMe Facility operations following the Project will not result in adverse impacts on the surrounding community and, therefore, will not result in disproportionate impacts, beneficial social impacts will be realized through investments by Koch in the areas of education, community enrichment, entrepreneurship, and environment. In addition, economic benefits to the community will be gained through job creation and labor income during Project construction and continued operations. Koch's investments are informed, in part, through engagement with the community which has included community outreach specific to this permit application. This engagement also has included joint training with local emergency services personnel, employee outreach through volunteer activities, KMe's participation with the St. James Citizens Advisory Panel, hosting two focus group meetings and a subsequent follow up meeting along with a Community Outreach Meeting, and establishment of a community advisory board. Future engagement with local advisory groups (e.g., CAP, CAB) will continue to be a priority, informing KMe's long-term community outreach efforts.

In conclusion, this analysis demonstrates that the proposed Project will not result in adverse impacts either directly or cumulatively considering existing conditions surrounding the KMe Facility. Accordingly, it also demonstrates that the proposed Project will not cause disproportionate impacts (adverse impacts borne disproportionately on the base of race, color, or national origin).

3. SOCIAL AND ECONOMIC BENEFITS

Does a cost benefit analysis of the environmental impact costs balance against the social and economic benefits of the proposed project demonstrate that the latter outweighs the former?

Yes. As noted in Section 2 above, environmental impact costs associated with the proposed Project will largely be avoided, and where the potential for environmental impact costs do exist, those impact costs have been minimized to the greatest extent feasible. Moreover, the social and economic benefits of the proposed optimization of the KMe Facility are significant and outweigh any remaining environmental impact costs. Specifically, the optimization Project strengthens the long-term viability of the Facility (including employment viability) such that the benefits from the original plant (as described below) will continue to be generated and, in many cases, increased. Benefits specifically attributable to the Project include additional property tax base from the capital investment, additional sales and use taxes for the parish and state, additional construction jobs, and an addition of up to 5 new permanent jobs.

3.1 Social Benefits

Social benefits resulting from the investment to build the KMe Facility in St. James Parish began early in the development with the agreement to buy the existing St. James Parish High School. Before the KMe Facility was planned, the St. James Parish School Board had decided to move the St. James High School to a new location; however, at the time funds were only available to buy the land and build a new football stadium at the new location. The developers of the project agreed to buy the high school for approximately $10 million, and this provided enough funds to allow the parish to design the new high school and partially fund its construction. Construction of the new high school was completed in 2018.

Koch believes that strong communities are good for business. The company’s core philosophy is anchored in a belief that for a business to survive and prosper, it must develop and use its capabilities to create sustainable value for both its customers and society. Working directly with local organizations is a key focus, and Koch is investing locally in the following four key areas:

Education: Supporting programs that give students and future workers the skills necessary for today’s workplace. This includes parish school initiatives, local scholarships, and STEAM programs, including:

- River Parishes Community College Scholarships (3 annually including both high school students and adult learners)

- Science, Technology, Engineering, Arts and Mathematics (STEAM) Camp (supported for two years pre-COVID; school has not reinstituted at this time)
- Support of Wildcat Productions which is a graphic design and video production certification curriculum for college and career bound high school students
- College and Career Center Initiatives financial support (e.g., students working with contractors designing and building the field press box)
- St. James High School Academic Champions in Education (ACE) Banquet (program starting in early high school years through graduation)
- St. James Parish Ag Day (educational support for students to learn via a classroom takeaway lesson including farm to table understanding of fast food)

Community Enrichment: Working with organizations that support community needs and allow for employee engagement through volunteering with various organizations, including:

- Hurricane Ida relief efforts[68]
- Food and toy drives
- Festival of the Bonfires (financial and volunteer)
- Veteran's Day Celebration (financial and volunteer)
- Emergency Preparedness services (donation for fire truck equipment & communication equipment upgrades)
- Food Bank
- St. James Arc, the community-based organization that advocates for and with people with intellectual and development disabilities (IDD) and serves them and their families

Entrepreneurship: Promoting entrepreneurial development while fostering economic and critical thinking skills, especially focused on initiatives that align with KII's Principled Based Management™ philosophy, including:

- Junior Achievement (financial education and work readiness) providing both financial and volunteer support; includes developing student's social and interviewing skills for both St. James High School and Lutcher High School

[68] https://newsdirect.com/news/out-of-the-storm-koch-employees-resilient-spirit-helps-hurricane-stricken-neighbors-236704107, accessed November 1, 2022.

Environment: Assist organizations that foster environmental responsibility and provide environmental learning opportunities, including those that promote environmental stewardship, including:

- St. James 4-H (including additional support for tree planting in celebration of Arbor Day at the new St. James High School that included live oak as well as magnolia trees to honor the old Magnolia High School which was an all-Black high school in St. James Parish that closed during desegregation),[69] and
- Pursuing Wildlife Habitat Council Conservation Certification at the KMe Facility (financial and volunteer); process has been initiated.

The Project that is the subject of this application will further optimize the existing KMe Facility and thereby contribute to the ongoing viability of the facility thus enabling Koch to continue these and other similar initiatives.

3.2 Economic Benefits

Capital expenditures to construct the KMe Facility were approximately $1.85 Billion. Now that initial construction of the KMe Facility is complete, operations and maintenance (O&M) supports approximately 135 jobs directly, $46 million annually in Gross State Product, and $3 million in state and local taxes per year. On a net present value basis, over approximately 30 years the facility will contribute approximately $1 billion in labor income to the Louisiana economy and $166 million in state and local tax impacts, including property taxes paid by the facility.[70]

Economists recognize that petrochemical jobs are some of the highest quality jobs in the United States as cited from the U.S. Department of Labor Bureau of Labor Statistics (May 2020).[71]

In addition to the direct economic impacts created in the form of new jobs at the KMe Facility, operation of the facility is resulting in positive indirect economic impacts such as spending in the local and state economy for ongoing operations and maintenance materials and services, income tax payments from facility workers, and increased development in local services and related businesses, including the creation of additional indirect jobs. Indirect economic effects are referred to as multiplier or ripple effects. The KMe Facility, supporting

[69] https://www.theadvocate.com/baton_rouge/news/environment/st-james-high-moved-to-make-way-for-chemical-plant-new-oaks-magnolias-echo-old/article_91512fde-9b57-11ed-94c3-87620df85d58.html, accessed February 17, 2023.

[70] The economic impacts of Koch Methanol St. James – M1, Dave E. Dismukes, Ph.D., Gregory B. Upton, Jr., Ph.D., Center for Energy Studies, Louisiana State University, October 2021.

[71] United States Department of Labor Occupational Employment Statistics, Occupational Employment and Wages, May 2020, http://www.bls.gov/oes/current/oes518091.htm, accessed February 16, 2023.

approximately 135 direct jobs to operate the facility results in a total economic impact of 300 new permanent jobs created.[72]

The construction of the KMe Facility spanned from 1st Quarter 2017 to commercial production in 3rd Quarter 2021 and is estimated to have supported 2,500 jobs, $611 million in labor income, $1 billion in Gross State Product, and $72 million in state and local taxes.

Although the KMe Facility is located in St. James Parish, the initial construction phase generated economic impacts across the state. Estimates suggest:

- $50+ million in labor income across three parishes
- $10-$50 million in labor income across an additional ten parishes
- $5-10 million in labor income across an additional seven parishes

As noted earlier, the Project represented in this application strengthens the Facility's long-term viability (including employment viability) such that the benefits from the original plant (as described above) will continue to be generated. Additionally, it is currently estimated that this Project will result in an additional $50 million in capital expenditures resulting in an additional annual tax revenue; an additional $100 million in non-capital expenditures, including labor, over the engineering, design and construction period (providing approximately 50-100 temporary jobs); associated sales and use tax revenue; and an addition of up to 5 new permanent jobs.

4. ALTERNATIVE PROJECTS

Are there alternative projects that would offer more protection to the environment than the proposed project without unduly curtailing non-environmental benefits?

No. There is no alternative project that would achieve the same goal as the proposed Project at the KMe Facility. The KMe Facility produces commercial grade methanol for sale to domestic and international customers. The facility is sized and situated to make an economically viable contribution to anticipated market demands for the product, with the flexibility to ship via truck, rail and barge to North American customers as well as to export product via oceangoing vessels to international customers. When processing wastewater streams that require treatment prior to discharge, the KMe Facility is equipped with a wastewater collection and treatment plant that is designed and operated to meet the stringent federal and state wastewater discharge requirements of the LPDES permit. The KMe Facility was designed to minimize the amount of methanol sent to its wastewater collection and treatment plant, and wastewater streams that contain higher concentrations of methanol are recycled back into the process to recover the methanol product. The KMe Facility licensed and installed Lurgi MegaMethanol® technology is a highly efficient process that results in reduced consumption of natural gas feedstock as compared to conventional methanol production technologies. This along with the air emissions controls that the facility utilizes results in lower emissions of GHG, NOx, CO, SO_2, PM and other pollutants per unit of methanol produced as compared to conventional methanol production technologies.

The proposed Project has been conceived and designed specifically to address opportunities for improved utilization and efficiency and increase capacity at the existing KMe Facility. The Project leverages the existing asset and infrastructure and will be constructed within the existing facility footprint. Building a greenfield facility or a new production train to achieve the same amount of additional methanol production would be highly inefficient relative to utilizing the KMe Facility's existing infrastructure (i.e., already invested in utility/base support such as steam system, flare, control rooms, water supply, electrical systems, etc.). Additionally, Koch does not own any other methanol production facilities where this Project could be executed. Accordingly, Koch is aware of no alternative projects that could achieve the Project goals with a lesser environmental impact.

The following sections discuss market supply and demand data that support the need for the KMe Optimization Project and future production increases along with alternative options that were evaluated for the ethane vaporizer portion of the proposed Project.

4.1 Market Supply and Demand

Global methanol demand is forecast to grow up to 6% compound annual growth rate (CAGR) over the next ten years.[72] Energy related demands create a growing market for methanol supported by clean energy policies and commercialization of methanol as a lower emission fuel (e.g., marine fuel).[73] Energy related applications for methanol (e.g., fuel) are a growing sector of global methanol demand.[74]

Methanol to olefins (MTO) represents a stable demand for methanol, as historical MTO operating rates have been resilient through different methanol/olefin price cycles. High oil prices and a forecasted slowdown in olefin capacity additions should support MTO affordability leading to stable demand. Via the MTO process, methanol is an alternative feedstock to produce light olefins (ethylene and propylene), which are then used to produce various everyday products used in packaging, textiles, plastic parts/containers and auto components. MTO applications make up approximately 17% of the global methanol demand.

Traditional chemical applications of methanol have seen steady growth. Demand growth is linked to global economic growth. The International Monetary Fund (IMF) World Economic Outlook forecasts approximately 3-4% annual GDP growth post COVID-19 recovery. Traditional chemical applications for methanol make up approximately 56% of the global methanol demand.[75]

4.2 Alternative Processes Considered for Project Scope Items

Given that this Project is intended to increase the efficiency and capacity of an existing facility, alternatives are limited in scope. Any expansion projects beyond the current scope would require additional reactor capacity and infrastructure, thereby significantly increasing project cost, footprint and impacts. Notwithstanding this limitation, alternatives were considered for one of the primary Project scope items, namely injecting ethane into the natural gas feed to increase the carbon to hydrogen ratio. To accomplish this at the optimum temperature, liquid ethane needs to be vaporized into the natural gas feed. The following three technologies were evaluated to accomplish the vaporization:

- Shell and tube exchanger using low pressure steam (65# sat'd) with an estimated capital cost of $55,000
- Electric heater (5KV) with an estimated capital cost of $550,000

[72] https://www.globenewswire.com/en/news-release/2022/07/06/2475166/0/en/Demand-for-methanol-is-projected-to-register-a-CAGR-of-6-through-2032-Persistence-Market-Research.html, accessed October 31, 2022.

[73] https://eibip.eu/publication/methanol-fuel/, accessed October 31, 2022.

[74] https://www.methanol.org/wp-content/uploads/2020/03/Future-Fuel-Strategies-Methanol-Automotive-Fuel-Primer.pdf, accessed October 31, 2022.

[75] Chemical Market Analytics by OPIS, 2022 Edition: Spring 2022 Update

- Fired heater (Fuel gas) with an estimated capital cost of $250,000

The shell and tube exchanger option was selected as the technology for heating the ethane feed, as it was the most efficient and effective from an energy standpoint due to the fact that it would utilize excess steam or, worst case, require some additional firing of the existing boiler. Even if additional boiler firing is required, the shell and tube exchanger option was determined to be significantly more energy efficient than the other two options. The electric heater was deemed to be economically unfavorable. Furthermore, it would result in additional electrical demand and increased emissions at the source of the third-party utility company. The fired heater was eliminated due to its cost compared to the shell/tube exchanger as well as its production of air emissions.

5. ALTERNATIVE SITES

Are there alternative sites that would offer more protection to the environment than the proposed project site without unduly curtailing non-environmental benefits?

No. As the Project involves modifications to an existing facility, a traditional alternative sites analysis as would be conducted for a "greenfield" facility is not relevant for this case. Because the proposed Project has been conceived and designed specifically to address increased design production rate and thereby further optimize the existing KMe Facility, the Project could not be conducted at any alternative sites, particularly because Koch does not own or operate any other methanol production facilities.

Furthermore, the KMe Facility site is located in close proximity to an existing ethane supply line, thereby making it ideally situated for the ethane feed gas project scope item. Additionally, the Project will be constructed at an already developed site with a Wastewater Treatment Plant capable of handling the additional wastewater flow that will result. The site is zoned for heavy industrial activity and located in an industrial zone[76], and the Project will be implemented without impacting any known archaeological sites. In addition, the KMe Facility is newly constructed and is equipped with some of the most stringent air emissions controls as further explained in the BACT analysis in Part 4 of the November 2022 Application and Part 3 of the Addendum. The facility is located in an area designated attainment for all national NAAQS, thereby avoiding emissions increases in a nonattainment area, and the Air Quality Impacts Analysis demonstrates the Project will not cause or contribute to an exceedance of the NAAQS or LAAS.

The KMe Facility was constructed in close proximity to required infrastructure (e.g., natural gas pipeline, rail, and marine terminal), which minimized environmental impacts associated with construction. The facility was built on a site developed for agriculture, reducing potential impacts to wetlands as compared to selecting a site characterized by previously undisturbed marsh or bottomland forested areas. The facility is not located adjacent to or in the vicinity of any estuarine bodies. As discussed in Section 2.9, no threatened or endangered species will be impacted by the Project. Additionally, the KMe facility is over 100 kilometers away from the Breton Sound Class I Wildlife Management Area. Wildlife populations present near the facility are not substantial in terms of numbers, as the majority of the area has been cultivated for farmland.

Finally, as discussed above, the KMe Facility has brought significant economic and social benefits to the local community. The facility is located between the Baton

[76] https://www.stjamesla.com/DocumentCenter/View/690/Land-Use-Map-PDF, accessed October 31, 2022.

Rouge and New Orleans metropolitan areas, with the I-10 interstate highway and major state highways providing easy access for workers. Additionally, Louisiana, and St. James Parish in particular, provides a positive business climate, including collaborative efforts by state and local officials to support Koch in achieving the project goals, including Louisiana's workforce development programs and outreach by Louisiana Economic Development. In sum, there are no alternative sites that would offer more protection to the environment than the site of the existing KMe Facility without unduly curtailing non-environmental benefits.

6. MITIGATING MEASURES

Are there mitigating measures which would offer more protection to the environment than the facility as proposed without unduly curtailing non-environmental benefits?

No. There are no additional mitigating measures which would offer more protection to the environment than the Project as proposed without unduly curtailing the Project's non-environmental benefits. The KMe Facility was constructed and is operated in a manner that ensures the potential and real adverse environmental effects are avoided to the maximum extent possible.

The KMe Facility was designed to minimize methanol wastewater streams sent to wastewater treatment through the incorporation of recycling and reprocessing. Additionally, as discussed in detail in Section 2 above, the wastewater treatment plant is designed and operated to meet the stringent federal and state wastewater discharge requirements of the LPDES permit, which incorporates Technology Based Effluent Limits (TBELs). The proposed Project will not affect any permitted discharges to the St. James Canal.

