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October 18, 2023

Mr. Bryan Johnston
Air Permits Division
Office of Environmental Services
Louisiana Department of Environmental Quality
P.O. Box 4313
Baton Rouge, Louisiana 70821-4313

2023 OCT 18 AM 10:43
LDEQ

RE: Title V Air Permit Minor Modification Application and Expedited Permit Processing Request
Shintech Louisiana, LLC
Plaquemine Ethylene Plant 1
Plaquemine, Iberville Parish, Louisiana
Title V Permit No. 3129-V6; PSD Permit No. PSD-LA-788(M-5)
Agency Interest No. 126578

Dear Mr. Johnston:

On behalf of our client, Shintech Louisiana, LLC (Shintech), Providence Engineering and Environmental Group LLC (Providence) herein submits the enclosed application for a Title V Air Permit minor modification application in accordance with Louisiana Administrative Code (LAC) 33:III.525 for the Plaquemine Ethylene Plant 1 (PEP-1) in Plaquemine, Iberville Parish, Louisiana.

PEP-1 currently operates under Title V Permit No. 3129-V6 issued on June 23, 2023, and Prevention of Significant Deterioration (PSD) Permit No. PSD-LA-788 (M-5) issued June 23, 2023. A check for $2,053, which is the minimum required fee for a minor modification under fee code 0635, is attached. Expedited permit processing is requested in accordance with LAC 33:I.Chapter 18.

If you have questions, please contact Mr. Timothy Bergeron at (225) 687-2105 ext. 5620 or me at (225) 766-7400.

Sincerely,

Mindi H. Faubion

Mindi H. Faubion, PE
Air Quality Director
Providence Engineering and Environmental Group LLC

cc: Laura Fennell, Shintech
EPA Region VI

RECEIVED
OCT 18 2023
By

Wednesday, October 18, 2023
1:32:38 PM

RECEIPT OF CHECK

Master AI #:	126578
Name on Check:	Providence Engineering and Environmental Group
Master File Name:	Shintech Louisiana LLC - Shintech Plaquemine Plan
Check Received Date:	10/18/2023
Check Date:	8/23/2023
Check Number:	21567
Check Amount ($):	$2,053.00
Staff Entry:	P00333122
Date data entered