As discussed in detail under Section 2 above, the KMe Facility was also designed and constructed with state-of-the-art pollution abatement equipment to meet stringent control standards. Once the proposed Project is implemented, environmental impacts will continue to be minimized by meeting or exceeding MACT and NSPS standards for emissions of NOx, CO, VOC, and methanol, as well as BACT for NOx, CO, PM, PM_{10}, $PM_{2.5}$, VOC, and GHG. As noted earlier, Koch has voluntarily completed a BACT analysis demonstrating that BACT level (and in some cases beyond BACT level) controls will be applied to all KMe Facility emissions units authorized by the permit thereby minimizing air emissions beyond what is required under applicable air permitting rules.

Meeting environmental standards for waste management will also assure environmental impacts are minimized. The KMe Facility is a Small Quantity Generator (SQG), as the facility produces less than 2,200 lb/month of hazardous waste. Koch also generates industrial solid wastes. Solid and hazardous waste minimization practices are implemented facility-wide through a variety of best management practices, from generation minimization to reuse where possible. The proposed Project is not anticipated to generate any new wastes, change the facility's generator status from SQG, or require any updates to current waste management practices. Wastes generated during construction of the Project will be managed in accordance with applicable regulations.

Koch is committed to design and construct the proposed Project and to continue operating the KMe Facility so as to minimize environmental impacts to the greatest extent practical, taking into consideration economic and energy costs. Beyond the regulatory and permitting requirements, Koch intends to continue driving stewardship at the site. This includes:

a. Further consideration of CCS opportunities for control of GHG emissions from the SMR and Boiler as CCS technology evolves and economic circumstances change, including potentially utilizing onsite or nearby sequestration
b. Periodic communication with LDEQ on progress of CCS considerations
c. Koch has invested in and has recently commissioned a steam condensing electrical generation turbine to leverage excess process steam (otherwise released to atmosphere) to reduce grid electricity consumption by 30-50% and is working to optimize up to 90% under normal operation
d. Continued community outreach (including initiation of a Community Advisory Board) to foster further discussions with members of the community, such as updates on local area monitoring performed by LDEQ
e. Koch is working with 3rd party suppliers to reduce trips resulting in loss of O_2 as well as adding an additional methane line at the site – these projects will mitigate flaring (from O_2 production trips or from primary supplier upsets) which will lead to the reduction of emissions associated with flaring
f. Koch recently invested in a Dissolved Air Flotation (DAF) unit to replace its Lamella Clarifier to further improve water quality by reducing suspended solids in the plant’s effluent. Additionally, installation of a DAF has resulted in improved solids handling which should also have reduced hydrogen sulfide emissions.
g. Koch is evaluating options for installing “fence line” monitoring at the site with the full intention to install such monitoring

Finally, the non-environmental social and economic benefits of the KMe Facility are substantial, with an initial capital investment in the local and state economy of approximately $1.85 billion and approximately 135 direct new permanent jobs created to operate the facility (resulting in a total increase of approximately 300 permanent jobs when indirect jobs are considered), $46 million in Gross State Product generated each year, and greater than $3 million in state and local taxes annually. The Project will include an additional investment of approximately $150 million ($50 million in equipment and $100 million in non-capital expenditures, including labor, providing approximately 50-100 temporary jobs), will provide additional property tax revenue as well as additional sales and use tax benefits, and will generate up to 5 new permanent jobs. As noted earlier, the Project strengthens the Facility’s long-term viability (including employment viability) such that the benefits from the facility will continue.

FIGURES

PROJECT: 1690025314 | DATED: 3/7/2023 | DESIGNER: SSHI

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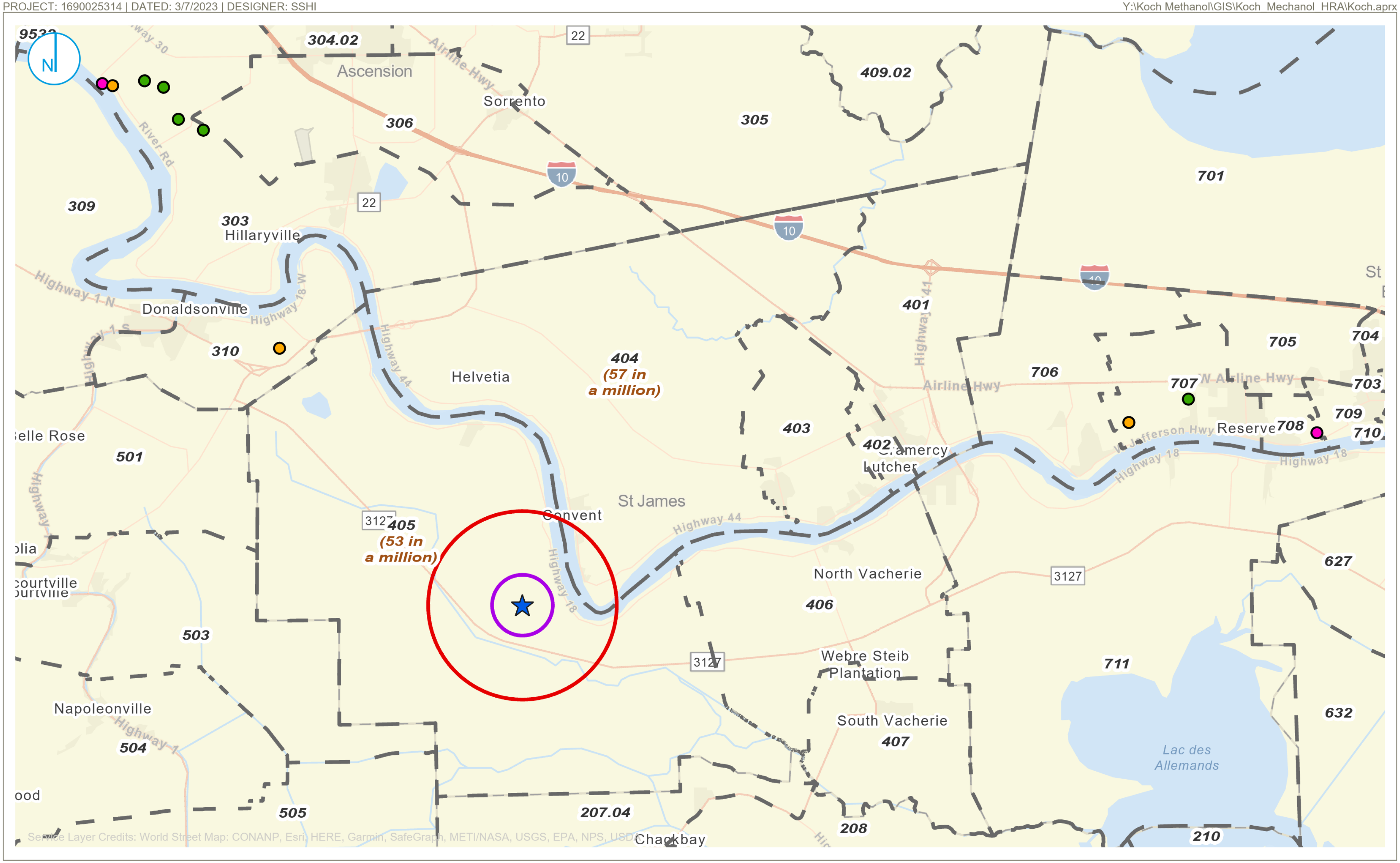


LEGEND

- Koch Methanol Facility
- 1-Mile Radius Study Area
- 3.1-Mile Radius Study Area
- 2020 Census Tract *(Cancer Risk)*

Major Emitters (2017 AirToxScreen Facilities)
Risk Driving Chemical

- Chloroprene
- Ethylene Oxide
- Formaldehyde

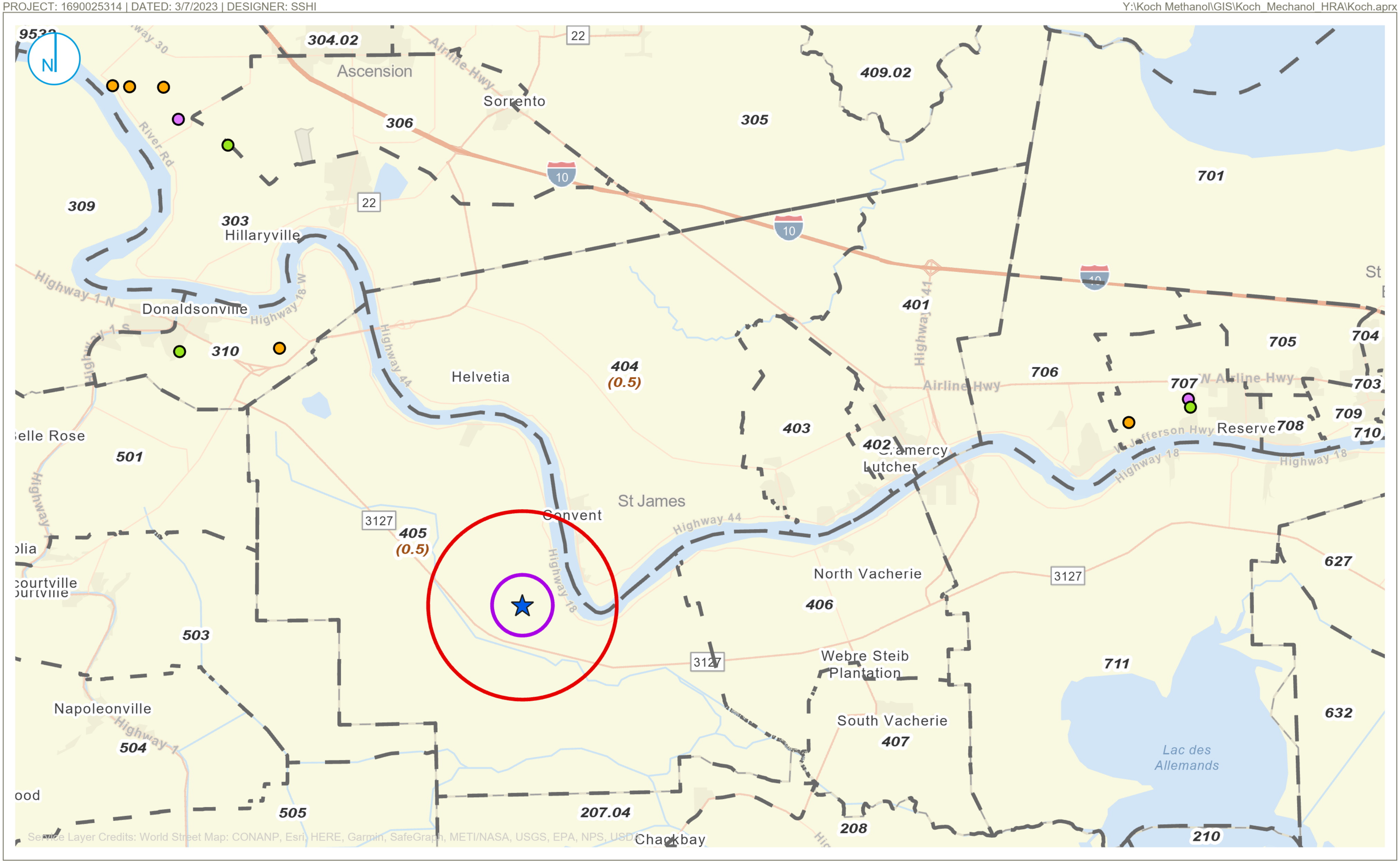
0 0.5 1 2 3 Miles

EJSCREEN STUDY AREAS AND NEARBY MAJOR SOURCES EMITTING CANCER RISK DRIVING AIR TOXIC CHEMICALS

Koch Methanol

FIGURE D-1

RAMBOLL US CONSULTING, INC.
A RAMBOLL COMPANY



LEGEND

- Koch Methanol Facility
- 1-Mile Radius Study Area
- 3.1-Mile Radius Study Area
- 2020 Census Tract *(Respiratory HI)*

Major Emitters (2017 AirToxScreen Facilities)
HI Driving Chemical

- Acetaldehyde
- Diesel PM
- Formaldehyde

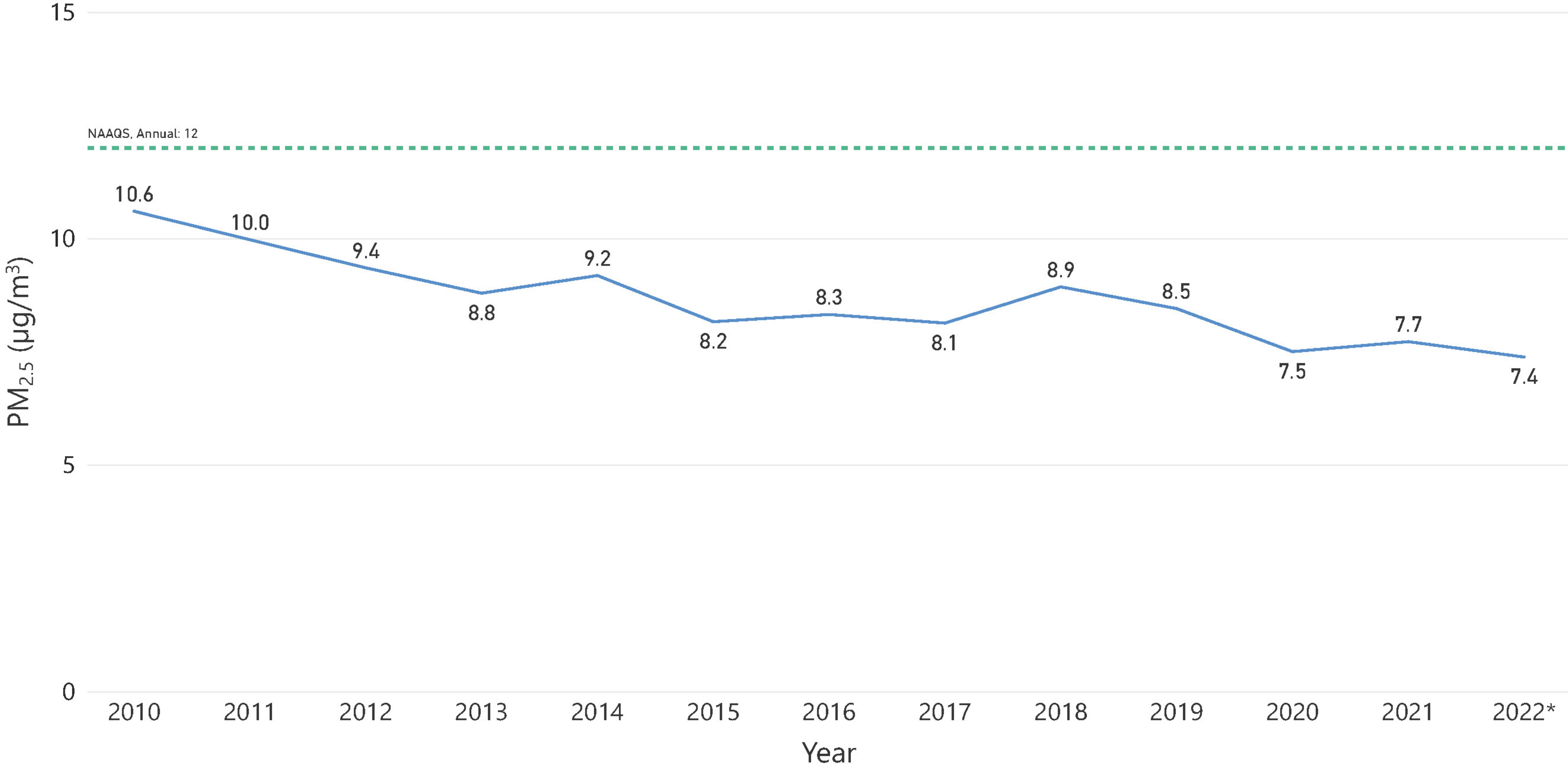
0 0.5 1 2 3 Miles

EJSCREEN STUDY AREAS AND NEARBY MAJOR SOURCES EMITTING RESPIRATORY HI DRIVING AIR TOXIC CHEMICALS

Koch Methanol

FIGURE D-2

RAMBOLL US CONSULTING, INC.
A RAMBOLL COMPANY



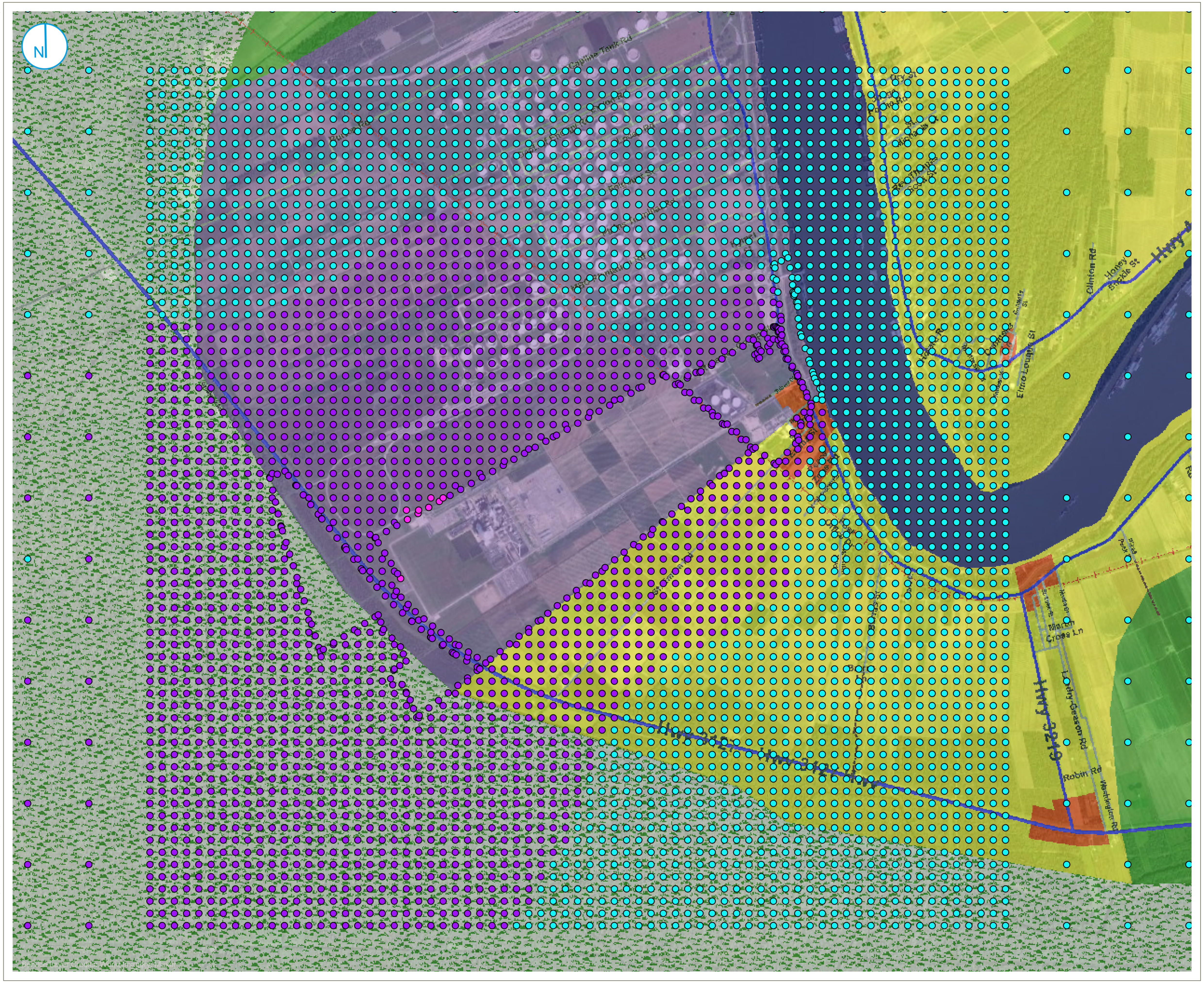
$PM_{2.5}$ ANNUAL AVERAGE CONCENTRATIONS AT GEISMAR MONITORING STATION NEAR KOCH METHANOL

FIGURE D-3

RAMBOLL US CONSULTING, INC.
A RAMBOLL COMPANY

Koch Methanol

*Note: 2022 values are not full-year values but values through the first three quarters of the year (January 1 - September 30). Value is therefore provisional.



LEGEND

Cancer Risk

- > 1 in one million and <= 2 in one million
- > 0.1 in one million and <= 1 in one million
- >= 0.006 in one million and <= 0.1 in one million

Land Use

- Commercial / Residential Mixed
- Commercial
- Industrial
- Agriculture
- Residential Growth
- Existing Residential / Future Industrial
- Water
- Wetlands

0 0.5 1 Miles

FACILITY AIR TOXIC RESIDENTIAL CANCER RISK ESTIMATES

Koch Methanol

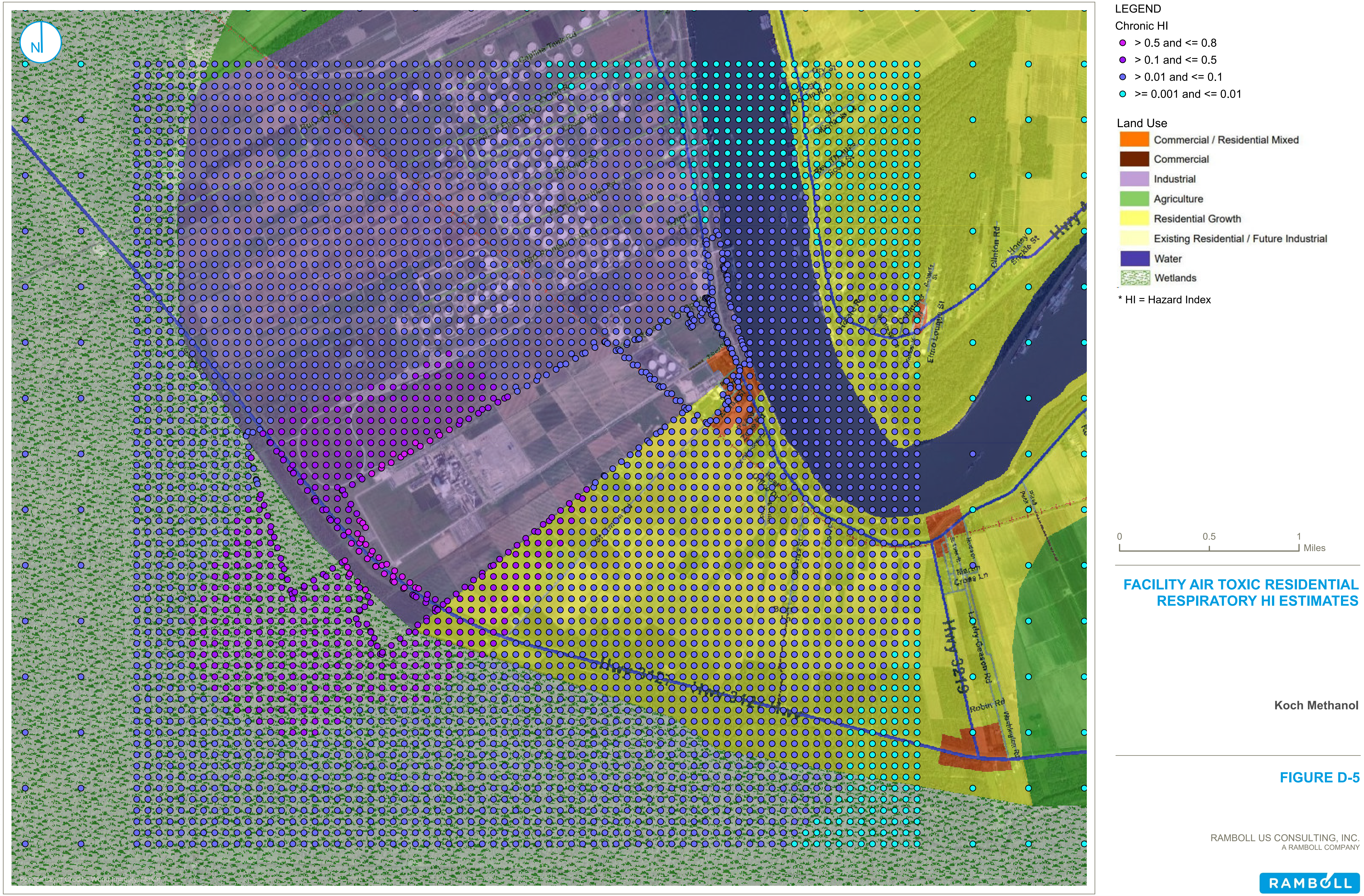
FIGURE D-4

RAMBOLL US CONSULTING, INC.
A RAMBOLL COMPANY

RAMBOLL

Y:\Koch Methanol\GIS\Koch_Mechanol_HRA\Koch_Mechanol_HRA.aprx

PROJECT: 1690025314 | DATED: 3/7/2023 | DESIGNER: SSHI



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PROJECT: 1690025134 | DATED: 1/24/2023 | DESIGNER: SSHI

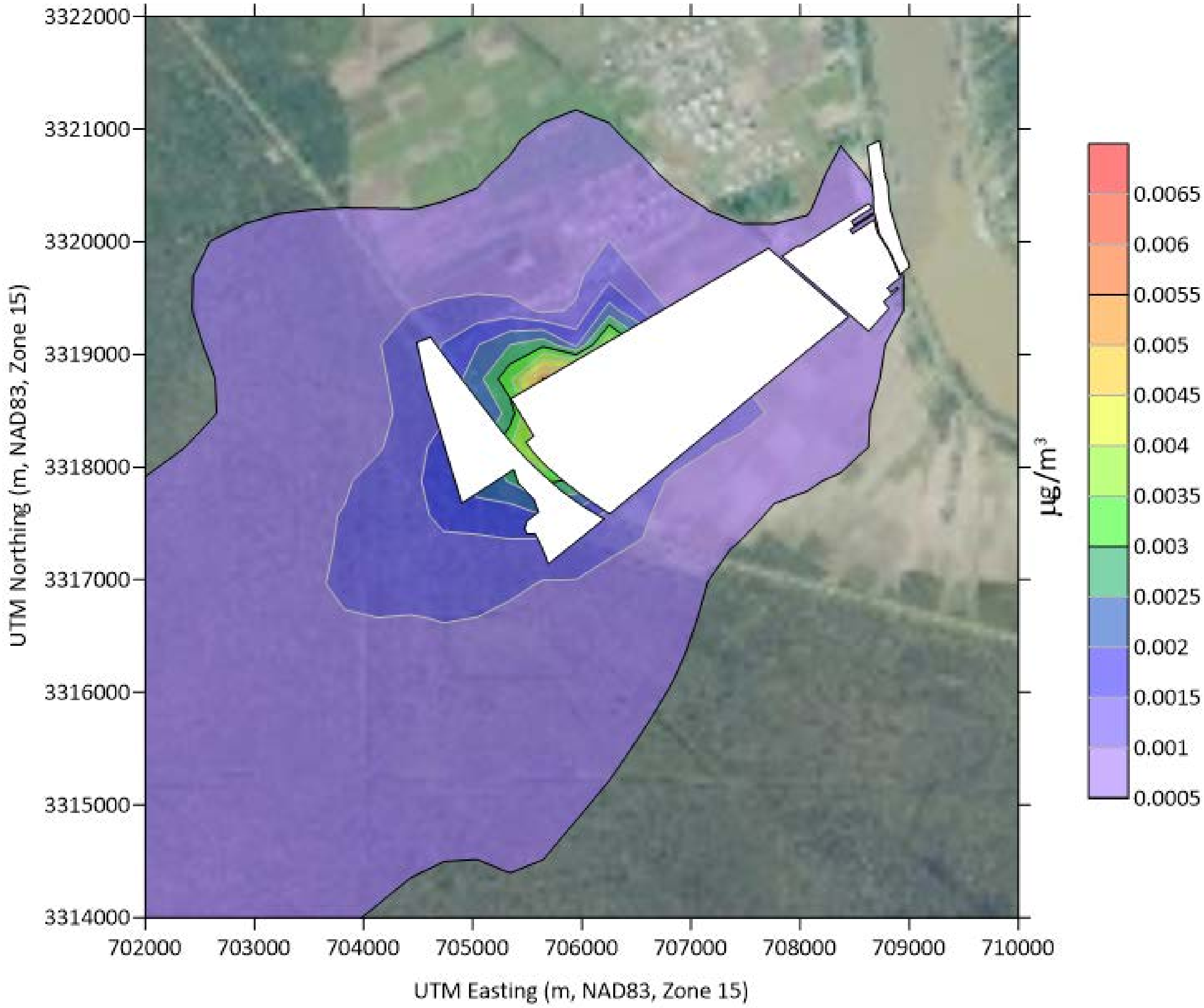
FACILITY AIR TOXIC RESIDENTIAL RESPIRATORY HI ESTIMATES

Koch Methanol

FIGURE D-5

RAMBOLL US CONSULTING, INC.
A RAMBOLL COMPANY

Y:\Koch Methanol\EJ\Figures\Figure D-7_DPM Annual



PROJECT: 1690025314 | DATED: 01-Feb-23 | DESIGNER: SSHI

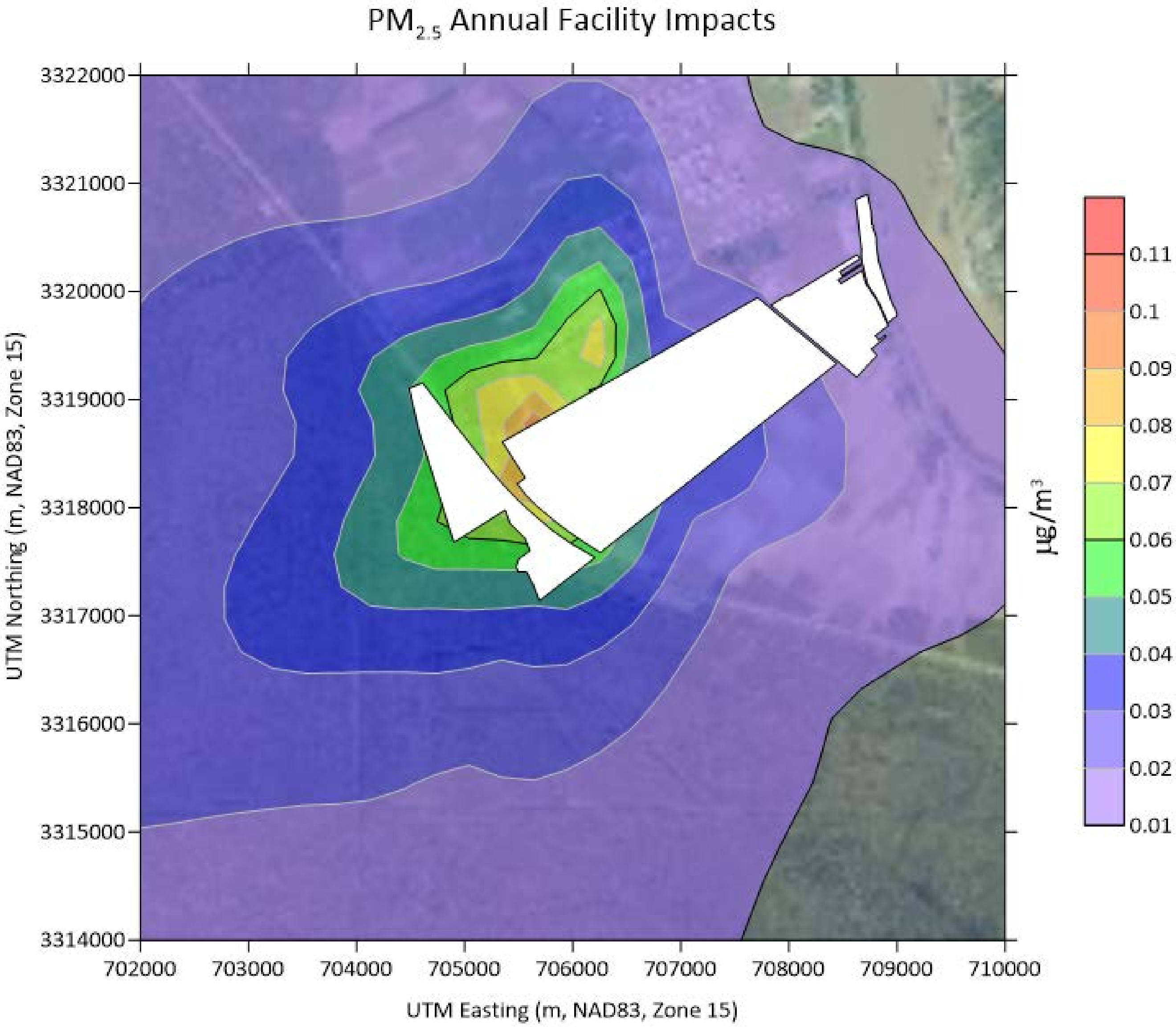
AERMOD-PREDICTED FACILITY ANNUAL DPM CONCENTRATIONS

FIGURE D-6

RAMBOLL US CONSULTING, INC
A RAMBOLL COMPANY

Koch Methanol

Y:\Koch Methanol\EJ\Figures\Figure D-8_PM25 Annual



PROJECT: 1690025314 | DATED: 01-Feb-23 | DESIGNER: SSHI

AERMOD-PREDICTED FACILITY ANNUAL PM2.5

FIGURE D-7

Koch Methanol

RAMBOLL US CONSULTING, INC
A RAMBOLL COMPANY

ATTACHMENT D-1
EJSCREEN REPORTS

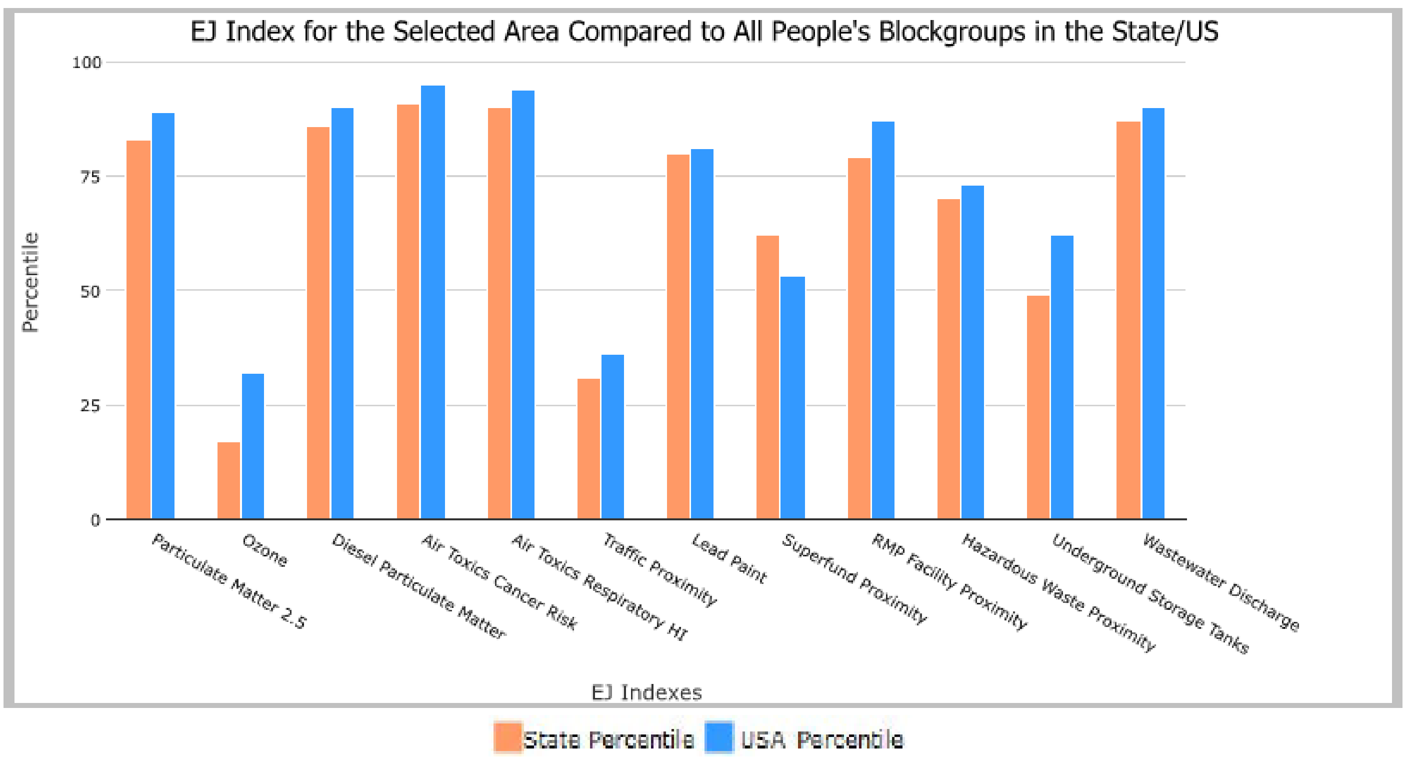
EJScreen Report (Version 2.1)

3.1 miles Ring Centered at 29.984221,-90.850335, LOUISIANA, EPA Region 6

Approximate Population: 1,142

Input Area (sq. miles): 30.18

Selected Variables	State Percentile	USA Percentile
Environmental Justice Indexes		
EJ Index for Particulate Matter 2.5	83	89
EJ Index for Ozone	17	32
EJ Index for Diesel Particulate Matter*	86	90
EJ Index for Air Toxics Cancer Risk*	91	95
EJ Index for Air Toxics Respiratory HI*	90	94
EJ Index for Traffic Proximity	31	36
EJ Index for Lead Paint	80	81
EJ Index for Superfund Proximity	62	53
EJ Index for RMP Facility Proximity	79	87
EJ Index for Hazardous Waste Proximity	70	73
EJ Index for Underground Storage Tanks	49	62
EJ Index for Wastewater Discharge	87	90



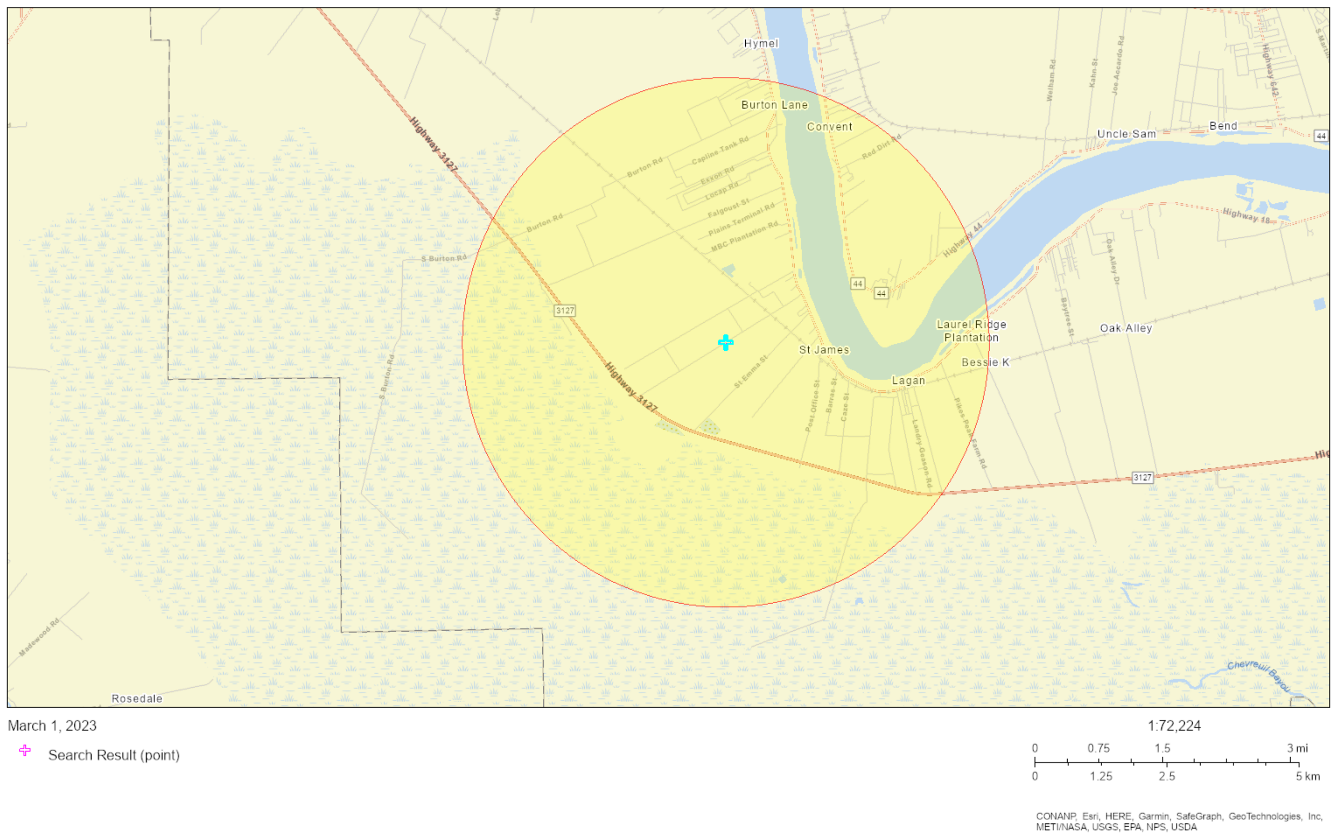
This report shows the values for environmental and demographic indicators and EJSCREEN indexes. It shows environmental and demographic raw data (e.g., the estimated concentration of ozone in the air), and also shows what percentile each raw data value represents. These percentiles provide perspective on how the selected block group or buffer area compares to the entire state, EPA region, or nation. For example, if a given location is at the 95th percentile nationwide, this means that only 5 percent of the US population has a higher block group value than the average person in the location being analyzed. The years for which the data are available, and the methods used, vary across these indicators. Important caveats and uncertainties apply to this screening-level information, so it is essential to understand the limitations on appropriate interpretations and applications of these indicators. Please see EJSCREEN documentation for discussion of these issues before using reports.

EJScreen Report (Version 2.1)

3.1 miles Ring Centered at 29.984221,-90.850335, LOUISIANA, EPA Region 6

Approximate Population: 1,142

Input Area (sq. miles): 30.18



Sites reporting to EPA	
Superfund NPL	0
Hazardous Waste Treatment, Storage, and Disposal Facilities (TSDF)	0

EJScreen Report (Version 2.1)

3.1 miles Ring Centered at 29.984221,-90.850335, LOUISIANA, EPA Region 6

Approximate Population: 1,142

Input Area (sq. miles): 30.18

Selected Variables	Value	State Avg.	%ile in State	USA Avg.	%ile in USA
Pollution and Sources					
Particulate Matter 2.5 (μg/m^3)	9.29	9.2	58	8.67	71
Ozone (ppb)	34.6	37	5	42.5	9
Diesel Particulate Matter* (μg/m^3)	0.388	0.297	73	0.294	70-80th
Air Toxics Cancer Risk* (lifetime risk per million)	54	40	92	28	95-100th
Air Toxics Respiratory HI*	0.5	0.45	90	0.36	95-100th
Traffic Proximity (daily traffic count/distance to road)	31	640	20	760	18
Lead Paint (% Pre-1960 Housing)	0.23	0.2	65	0.27	51
Superfund Proximity (site count/km distance)	0.02	0.076	30	0.13	18
RMP Facility Proximity (facility count/km distance)	0.75	0.96	61	0.77	68
Hazardous Waste Proximity (facility count/km distance)	0.46	1.4	45	2.2	43
Underground Storage Tanks (count/km^2)	0.081	2.2	23	3.9	27
Wastewater Discharge (toxicity-weighted concentration/m distance)	0.0065	0.37	69	12	65
Socioeconomic Indicators					
Demographic Index	68%	41%	81	35%	88
People of Color	79%	42%	80	40%	83
Low Income	57%	38%	74	30%	86
Unemployment Rate	8%	7%	69	5%	76
Limited English Speaking Households	0%	2%	0	5%	0
Less Than High School Education	20%	14%	70	12%	80
Under Age 5	6%	7%	58	6%	60
Over Age 64	16%	15%	57	16%	51

*Diesel particular matter, air toxics cancer risk, and air toxics respiratory hazard index are from the EPA's Air Toxics Data Update, which is the Agency's ongoing, comprehensive evaluation of air toxics in the United States. This effort aims to prioritize air toxics, emission sources, and locations of interest for further study. It is important to remember that the air toxics data presented here provide broad estimates of health risks over geographic areas of the country, not definitive risks to specific individuals or locations. Cancer risks and hazard indices from the Air Toxics Data Update are reported to one significant figure and any additional significant figures here are due to rounding. More information on the Air Toxics Data Update can be found at: https://www.epa.gov/haps/air-toxics-data-update.

For additional information, see: www.epa.gov/environmentaljustice

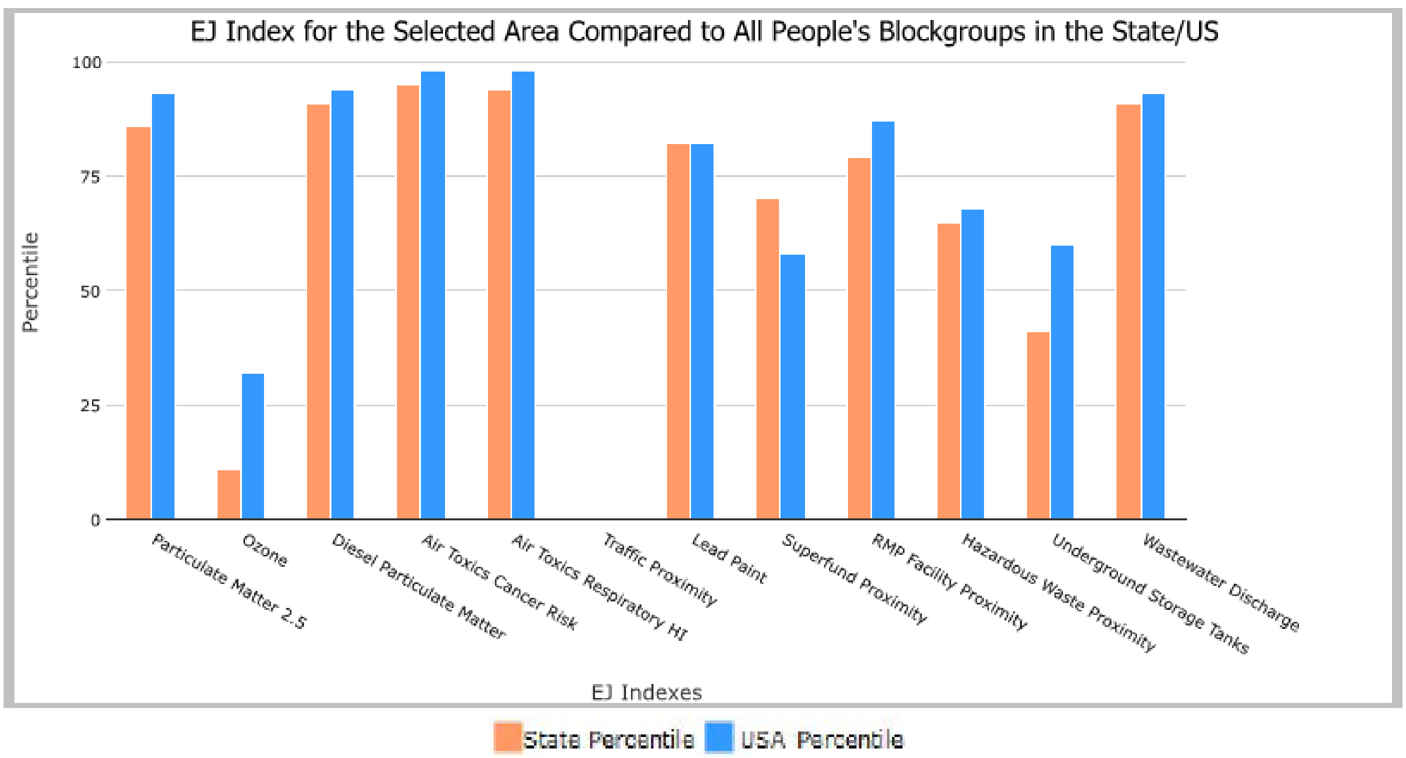
EJScreen Report (Version 2.1)

1 mile Ring Centered at 29.984221,-90.850335, LOUISIANA, EPA Region 6

Approximate Population: 41

Input Area (sq. miles): 3.14

Selected Variables	State Percentile	USA Percentile
Environmental Justice Indexes		
EJ Index for Particulate Matter 2.5	86	93
EJ Index for Ozone	11	32
EJ Index for Diesel Particulate Matter*	91	94
EJ Index for Air Toxics Cancer Risk*	95	98
EJ Index for Air Toxics Respiratory HI*	94	98
EJ Index for Traffic Proximity	N/A	N/A
EJ Index for Lead Paint	82	82
EJ Index for Superfund Proximity	70	58
EJ Index for RMP Facility Proximity	79	87
EJ Index for Hazardous Waste Proximity	65	68
EJ Index for Underground Storage Tanks	41	60
EJ Index for Wastewater Discharge	91	93



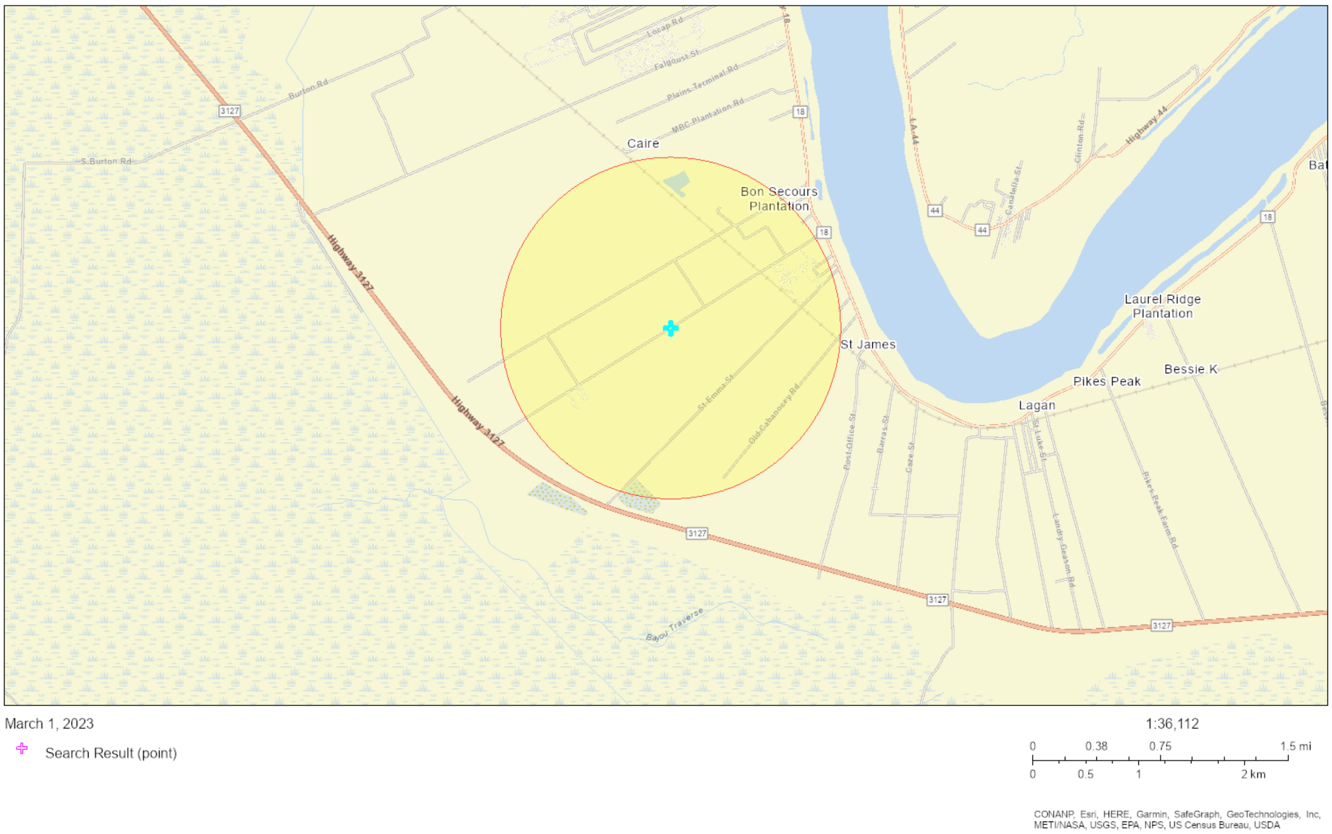
This report shows the values for environmental and demographic indicators and EJSCREEN indexes. It shows environmental and demographic raw data (e.g., the estimated concentration of ozone in the air), and also shows what percentile each raw data value represents. These percentiles provide perspective on how the selected block group or buffer area compares to the entire state, EPA region, or nation. For example, if a given location is at the 95th percentile nationwide, this means that only 5 percent of the US population has a higher block group value than the average person in the location being analyzed. The years for which the data are available, and the methods used, vary across these indicators. Important caveats and uncertainties apply to this screening-level information, so it is essential to understand the limitations on appropriate interpretations and applications of these indicators. Please see EJSCREEN documentation for discussion of these issues before using reports.

EJScreen Report (Version 2.1)

1 mile Ring Centered at 29.984221,-90.850335, LOUISIANA, EPA Region 6

Approximate Population: 41

Input Area (sq. miles): 3.14



Sites reporting to EPA	
Superfund NPL	0
Hazardous Waste Treatment, Storage, and Disposal Facilities (TSDF)	0

EJScreen Report (Version 2.1)

1 mile Ring Centered at 29.984221,-90.850335, LOUISIANA, EPA Region 6

Approximate Population: 41

Input Area (sq. miles): 3.14

Selected Variables	Value	State Avg.	%ile in State	USA Avg.	%ile in USA
Pollution and Sources					
Particulate Matter 2.5 (μg/m^3)	9.24	9.2	55	8.67	69
Ozone (ppb)	34	37	3	42.5	8
Diesel Particulate Matter* (μg/m^3)	0.387	0.297	73	0.294	70-80th
Air Toxics Cancer Risk* (lifetime risk per million)	50	40	89	28	95-100th
Air Toxics Respiratory HI*	0.5	0.45	90	0.36	95-100th
Traffic Proximity (daily traffic count/distance to road)	N/A	640	N/A	760	N/A
Lead Paint (% Pre-1960 Housing)	0.16	0.2	54	0.27	42
Superfund Proximity (site count/km distance)	0.021	0.076	32	0.13	19
RMP Facility Proximity (facility count/km distance)	0.46	0.96	52	0.77	57
Hazardous Waste Proximity (facility count/km distance)	0.18	1.4	31	2.2	29
Underground Storage Tanks (count/km^2)	0.0066	2.2	14	3.9	0
Wastewater Discharge (toxicity-weighted concentration/m distance)	0.007	0.37	70	12	66
Socioeconomic Indicators					
Demographic Index	78%	41%	90	35%	94
People of Color	86%	42%	85	40%	87
Low Income	70%	38%	87	30%	93
Unemployment Rate	2%	7%	36	5%	30
Limited English Speaking Households	0%	2%	0	5%	0
Less Than High School Education	14%	14%	55	12%	68
Under Age 5	0%	7%	0	6%	0
Over Age 64	28%	15%	85	16%	85

*Diesel particular matter, air toxics cancer risk, and air toxics respiratory hazard index are from the EPA's Air Toxics Data Update, which is the Agency's ongoing, comprehensive evaluation of air toxics in the United States. This effort aims to prioritize air toxics, emission sources, and locations of interest for further study. It is important to remember that the air toxics data presented here provide broad estimates of health risks over geographic areas of the country, not definitive risks to specific individuals or locations. Cancer risks and hazard indices from the Air Toxics Data Update are reported to one significant figure and any additional significant figures here are due to rounding. More information on the Air Toxics Data Update can be found at: https://www.epa.gov/haps/air-toxics-data-update.

For additional information, see: www.epa.gov/environmentaljustice

ATTACHMENT D-2
EJ MODELING INPUT TABLES

Table 1. Point Source Parameters in EJ Modeling							
		Location		Stack Parameters			
Source	AERMOD ID	UTM-x (m)	UTM-y (m)	Height (ft)	Temperature (F)	Velocity (ft/s)	Diameter (ft)
Steam Methane Reformer	M1_SMR	706279.00	3318808.00	213.25	336.00	78.93	10.66
Auxiliary Boiler	M1_BLR	706241.00	3318778.00	213.25	300.00	44.59	8.26
Process Condensate Stripper Vent	M1_PCV	706349.30	3318742.00	93.83	248	1.09	5.25
Flare	M1_FL_LT	705987.00	3318635.00	185.00	1832	65.60	4.45
Emergency Generator	M1_EGEN	706247.00	3318690.00	12.01	918	182.55	1.35
Fire Pump 1	M1_FP1	706440.00	3318692.00	12.01	918	173.85	0.49
Fire Pump 2	M1_FP2	706458.00	3318702.00	12.01	918	173.85	0.49
Fire Pump 3	M1_FP3	706468.00	3318707.00	12.01	918	173.85	0.49
Cooling Tower Cell 1	M1_CT_1	706192.00	3318720.00	46.00	68	22.13	34.38
Cooling Tower Cell 2	M1_CT_2	706198.00	3318709.00	46.00	68	22.13	34.38
Cooling Tower Cell 3	M1_CT_3	706205.00	3318697.00	46.00	68	22.13	34.38
Cooling Tower Cell 4	M1_CT_4	706211.00	3318687.00	46.00	68	22.13	34.38
Cooling Tower Cell 5	M1_CT_5	706217.00	3318675.00	46.00	68	22.13	34.38
Cooling Tower Cell 6	M1_CT_6	706224.00	3318664.00	46.00	68	22.13	34.38
Cooling Tower Cell 7	M1_CT_7	706230.00	3318653.00	46.00	68	22.13	34.38
Cooling Tower Cell 8	M1_CT_8	706236.00	3318642.00	46.00	68	22.13	34.38
Cooling Tower Cell 9	M1_CT_9	706243.00	3318632.00	46.00	68	22.13	34.38
Cooling Tower Cell 10	M1_CT_10	706248.00	3318620.00	46.00	68	22.13	34.38
Cooling Tower Cell 11	M1_CT_11	706233.00	3318610.00	46.00	68	22.13	34.38
Ammonia Tank	M1_TKNH3	706589.00	3318651.00	8.01	ambient	0.003	3.28
Methanol Scrubber	M1_D4001	706247.00	3318914.00	66.01	ambient	0.003	3.28
Admin Building Generator	M1ADGEN	708673.52	3319560.32	11.98	1175	264.51	0.04
Gasoline Tank	M1GASTK	706807.00	3318474.00	3.28	ambient	0.003	3.28
Generac 1	T1_EGEN1	708465.00	3319620.00	13.75	987	324.96	1.12
Generac 2	T1_EGEN2	708457.00	3319615.00	13.75	987	324.96	1.12
Vapor Combustion Unit	VCU	705814.20	3318792.60	45.00	1320	20.00	8.00
Trap Vents	TRAP	706341.82	3318718.17	9.84	212	0.003	0.06

Table 2. Polygon Area Source Parameters in EJ Modeling					
		Location		Release Parameters	
Source	AERMOD ID	UTM-x (m)	UTM-y (m)	Height (ft)	Number of Corners
M1 Area Fugitives	M1_FUG	706233.23	3318596.83	15.00	8
T1 Area Fugitives	T1_FUG	708143.78	3319773.28	15.00	8

Table 3. Volume Source Parameters in EJ Modeling						
	AERMOD	Location		Release Parameters		
Source	ID	UTM-x (m)	UTM-y (m)	Height (ft)	Initial Horiz. Dim. (ft)	Initial Vert. Dim. (ft)
Waste Water Treatment Plant Fugitives	WWTP	706488.00	3318658.00	15.00	155.64	13.94

Table 4. Circle Area Source Parameters in EJ Modeling					
		Location		Release Parameters	
Source	AERMOD ID	UTM-x (m)	UTM-y (m)	Height (ft)	Radius (ft)
Above ground storage vessel	TK26202A	708202.90	3319662.60	50	110
Above ground storage vessel	TK26202B	708298.30	3319717.80	50	110
Above ground storage vessel	TK26202C	708156.80	3319729.10	50	110
Above ground storage vessel	TK26202D	708236.30	3319761.60	50	110

Table 5. Annual Emission Rates for EJ Modeling														
		Emission Rates (tpy)												
Source	**AERMOD ID**	**Methanol**	**Ammonia**	**H2S**	**Acetaldehyde**	**Benzene**	**Dichlorobenzene**	**Ethylbenzene**	**Formaldehyde**	**Hexane**	**Naphthalene**	**Toluene**	**224-Trimethylpentane**	**Aldehydes**
Steam Methane Reformer	M1_SMR	17.44	91.98	0.00	0.00	0.01	6.17E-03	0.00	0.39	9.25	3.13E-03	0.02	0.00	0.00
Auxiliary Boiler	M1_BLR	1.76	21.46	0.00	0.00	1.42E-03	8.76E-04	0.00	0.05	1.22	4.13E-04	2.30E-03	0.00	0.00
Process Condensate Stripper Vent	M1_PCV	0.00	2.18	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Flare	M1_FL_LT	8.22	0.00	0.00	0.00	8.05E-04	4.60E-04	0.00	0.03	0.69	2.34E-04	1.30E-03	0.00	0.00
Emergency Generator	M1_EGEN	0.00	0.00	0.00	3.21E-05	9.87E-04	0.00	0.00	1.00E-04	0.00	1.65E-04	3.57E-04	0.00	0.00
Fire Pump 1	M1_FP1	0.00	0.00	0.00	1.61E-04	1.96E-04	0.00	0.00	2.48E-04	0.00	1.78E-05	8.59E-05	0.00	0.02
Fire Pump 2	M1_FP2	0.00	0.00	0.00	1.61E-04	1.96E-04	0.00	0.00	2.48E-04	0.00	1.78E-05	8.59E-05	0.00	0.02
Fire Pump 3	M1_FP3	0.00	0.00	0.00	6.71E-05	8.16E-05	0.00	0.00	1.03E-04	0.00	7.42E-06	3.58E-05	0.00	6.00E-03
Cooling Tower Cell 1	M1_CT_1	3.34	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Cooling Tower Cell 2	M1_CT_2	3.34	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Cooling Tower Cell 3	M1_CT_3	3.34	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Cooling Tower Cell 4	M1_CT_4	3.34	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Cooling Tower Cell 5	M1_CT_5	3.34	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Cooling Tower Cell 6	M1_CT_6	3.34	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Cooling Tower Cell 7	M1_CT_7	3.34	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Cooling Tower Cell 8	M1_CT_8	3.34	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Cooling Tower Cell 9	M1_CT_9	3.34	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Cooling Tower Cell 10	M1_CT_10	3.34	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Cooling Tower Cell 11	M1_CT_11	3.34	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Ammonia Tank	M1_TKNH3	0.00	0.56	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Methanol Scrubber	M1_D4001	10.07	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Admin Building Generator	M1ADGEN	1.99E-04	0.00	0.00	6.65E-04	3.50E-05	0.00	3.16E-06	4.20E-03	8.83E-05	5.92E-06	3.24E-05	1.99E-05	0.00
Gasoline Tank	M1GASTK	0.00	0.00	0.00	0.00	1.21E-03	0.00	6.60E-04	0.00	6.14E-04	0.00	1.42E-03	2.34E-03	0.00
Generac 1	T1_EGEN1	0.00	0.00	0.00	2.58E-05	7.94E-04	0.00	0.00	8.07E-05	0.00	1.33E-04	2.87E-04	0.00	0.00
Generac 2	T1_EGEN2	0.00	0.00	0.00	2.58E-05	7.94E-04	0.00	0.00	8.07E-05	0.00	1.33E-04	2.87E-04	0.00	0.00
Vapor Combustion Unit	VCU	15.93	0.00	0.00	0.00	1.72E-04	9.84E-05	0.00	6.15E-03	0.15	5.00E-05	2.79E-04	0.00	0.00
Trap Vents	TRAP	0.00	0.08	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
M1 Area Fugitives	M1_FUG	27.26	0.93	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Waste Water Treatment Plant Fugitives	M1_WWTP	0.33	3.29	9.13	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
T1 Area Fugitives	T1_FUG	11.56	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Above ground storage vessel	TK26202A	2.39	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Above ground storage vessel	TK26202B	2.31	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Above ground storage vessel	TK26202C	2.24	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Above ground storage vessel	TK26202D	2.33	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00

Table 5. Annual Emission Rates for EJ Modeling

Source	AERMOD ID	Emission Rates (tpy)											
		Arsenic	Barium	Cadmium	Chromium	Chromium-VI	Cobalt	Copper	Manganese	Mercury	Nickel	Zinc	Diesel PM
Steam Methane Reformer	M1_SMR	1.48E-03	0.03	0.01	0.01	2.07E-03	6.22E-04	0.01	2.81E-03	1.93E-03	0.02	0.21	0.00
Auxiliary Boiler	M1_BLR	4.51E-04	0.01	2.48E-03	3.16E-03	6.31E-04	1.89E-04	1.92E-03	8.57E-04	5.86E-04	4.73E-03	0.07	0.00
Process Condensate Stripper Vent	M1_PCV	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Flare	M1_FL_LT	7.66E-05	1.69E-03	4.21E-04	5.36E-04	1.07E-04	3.22E-05	3.26E-04	1.46E-04	9.96E-05	8.05E-04	0.01	0.00
Emergency Generator	M1_EGEN	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.06
Fire Pump 1	M1_FP1	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.01
Fire Pump 2	M1_FP2	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.01
Fire Pump 3	M1_FP3	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	2.76E-03
Cooling Tower Cell 1	M1_CT_1	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Cooling Tower Cell 2	M1_CT_2	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Cooling Tower Cell 3	M1_CT_3	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Cooling Tower Cell 4	M1_CT_4	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Cooling Tower Cell 5	M1_CT_5	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Cooling Tower Cell 6	M1_CT_6	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Cooling Tower Cell 7	M1_CT_7	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Cooling Tower Cell 8	M1_CT_8	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Cooling Tower Cell 9	M1_CT_9	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Cooling Tower Cell 10	M1_CT_10	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Cooling Tower Cell 11	M1_CT_11	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Ammonia Tank	M1_TKNH3	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Methanol Scrubber	M1_D4001	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Admin Building Generator	M1ADGEN	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Gasoline Tank	M1GASTK	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Generac 1	T1_EGEN1	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.04
Generac 2	T1_EGEN2	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.04
Vapor Combustion Unit	VCU	1.64E-05	3.61E-04	9.02E-05	1.15E-04	2.30E-05	6.89E-06	6.97E-05	3.12E-05	2.13E-05	1.72E-04	2.38E-03	0.00
Trap Vents	TRAP	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
M1 Area Fugitives	M1_FUG	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Waste Water Treatment Plant Fugitives	M1_WWTP	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
T1 Area Fugitives	T1_FUG	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Above ground storage vessel	TK26202A	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Above ground storage vessel	TK26202B	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Above ground storage vessel	TK26202C	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Above ground storage vessel	TK26202D	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00

APPENDIX C
MISCELLANEOUS WATER STREAMS INFORMATION

APPENDIX C
MISCELLANEOUS WATER STREAMS INFORMATION

Stream	Description	Anticipated Ranges for Common Parameters[1] pH	Temperature (deg F)	TSS (mg/L)	Turbidity (NTU)	TOC (mg/L)	Oil & Grease (mg/L)	COD (mg/L)	Requested Outfalls
Firewater	Firewater is sourced from the Mississippi River and clarified.	7.0 - 8.5	Ambient	0 - 5	0 - 7	0 - 5	NE	0 - 25	001, 201, 301, 401, 003, 002, 004
Potable Water	Potable water is sourced from the local municipality. No onsite treatment is conducted.	6.5 - 8.5	Ambient	0 - 5	0 - 5	0 - 5	NE	0 - 25	001, 201, 301, 401, 003, 002, 004
Clarified Water / Treated Water	Clarified water is sourced from the Mississippi River, clarified, filtered and pH adjusted.	7.0 - 9.0	Ambient	0 - 5	0 - 5	0 - 5	NE	0 - 25	001, 201, 301, 401, 003, 002, 004
Non-Contact Cooling Water	Non-contact cooling water is treated water that has water additives to ensure equipment health. Cooling water is cycling through the process in a manner that prevents contact during normal operations.	7.5 - 8.5	Ambient	0 - 5	0 - 5	0 - 15	0 - 5	0 - 30	001, 201, 301, 401, 003, 004
Demineralized Water	Demineralized water is clarified water that goes through additional filtration to remove any impurities.	6.5 - 8.5	80-110 (Ambient upon discharge from Final Outfall)	0 - 5	0 - 5	0 - 5	NE	NE	001, 201, 301, 401, 003, 004
Boiler Feedwater	Boiler feedwater is a mixture of deminerlized water and turbine/process condensate return that has water additives to ensure equipment health.	8.0 - 9.5	200-250 (Ambient upon discharge from Final Outfall)	0 - 5	0 - 5	0 - 5	0 - 5	0 - 25	001, 201, 301, 401, 003, 004
Steam Condensate	Steam condensate is steam that discharges from what is commonly referred to as a "steam trap". This is extra steam that exits the system and condenses into a water stream.	7.0 - 9.5	150 - 210 (Ambient upon discharge from Final Outfall)	0 - 5	0 - 5	0 - 5	0 - 5	NE	001, 201, 301, 401, 003, 002, 004

[1] Anticipated ranges are estimated with sampling results being utilized when available. "NE" indicates the pollutant is not expected in the stream.
[2] Outfall 003 is being proposed to consolidate Outfalls 005, 006, 007 & 008.
[3] Outfall 004 is being proposed to rename Outfall 009 in an effort to align nomenclature of outfall references.

APPENDIX D
NONCOMPLIANCE REPORT FORMS (NCR FORMS)

Non-Compliance Report Form

Facility Name: YCI Methanol Plant **Date:** 12-09-2020

Facility Address: 5181 Wildcat St., St. James, LA 70086

Person Reporting: Jim Tidwell **Title:** Plant Manager

Phone Number: 225-624-6201 **Parish:** St. James

LPDES Number: LA0127367 **AI#:** 194165

Receiving Waters: St. James Canal
(Refer to Subject Line on Permit Cover Letter)

Date of Non-Compliance	Parameter/ Description (e.g. TSS, Overflow)	Outfall No./ Location (e.g. 001, 123 Main St.)	Permit Limit	Reported Value
12-09-2020	Oil & Grease	012B	15 mg/L	41 mg/L

Cause of Violation(s):
As part of commissioning operations, a new piece of equipment that has not previously been in service was hydrotested. The hydrotest water was sampled and then subsequently discharged to Internal Outfall 012B. The discharge began on 12-09-2020 at approximately 11:52PM and discharged for approximately 50 minutes. The discharge ceased on 12-10-2020 at approximately 12:42AM. The total volume of the discharge was approximately 12,000 gallons.

Corrective Action/Preventative Measures/Remediation:
Prior to discharging, the hydrotest water is visually inspected for floating solids, visible foam, and visible sheen. The inspection of the hydrotest water on 12-09-2020 was visibly inspected and the inspection did not indicate any potential for contamination. The corrective action for remaining hydrotest water discharges is to continue visible inspections and ensure additional caution is taken when inspections are occurring in low-light situations. Additionally, if the hydrotest water can be collected prior to discharge, it is being sent through process wastewater treatment to mitigate any potential contamination.

Please submit as a PDF attachment in NetDMR or mail non-compliance reports to the following address:

Office of Environmental Compliance
Attn: Permit Compliance Unit
P.O. Box 4312
Baton Rouge, LA 70821-4312

Non-Compliance Report Form

Facility Name: YCI Methanol Plant **Date:** 01-29-2021

Facility Address: 5181 Wildcat St., St. James, LA 70086

Person Reporting: Marc Hoss **Title:** Vice President of Manufacturing

Phone Number: 580-231-4268 **Parish:** St. James

LPDES Number: LA0127367 **AI#:** 194165

Receiving Waters: Mississippi River

(Refer to Subject Line on Permit Cover Letter)

Violation(s) Summary:

Date of Non-Compliance	**Parameter/ Description** (e.g. TSS, Overflow)	**Outfall No./ Location** (e.g. 001, 123 Main St.)	**Permit Limit**	**Reported Value**
1-29-2021	Chloroform Daily Maximum Load	Outfall 301	0.08 lb/day	0.12 lb/day
January 2021	Chloroform Monthly Average Load	Outfall 301	0.04 lb/day	0.10 lb/day

Description of Violation(s):

A sample collected from Outfall 301 to meet the semi-annual sampling requirement for volatile compounds, acid compounds, and base neutral compounds yielded an elevated result for chloroform. The 24-hr composite sample collected from 1/21/2021 10:00 AM through 1/22/2021 10:00 AM had a result of 47.2 micrograms per liter which yielded a load value of 0.08 lb/day, not exceeding the daily maximum load limitation.

Upon receiving the elevated results, an additional 24-hr composite sample was collected from 1/28/2021 08:00 PM through 1/29/2021 08:00 PM to confirm the elevated chloroform value. This sample had a result of 58.2 micrograms per liter which yielded a load value of 0.12 lb/day, exceeding the daily maximum load limitation.

The monthly average load value for the month of January 2021 was 0.10 lb/day chloroform which exceeded the monthly average load limitation for chloroform at Outfall 301.

Cause of Violation(s):

After receiving the sample results for chloroform, an investigation was initiated to evaluate potential causes of the elevated result. The YCI Methanol Plant is currently starting up. Outfall

301 is the effluent from the wastewater treatment system. A review of operations confirmed there has been no methanol or other products introduced to the wastewater treatment system that would result in an elevated chloroform result in the discharge of Outfall 301.

The site utilizes sodium hypochlorite to disinfect the intake water to mitigate algae growth in the water treatment system. Once treated with sodium hypochlorite, the water is now "treated water". Sodium hypochlorite has the potential to form disinfection byproducts under certain conditions, including chloroform which would be present in the treated water. The disinfectant was being applied as designed and process operation samples indicated there was no free chlorine in the wastewater treatment system.

YCI Methanol Plant has been using treated water in process units as part of starting up and routing to the wastewater treatment system. During start-up conditions, the flow into the wastewater treatment system is majority treated water as all process related streams have not been generated yet. During normal operations, Outfall 301 will consist primarily of process related streams that will not contribute disinfection byproducts such as chloroform.

Additionally, the Moving Bed Biofilm Reactor (MBBR), the biological treatment step in YCI Methanol Plant's wastewater treatment system, is still being brought online as the biological film develop. Once the MBBR is online, it will directionally decrease concentrations of residual disinfection byproducts, including chloroform.

Corrective Actions, Preventative Measures, & Remediation:
To mitigate potential onsite contributions to disinfection byproducts, the dosage of sodium hypochlorite has been reduced to zero. Process samples are being collected to evaluate the use of sodium hypochlorite to mitigate algae while meeting effluent limitations. Alternatives to sodium hypochlorite as a disinfectant are being evaluated and will be implemented as necessary to meet effluent limitations. Additionally, the site is continuing to bring the MBBR online and incorporate the unit into the wastewater treatment system. As the site continues to start up and moves towards normal operations, the makeup of the Outfall 301 will become more representative of steady state discharges.

With the adjustments to the sodium hypochlorite disinfecting and obtaining normal operations through start-up, YCI Methanol One believes our discharge will comply with all effluent limitations.

24-Hour Oral Reporting Information:
On 2/1/2021, upon receiving the sample results and the final flow rate, the loading calculation was performed and indicated an exceedance of the daily maximum load limitation. Notification was provided to the SPOC at 225-219-3640 at approximately 4:30 PM on 2/1/2021.

If you have any questions or require additional information, please contact HaLeigh Engler at (225) 264-2065 or at haleigh.engler@yci-us.com.

Non-Compliance Report Form

Facility Name: YCI Methanol Plant **Date:** 03-03-2021

Facility Address: 5181 Wildcat St., St. James, LA 70086

Person Reporting: Marc Hoss **Title:** Vice President of Manufacturing

Phone Number: 580-231-4268 **Parish:** St. James

LPDES Number: LA0127367 **AI#:** 194165

Receiving Waters: Mississippi River
(Refer to Subject Line on Permit Cover Letter)

Date of Non-Compliance	**Parameter/ Description** (e.g. TSS, Overflow)	**Outfall No./ Location** (e.g. 001, 123 Main St.)	**Permit Limit**	**Reported Value**
03-03-2021	Unauthorized Discharge	Outfall 009	--	--

Cause of Violation(s):
At approximately 9:00AM on March 03, 2021, during commissioning and start-up activities, an underground leak was identified on the cooling water return line. Due to the leak, a small stream of cooling water was found to be discharging to greenspace which drains to Outfall 009. The discharge occurred for approximately two hours and the total volume of water discharged to Outfall 009 was approximately 120 gallons. The majority of the cooling water leak was contained before it reached Outfall 009. Note that while the water classifies as cooling water, YCI Methanol One, is still in the process of starting up and has not introduced methanol to the process units, therefore, there was no potential for methanol contamination in the cooling water.

Corrective Action/Preventative Measures/Remediation:
Upon discovering the underground leak, operations immediately worked to mitigate the environmental impact by creating berms around the area of the underground leak. The water that accumulated was then managed and treated onsite accordingly. The cooling water system was de-inventoried and the underground leak was repaired. Normal operations of the cooling water system was resumed and a visual inspection indicated the leak was properly repaired.

Non-Compliance Report Form

Facility Name: YCI Methanol Plant **Date:** 03-04-2021

Facility Address: 5181 Wildcat St., St. James, LA 70086

Person Reporting: Marc Hoss **Title:** Vice President of Manufacturing

Phone Number: 580-231-4268 **Parish:** St. James

LPDES Number: LA0127367 **AI#:** 194165

Receiving Waters: Mississippi River
(Refer to Subject Line on Permit Cover Letter)

Date of Non-Compliance	**Parameter/ Description** (e.g. TSS, Overflow)	**Outfall No./ Location** (e.g. 001, 123 Main St.)	**Permit Limit**	**Reported Value**
03-04-2021	Total Suspended Solids (TSS) Monthly Average Limit	Outfall 101	30 mg/L	72 mg/L
	Total Suspended Solids (TSS) Daily Max Limit	Outfall 101	45 mg/L	72 mg/L

Cause of Violation(s):
A sample collected from Outfall 101 (Sanitary Treatment Discharge from the Control Building) to meet the quarterly sampling requirement for Total Suspended Solids (TSS) yielded an elevated sample result. The grab sample collected on March 4, 2021 had a result of 72 mg/L which exceeds both the monthly average concentration limit of 30 mg/L and the daily max concentration limit of 45 mg/L.

Corrective Action/Preventative Measures/Remediation:
The sanitary treatment unit is inspected and maintenanced on a weekly basis. After discovering the elevated sample result, the unit was promptly inspected and it was found to be carrying over solids past the clarification section of the treatment unit. Upon investigation, it was found that an increased number of employees were utilizing the sanitary facilities as personnel headcount is increased due to start-up operations which was overloading the sanitary system. Adjustments were made to the sanitary unit to aid in solids settling and a communication to employees regarding system capacity was distributed. Additionally, temporary restroom facilities have been brought in to mitigate the additional personnel headcount. The system will continue to be monitored closely as the sites work towards the design personnel headcount.

Non-Compliance Report Form

Facility Name: Koch Methanol St. James (Previously YCI Methanol One)

Date: 05-01-2021

Facility Address: 5181 Wildcat St., St. James, LA 70086

Person Reporting: Marc Hoss **Title:** Vice President of Manufacturing

Phone Number: 580-231-4268 **Parish:** St. James

LPDES Number: LA0127367 **AI#:** 194165

Receiving Waters: Mississippi River
(Refer to Subject Line on Permit Cover Letter)

Date of Non-Compliance	**Parameter/ Description** (e.g., TSS, Overflow)	**Outfall No./ Location** (e.g., 001, 123 Main St.)	**Permit Limit**	**Reported Value**
05-01-2021 4:40 AM – 9:17 AM	pH Range Excursions (# Events > 60 minutes)	Outfall 301	0 Events	1 Event
05-10-2021 5:33 PM – 7:01 PM	pH Range Excursions (# Events > 60 minutes)	Outfall 301	0 Events	1 Event
05-10-2021 6:44 PM – 9:00 PM	pH Range Excursions (# Events > 60 minutes)	Outfall 001	0 Events	1 Event

Cause of Violation(s):
On May 10, 2021 Outfall 301 experienced a pH excursion with pH less than 6.0 SU for a duration more than 60 minutes. Beginning at approximately 5:33 PM the pH of Outfall 301 was below 6.0 SU and continued to be below 6.0 SU until approximately 7:01 PM.

As a result of the pH excursion at Outfall 301, on May 10, 2021 Outfall 001 also experienced a pH excursion with pH less than 6.0 SU for a duration more than 60 minutes. Beginning at approximately 6:44 PM the pH of Outfall 301 was below 6.0 SU and continued to be below 6.0 SU until approximately 9:00 PM.

Upon investigating the May 10, 2021 pH excursions, it was found that on May 1, 2021 Outfall 301 experienced an additional pH excursion with pH less than 6.0 SU for a duration more than 60 minutes. Beginning at approximately 4:40 AM the pH of Outfall 301 was below 6.0 SU and continued to be below 6.0 SU until approximately 9:17 AM.

Corrective Action/Preventative Measures/Remediation:
An investigation was conducted on the pH excursions and the investigation yielded the following findings:

1. The initial alarm indicating the discharge of Outfall 301 has an instantaneous pH value outside of range (6.0-9.0 SU) was not addressed in a timely manner due to human error.
2. The secondary alarm indicating when the discharge continues to be outside of range (6.0-9.0 SU) for a longer duration did not activate as designed due to an error in the coding.
3. The automation sequence which controls the neutralization pit (a wastewater treatment component for pH control) was not functioning correctly resulting in unplanned pH swings in the wastewater treatment plant.

The corrective actions regarding these investigation findings are as follows:

1. Additional training has been provided for the applicable personnel regarding the regulatory requirements of the site's pH limitations as well as the consequences of extended durations outside of the pH limits. A new alarm has been implemented which will "refresh" if the initial alarm has not been addressed in 15 minutes.

   Additional control logic has also been established which will automatically stop the discharge of Outfall 301 if the pH of the discharge is out of the pH range of 6.0-9.0 SU.
2. The secondary alarm logic has been corrected to activate as designed and will provide indication if the discharge were to continue and was outside of the pH range of 6.0-9.0 SU for an extended duration.
3. The automation sequence for the neutralization pit has been corrected to function as designed.

The wastewater treatment system continues to be monitored closely as the site progresses through start-up activities.

Non-Compliance Report Form

Facility Name: Koch Methanol St. James **Date:** 09-14-2021

Facility Address: 5181 Wildcat St., St. James, LA 70086

Person Reporting: Marc Hoss

Title: Vice President of Manufacturing and Plant Manager

Phone Number: 580-231-4268 **Parish:** St. James

LPDES Number: LA0127367 **AI#:** 194165

Receiving Waters: St. James Canal
(Refer to Subject Line on Permit Cover Letter)

Date of Non-Compliance	**Parameter/ Description** (e.g. TSS, Overflow)	**Outfall No./ Location** (e.g. 001, 123 Main St.)	**Permit Limit**	**Reported Value**
09-14-2021	Unauthorized Discharge – Oil Sheen	Outfall 006 (Receiving Water St. James Canal)	--	--

Cause of Violation(s):
At approximately 8:15AM on September 14, 2021, while observing outfalls during a heavy rainfall prior to a stormwater sampling event, a light sheen was observed on the discharge from Outfall 006 resulting in an unpermitted discharge.

Corrective Action/Preventative Measures/Remediation:
Upon discovering the sheen, operations visually inspected the stormwater system discharging to Outfall 006 for any active or historical leaks in the vicinity that could have resulted in the sheen. Visual observations yielded no known sources for the sheen.

The team also worked to deploy oil absorbent booms to contain the sheen to the immediate outfall area. Additionally, the team placed oil absorbent booms at the outlet of Pond 2, to which Outfall 006 discharges. No sheen was found near the outlet of Pond 2.

As there were no known sources, the sheen continued to be contained with the oil absorbent booms until the sheen ceased. Subsequently, the oil absorbent booms were removed and disposed. Outfall 006 continues to be monitored daily as part of routine operations, and there has been no further indication of sheen presence. Oil absorbent booms are being installed proactively to prevent potential reoccurrences from having environmental impact. The quarterly stormwater sample was collected at Outfall 006 during this rain event and was analyzed for TOC and Oil and Grease. Both TOC and Oil and Grease results were "non-detect" at <2 mg/L and <5 mg/L, respectively.

Non-Compliance Report Form

Facility Name: Koch Methanol St. James **Date:** 09-14-2021

Facility Address: 5181 Wildcat St., St. James, LA 70086

Person Reporting: Marc Hoss

Title: Vice President of Manufacturing and Plant Manager

Phone Number: 580-231-4268 **Parish:** St. James

LPDES Number: LA0127367 **AI#:** 194165

Receiving Waters: St. James Canal
(Refer to Subject Line on Permit Cover Letter)

Date of Non-Compliance	**Parameter/ Description** (e.g. TSS, Overflow)	**Outfall No./ Location** (e.g. 001, 123 Main St.)	**Permit Limit**	**Reported Value**
09-14-2021	Daily Max Total Organic Carbon (TOC) Concentration	Outfall 008 (Receiving Water St. James Canal)	50 mg/L	6,880 mg/L

Cause of Violation(s):
On September 14, 2021, a qualifying rain event occurred and the quarterly stormwater sample for Outfall 008 was collected at approximately 9:15AM. The sample for TOC yielded a result of 6,880 mg/L which exceeds the daily max TOC concentration limit of 50 mg/L.

Corrective Action/Preventative Measures/Remediation:
While collecting the sample at Outfall 008, visual observations were made for the presence of color, odor, poor clarity, solids, foaming, and sheen. During the visual observation, no indicators of pollution were found.

Upon receiving the elevated TOC sample result, the area of the outfall was investigated for any potential contribution to the abnormal result. There are no chemicals being stored in the area. All secondary containment for nearby process equipment was closed and there were no known releases from the process equipment or visual indications of leaks.

In investigating the abnormal sample result, samples were collected from two process locations nearby Outfall 008, water inside the flare seal pot and water inside the flare knockout drum. Sample results for TOC indicated that releases from these process locations could have potentially contributed to the elevated TOC result.

Non-Compliance Report Form

Facility Name: Koch Methanol St. James **Date:** 09-14-2021

Facility Address: 5181 Wildcat St., St. James, LA 70086

Person Reporting: Marc Hoss

Title: Vice President of Manufacturing and Plant Manager

Phone Number: 580-231-4268 **Parish:** St. James

LPDES Number: LA0127367 **AI#:** 194165

Receiving Waters: Mississippi River
(Refer to Subject Line on Permit Cover Letter)

Date of Non-Compliance	**Parameter/ Description** (e.g. TSS, Overflow)	**Outfall No./ Location** (e.g. 001, 123 Main St.)	**Permit Limit**	**Reported Value**
09-14-2021	Daily Max Total Residual Chlorine (TRC) Concentration	Outfall 201 (Receiving Water Mississippi River)	0.2 mg/L	0.35 mg/L

Cause of Violation(s):
The monthly water sample collected on 09/14/2021 at Outfall 201 yielded a TRC result of 0.35 mg/L, exceeding the daily max concentration limit of 0.2 mg/L.

Corrective Action/Preventative Measures/Remediation:
Upon obtaining the result from the field test kit, operations and technical were notified of the abnormal result to begin troubleshooting. It was found that the sodium bisulfite (used as a chlorine scavenger) injection system had failed due to a loss of power. The injection system was restarted and sodium bisulfite addition resumed.

A physical modification to the sodium bisulfite injection system is scheduled to be conducted to minimize the chances of the power loss scenario reoccurring. Operations is currently observing the injection pump on visual rounds to ensure it is operating.

Non-Compliance Report Form

Facility Name: Koch Methanol St. James **Date:** 07-15-2022

Facility Address: 5181 Wildcat St., St. James, LA 70086

Person Reporting: Marc Hoss

Title: Vice President of Manufacturing & Plant Manager

Phone Number: 580-231-4268 **Parish:** St. James

LPDES Number: LA0127367 **AI#:** 194165

Receiving Waters: St. James Canal
(Refer to Subject Line on Permit Cover Letter)

Violation(s) Summary:

Date of Non-Compliance	**Parameter/ Description** (e.g. TSS, Overflow)	**Outfall No./ Location** (e.g. 001, 123 Main St.)	**Permit Limit**	**Reported Value**
06-07-2022	Unauthorized Discharge – Cooling Water	Outfall 005 (Receiving Water St. James Canal)	--	--

Description of Violation(s):
At approximately 11:12 AM on June 7, 2022, the cooling tower overflowed cooling water to the ground. During a maintenance activity on the cooling tower fans, equipment was inadvertently blocked in resulting in an overflow of the cooling tower riser that lasted approximately 24 minutes. This resulted in approximately 4,725 gallons of cooling water overflowing to grade. A portion of this stream collected in the stormwater drainage system and was discharged via Outfall 005.

Cause of Violation(s):
The overflow occurred during a maintenance activity on the cooling tower fans. The activity required flow to be restricted to perform maintenance in that section. The nearby risers were blocked in to restrict flow, however, when switching to a new section, an additional riser was blocked in as an attempt to perform more efficient maintenance. The flow was restricted in excess which caused the remaining risers to overflow. Upon identifying the overflow condition, maintenance adjusted the additional riser to eliminate the overflow condition.

Corrective Actions, Preventative Measures, & Remediation:
The attempt to block in two risers at the same time and its consequences was communicated to the site via the incident reporting system. The operations and maintenance teams are now aware of this limitation and the maintenance activity will not be conducted in this manner again.

If you have any questions or require additional information, please contact HaLeigh Engler at (225) 264-2065 or at haleigh.engler@kochind.com.

Non-Compliance Report Form

Facility Name: Koch Methanol St. James **Date:** 12-13-2022

Facility Address: 5181 Wildcat St., St. James, LA 70086

Person Reporting: Marc Hoss

Title: Vice President of Manufacturing & Plant Manager

Phone Number: 580-231-4268 **Parish:** St. James

LPDES Number: LA0127367 **AI#:** 194165

Receiving Waters: Mississippi River
(Refer to Subject Line on Permit Cover Letter)

Violation(s) Summary:

Date of Non-Compliance	**Parameter/ Description** (e.g. TSS, Overflow)	**Outfall No./ Location** (e.g. 001, 123 Main St.)	**Permit Limit**	**Reported Value**
11-30-2022	TSS Monthly Average Loading	Outfall 301 (Receiving Water Mississippi River)	116 lb/day	132 lb/day

Description of Violation(s):
During the month of November, the monthly average Total Suspended Solids (TSS) loading limit was exceeded, with a reported monthly average loading of 132 lb/day TSS, which is above the permitted monthly average loading limit of 116 lb/day TSS. The daily maximum loading limit was not exceeded during the month of November.

Cause of Violation(s):
Upon review of process monitoring and plant operating conditions there were three factors that contributed to increased TSS loading values:

1. The wastewater going into the WWTP had on average a higher TSS concentration than previously seen, which may have been due to an unplanned operations event which resulted in a plant shutdown.
2. Previous operation of the wastewater equalization basin resulted in a low water level in the basin which may have inadvertently stirred up settled solids that were in the basin, passing suspended solids downstream, yielding elevated TSS concentrations in the discharge.
3. The clarification section of the WWTP as originally designed has been removing suspended solids at a lower than anticipated rate, yielding elevated TSS concentrations in the discharge.

Corrective Actions, Preventative Measures, & Remediation:
The following actions took place as a result of this non-compliance event:

1. The plant resumed normal activity after the shutdown event and is reviewing the WWTP process monitoring sampling plan to identify elevated TSS in the WWTP intake.
2. The low water level alarm was revised on the equalization basin to a higher level, in order to prevent settled solids from being carried downstream and impacting discharge quality. Additionally, basin cleaning is being evaluated for planned maintenance outages.
3. The site has evaluated and is preparing to install an additional clarification technology (Dissolved Air Flotation) to improve TSS removal. A Letter of No Objection was submitted to LDEQ on October 13, 2022 indicating the anticipated changes. The new clarification technology is expected to be installed in January 2023.

If you have any questions or require additional information, please contact HaLeigh Engler at (225) 264-2065 or at haleigh.engler@kochind.com.

Non-Compliance Report Form

Facility Name: Koch Methanol St. James **Date:** 01-12-2023

Facility Address: 5181 Wildcat St., St. James, LA 70086

Person Reporting: Marc Hoss

Title: Vice President of Manufacturing & Plant Manager

Phone Number: 580-231-4268 **Parish:** St. James

LPDES Number: LA0127367 **AI#:** 194165

Receiving Waters: St. James Canal
(Refer to Subject Line on Permit Cover Letter)

Violation(s) Summary:

Date of Non-Compliance	**Parameter/ Description** (e.g. TSS, Overflow)	**Outfall No./ Location** (e.g. 001, 123 Main St.)	**Permit Limit**	**Reported Value**
12-15-2022	Unauthorized Discharge of Cooling Water	Outfall 005 (Receiving Water St. James Canal)	--	--

Description of Violation(s):
At approximately 4:00PM on December 15, 2022, an operator at our third-party oxygen supplier inadvertently opened a valve that sent cooling water from our third-party oxygen supplier to our cooling tower. This valve is not supposed to be opened during normal operations. The unplanned volume of cooling water being sent to the tower resulted in high levels followed by an overflow. The cooling water overflowed to grade and travelled to the stormwater drainage system which discharged to Outfall 005 to Pond 2. The discharge was approximately 121,000 gallons of cooling water.

Cause of Violation(s):
The cooling water was inadvertently sent from the third-party oxygen supplier to the Koch Methanol site's cooling tower due to an error by an operator employed by the third-party oxygen supplier.

Corrective Actions, Preventative Measures, & Remediation:
Upon receiving indication of high cooling tower level, Koch Methanol operations began to troubleshoot the source of the additional volume. Koch Methanol operations determined that the water was coming from the third-party oxygen supplier and immediately communicated that fact to the third-party oxygen supplier's operations team. The third-party operations team was able to

close the improperly opened valve, stopping the flow of cooling water to the Koch Methanol cooling tower. The event was reviewed and investigated by the third party, and the third party put a preventative measure in place to prevent a recurrence of the improper lineup by means of a car seal.

If you have any questions or require additional information, please contact HaLeigh Engler at (225) 264-2065 or at haleigh.engler@kochind.com.

Non-Compliance Report Form

Facility Name: Koch Methanol St. James **Date:** 01-12-2023

Facility Address: 5181 Wildcat St., St. James, LA 70086

Person Reporting: Marc Hoss

Title: Vice President of Manufacturing & Plant Manager

Phone Number: 580-231-4268 **Parish:** St. James

LPDES Number: LA0127367 **AI#:** 194165

Receiving Waters: St. James Canal
(Refer to Subject Line on Permit Cover Letter)

Violation(s) Summary:

Date of Non-Compliance	**Parameter/ Description** (e.g. TSS, Overflow)	**Outfall No./ Location** (e.g. 001, 123 Main St.)	**Permit Limit**	**Reported Value**
12-01-2022	Unauthorized Discharge of Cooling Water	Outfall 005 (Receiving Water St. James Canal)	--	--

Description of Violation(s):
At approximately 8:00PM on December 1, 2022, an underground leak of cooling water was identified in the process block area. Due to the leak's nature and location under grade, the leak could not be stopped without a full plant shutdown. The site began standard operating procedures to safely shut down the plant during which time the leak continued to discharge cooling water to grade. Given the volume of the leak, Koch Methanol could not contain the water onsite. The water travelled across grade and to the stormwater drainage system and was discharged via Outfall 005 to Pond 2. The total volume of cooling water leaked was approximately 880,000 gallons.

Cause of Violation(s):
Upon investigation of the cooling water piping, it was found that the original construction sealant material at the cooling water piping joint failed. This led to the leak point which resulted in the discharge of cooling water.

Corrective Actions, Preventative Measures, & Remediation:
Upon finding the underground leak, the site was able to safely shut down the plant to bring the cooling water system down and stop the leak source. Once the cooling water piping was excavated, the site was able perform a repair by wrapping the joint connection which eliminated

the leak point. Additionally, the site opted to proactively repair a similar connection point adjacent to the failed connection to eliminate this potential failure mechanism at that connection point as well.

A sample was collected for TOC and Oil and Grease at the outfall during the discharge, and the results were within the outfall's permit limitations. The results are reported in the December DMR.

If you have any questions or require additional information, please contact HaLeigh Engler at (225) 264-2065 or at haleigh.engler@kochind.com.

Non-Compliance Report Form

Facility Name: Koch Methanol St. James **Date:** 02-15-2023

Facility Address: 5181 Wildcat St., St. James, LA 70086

Person Reporting: Marc Hoss

Title: Vice President of Manufacturing & Plant Manager

Phone Number: 580-231-4268 **Parish:** St. James

LPDES Number: LA0127367 **AI#:** 194165

Receiving Waters: Mississippi River
(Refer to Subject Line on Permit Cover Letter)

Violation(s) Summary:

Date of Non-Compliance	**Parameter/ Description** (e.g. TSS, Overflow)	**Outfall No./ Location** (e.g. 001, 123 Main St.)	**Permit Limit**	**Reported Value**
02-15-2023	Daily Max Total Residual Chlorine (TRC) Concentration	Outfall 201 (Receiving Water Mississippi River)	0.2 mg/L	0.63 mg/L

Description of Violation(s):
At approximately 10:15 AM on February 15, 2023, a monthly sampling event at Outfall 201 yielded an elevated Total Residual Chlorine (TRC) result above permitted limits. Upon investigation, it was found that the chlorine scavenger chemical injection pump had failed and did not provide treatment for less than approximately 5 hours.

Cause of Violation(s):
The chlorine scavenger (i.e., sodium bisulfite) injection pump was found to be inoperable due to a failed discharge hose that had become disconnected from the pump. Sodium bisulfite is an approved chemical to treat residual chlorine in cooling tower blowdown which discharges via Outfall 201 to the Mississippi River. The short (less than 5 hours) lapse in chemical injection, resulted in elevated TRC level. The pump had been inspected during a routine inspection round that morning and no issues were identified. Additionally, visual observations confirmed the failure had occurred in the previous hours and was not ongoing for long period of time.

Corrective Actions, Preventative Measures, & Remediation:
Upon receiving indication of elevated TRC concentrations, Koch Methanol operations was notified and found the pump discharge hose disconnected. The discharge hose was immediately

reconnected and the connection was tightened. Visual inspections will continue to occur at a minimum of once per shift to identify any potential issues with the pump.

If you have any questions or require additional information, please contact HaLeigh Engler at (225) 264-2065 or at haleigh.engler@kochind.com.

Non-Compliance Report Form

Facility Name: Koch Methanol St. James **Date:** 04-13-2023

Facility Address: 5181 Wildcat St., St. James, LA 70086

Person Reporting: Marc Hoss

Title: Vice President of Manufacturing & Plant Manager

Phone Number: 580-231-4268 **Parish:** St. James

LPDES Number: LA0127367 **AI#:** 194165

Receiving Waters: St. James Canal
(Refer to Subject Line on Permit Cover Letter)

Violation(s) Summary:

Date of Non-Compliance	**Parameter/ Description** (e.g. TSS, Overflow)	**Outfall No./ Location** (e.g. 001, 123 Main St.)	**Permit Limit**	**Reported Value**
02-28-2023	Unauthorized Discharge of Cooling Water	Outfall 005 (Receiving Water St. James Canal)	--	--

Description of Violation(s):
On February 28, 2023, after an unplanned shutdown, the cooling tower was found to be overflowing to Outfall 005 and to Pond 2. The unplanned shutdown that occurred on February 27, 2023 resulted in the Koch Methanol Plant being shut down while the third-party oxygen supplier remained operating. This, coupled with lack of cooling water usage from the Koch Methanol Plant, resulted in an abnormal operating condition where cooling water continued to be returned from the third-party into the cooling tower at a higher rate than the designed cooling water blowdown, resulting in rising water level in the cooling tower followed by an overflow. The cooling water overflowed to the stormwater drainage system which discharged to Outfall 005 to Pond 2. The discharge was approximately 371,430 gallons of cooling water.

Cause of Violation(s):
The high level in the cooling tower was not recognized in a timely manner by the operator as the unplanned shutdown resulted in an “alarm flood” where a high number of alarms are issued at the same time. The warning alarm was inadvertently missed for approximately 18 hours.

Corrective Actions, Preventative Measures, & Remediation:
Upon indication of high cooling tower level and the overflow, Koch Methanol operations began to troubleshoot the source of the additional volume and adjust the cooling tower blowdown rate

to lower the level. Koch Methanol determined that the alarm strategy was inadequate for that operating scenario and has since modified the strategy to include an additional high level critical alarm. There is currently a high level warning to indicate to operations to take action due to higher than normal water level in the cooling tower. The new high level *critical* alarm will also indicate to take action due to high level, however, with its criticality it will mitigate the alarm being missed during an alarm flood. The alarms are set at levels that will allow operations adequate time to mitigate the high level prior to an overflow.

If you have any questions or require additional information, please contact HaLeigh Engler at (225) 264-2065 or at haleigh.engler@kochind.com.

APPENDIX E
BIOASSAY TESTING RESULTS (TOXICITY TESTING RESULTS)

Results Summary Table

		Daphnia pulex (water flea)	Pimephales promelas (fathead minnow)	
		Result (%)	Result (%)	
2020	NOEC	0.2	0.2	Pass - No Toxicity
	LC50(48)	> 0.2	> 0.2	
2021	NOEC	0.2	0.2	Pass - No Toxicity
	LC50(48)	> 0.2	> 0.2	
2022	NOEC	0.2	0.2	Pass - No Toxicity
	LC50(48)	> 0.2	> 0.2	

Critical Dilution = 0.1%

TABLE 1
SUMMARY SHEET
***Daphnia pulex* ACUTE SURVIVAL TEST RESULTS**

PERMITTEE: YCI Methanol One, LLC
FACILITY SITE: YCI Methanol Plant
NPDES PERMIT NUMBER: LA0127367 AI 194165
OUTFALL IDENTIFICATION: 001
OUTFALL SAMPLE IS FROM: X SINGLE ____ MULTIPLE DISCHARGE
BIOMONITORING LABORATORY: Element Lafayette
DILUTION WATER USED: X RECEIVING WATER ____ LAB WATER
CRITICAL DILUTION: 0.1% DATE TEST INITIATED December 15, 2020

1. LOW-FLOW LETHALITY:
   Is the mean survival at 48 hours significantly less (p= 0.05) than the control survival for the low flow or critical dilution? ____ yes X no

DILUTION SERIES RESULTS

Time of Reading	REP	0	0.05	0.07	0.09	0.1	0.2
24-Hour	A	100	100	100	100	100	100
	B	100	100	100	100	100	100
	C	100	100	100	100	100	100
	D	100	100	100	100	100	100
	E	100	100	100	100	100	100
48-Hour	A	100	100	90	100	100	100
	B	90	100	100	100	100	100
	C	100	100	90	90	100	100
	D	90	100	100	90	100	90
	E	90	100	100	100	100	100
Mean		94	100	96	96	100	98

2. Are the test results to be considered valid? X yes ____ no
   If ____ no (test invalid), what reasons for invalidity? NA

3. Is this a retest of a previous invalid test? ____ yes X no
   Is this a retest of a previous test failure? ____ yes X no

4. Enter percent effluent corresponding to each NOEC (No Observed Effect Concentration) for *Daphnia pulex*:
   NOEC = 0.2 % effluent
   $LC_{50}48$ = > 0.2 % effluent

TABLE 2
SUMMARY SHEET
***Pimephales promelas* ("fathead minnow") ACUTE SURVIVAL TEST RESULTS**

PERMITTEE: YCI Methanol One, LLC
FACILITY SITE: YCI Methanol Plant
NPDES PERMIT NUMBER: LA0127367 AI 194165
OUTFALL IDENTIFICATION: 001
OUTFALL SAMPLE IS FROM: X SINGLE ____ MULTIPLE DISCHARGE
BIOMONITORING LABORATORY: Element Lafayette
DILUTION WATER USED: X RECEIVING WATER ____ LAB WATER
CRITICAL DILUTION: 0.1% DATE TEST INITIATED December 15, 2020

1. LOW-FLOW LETHALITY:
   Is the mean survival at 48 hours significantly less (p= 0.05) than the control survival for the low flow or critical dilution? ____ yes X no

DILUTION SERIES RESULTS

Time of Reading	REP	0	0.05	0.07	0.09	0.1	0.2
24-Hour	A	100	100	100	100	100	100
	B	100	100	100	100	100	100
	C	100	100	100	100	100	100
	D	100	100	100	100	100	100
	E	100	100	100	100	100	100
48-Hour	A	100	100	100	100	100	100
	B	100	100	100	100	100	100
	C	100	100	100	100	100	100
	D	100	100	100	100	100	100
	E	100	100	100	100	100	100
Mean		100	100	100	100	100	100

2. Are the test results to be considered valid? X yes ____ no
   If ____ no (test invalid), what reasons for invalidity? NA

3. Is this a retest of a previous invalid test? ____ yes X no
   Is this a retest of a previous test failure? ____ yes X no

4. Enter percent effluent corresponding to each NOEC (No Observed Effect Concentration) for *Pimephales promelas*:
   NOEC = 0.2 % effluent
   $LC_{50}48$ = > 0.2 % effluent

TABLE 1
SUMMARY SHEET
***Daphnia pulex* ACUTE SURVIVAL TEST RESULTS**

PERMITTEE: Koch Methanol St. James, LLC
FACILITY SITE: Koch Methanol Plant
NPDES PERMIT NUMBER: LA0127367 AI 194165
OUTFALL IDENTIFICATION: 001
OUTFALL SAMPLE IS FROM: X SINGLE ____ MULTIPLE DISCHARGE
BIOMONITORING LABORATORY: Element Lafayette
DILUTION WATER USED: X RECEIVING WATER ____ LAB WATER
CRITICAL DILUTION: 0.1% DATE TEST INITIATED October 14, 2021

1. LOW-FLOW LETHALITY:
   Is the mean survival at 48 hours significantly less (p= 0.05) than the control survival for the low flow or critical dilution? ____ yes X no

DILUTION SERIES RESULTS

Time of Reading	REP	0	0.05	0.07	0.09	0.1	0.2
24-Hour	A	100	100	100	100	100	100
	B	100	100	100	100	100	100
	C	100	100	100	100	100	100
	D	100	100	100	100	100	100
	E	100	100	100	100	100	100
48-Hour	A	100	100	100	100	100	100
	B	100	100	100	100	100	100
	C	100	100	100	100	100	100
	D	100	100	100	100	100	100
	E	100	100	100	100	100	100
Mean		100	100	100	100	100	100

2. Are the test results to be considered valid? X yes ____ no
   If ____ no (test invalid), what reasons for invalidity? NA

3. Is this a retest of a previous invalid test? ____ yes X no
   Is this a retest of a previous test failure? ____ yes X no

4. Enter percent effluent corresponding to each NOEC (No Observed Effect Concentration) for *Daphnia pulex*:
   NOEC = 0.2 % effluent
   $LC_{50}48$ = > 0.2 % effluent

TABLE 2
SUMMARY SHEET
***Pimephales promelas* ("fathead minnow") ACUTE SURVIVAL TEST RESULTS**

PERMITTEE: Koch Methanol St. James, LLC
FACILITY SITE: Koch Methanol Plant
NPDES PERMIT NUMBER: LA0127367 AI 194165
OUTFALL IDENTIFICATION: 001
OUTFALL SAMPLE IS FROM: X SINGLE ____ MULTIPLE DISCHARGE
BIOMONITORING LABORATORY: Element Lafayette
DILUTION WATER USED: X RECEIVING WATER ____ LAB WATER
CRITICAL DILUTION: 0.1% DATE TEST INITIATED October 14, 2021

1. LOW-FLOW LETHALITY:
   Is the mean survival at 48 hours significantly less (p= 0.05) than the control survival for the low flow or critical dilution? ____ yes X no

DILUTION SERIES RESULTS

Time of Reading	REP	0	0.05	0.07	0.09	0.1	0.2
24-Hour	A	100	100	100	100	100	100
	B	100	100	100	100	100	100
	C	100	100	100	100	90	100
	D	100	100	100	100	100	100
	E	100	100	100	100	100	100
48-Hour	A	100	100	100	100	100	100
	B	100	100	100	100	100	100
	C	100	100	100	100	90	100
	D	100	100	100	100	100	100
	E	100	100	100	100	100	100
Mean		100	100	100	100	98	100

2. Are the test results to be considered valid? X yes ____ no
   If ____ no (test invalid), what reasons for invalidity? NA

3. Is this a retest of a previous invalid test? ____ yes X no
   Is this a retest of a previous test failure? ____ yes X no

4. Enter percent effluent corresponding to each NOEC (No Observed Effect Concentration) for *Pimephales promelas*:
   NOEC = 0.2 % effluent
   $LC_{50}48$ = > 0.2 % effluent

TABLE 1
SUMMARY SHEET
***Daphnia pulex* ACUTE SURVIVAL TEST RESULTS**

PERMITTEE: Koch Methanol St. James, LLC
FACILITY SITE: Koch Methanol Plant
NPDES PERMIT NUMBER: LA0127367 AI 194165
OUTFALL IDENTIFICATION: 001
OUTFALL SAMPLE IS FROM: X SINGLE ____ MULTIPLE DISCHARGE
BIOMONITORING LABORATORY: Element Lafayette
DILUTION WATER USED: X RECEIVING WATER ____ LAB WATER
CRITICAL DILUTION: 0.1% DATE TEST INITIATED October 11, 2022

1. LOW-FLOW LETHALITY:
   Is the mean survival at 48 hours significantly less (p= 0.05) than the control survival for the low flow or critical dilution? ____ yes X no

DILUTION SERIES RESULTS

Time of Reading	REP	0	0.05	0.07	0.09	0.1	0.2
24-Hour	A	100	100	100	100	100	100
	B	100	100	100	100	100	100
	C	100	100	100	100	100	100
	D	100	100	100	100	100	100
	E	100	100	100	100	100	100
48-Hour	A	100	100	100	100	100	100
	B	100	100	100	100	100	100
	C	100	100	100	100	100	100
	D	100	100	100	100	100	100
	E	100	100	100	100	100	100
Mean		100	100	100	100	100	100

2. Are the test results to be considered valid? X yes ____ no
   If ____ no (test invalid), what reasons for invalidity? NA

3. Is this a retest of a previous invalid test? ____ yes X no
   Is this a retest of a previous test failure? ____ yes X no

4. Enter percent effluent corresponding to each NOEC (No Observed Effect Concentration) for *Daphnia pulex*:
   NOEC = 0.2 % effluent
   $LC_{50}48$ = > 0.2 % effluent

TABLE 2
SUMMARY SHEET
***Pimephales promelas* ("fathead minnow") ACUTE SURVIVAL TEST RESULTS**

PERMITTEE: Koch Methanol St. James, LLC
FACILITY SITE: Koch Methanol Plant
NPDES PERMIT NUMBER: LA0127367 AI 194165
OUTFALL IDENTIFICATION: 001
OUTFALL SAMPLE IS FROM: X SINGLE ______ MULTIPLE DISCHARGE
BIOMONITORING LABORATORY: Element Lafayette
DILUTION WATER USED: X RECEIVING WATER ______ LAB WATER
CRITICAL DILUTION: 0.1% DATE TEST INITIATED October 11, 2022

1. LOW-FLOW LETHALITY:
   Is the mean survival at 48 hours significantly less (p= 0.05) than the control survival for the low flow or critical dilution? ______ yes X no

DILUTION SERIES RESULTS

Time of Reading	REP	0	0.05	0.07	0.09	0.1	0.2
24-Hour	A	100	100	100	100	100	100
	B	100	100	100	100	100	100
	C	100	100	100	100	100	100
	D	100	100	100	100	100	100
	E	100	100	100	100	100	100
48-Hour	A	100	100	100	100	100	100
	B	100	100	100	100	100	100
	C	100	100	100	100	100	100
	D	100	100	100	100	100	100
	E	100	100	100	100	100	100
Mean		100	100	100	100	100	100

2. Are the test results to be considered valid? X yes ______ no
   If ____ no (test invalid), what reasons for invalidity? NA

3. Is this a retest of a previous invalid test? ______ yes X no
   Is this a retest of a previous test failure? ______ yes X no

4. Enter percent effluent corresponding to each NOEC (No Observed Effect Concentration) for *Pimephales promelas*:
   NOEC = 0.2 % effluent
   $LC_{50}48$ = > 0.2 % effluent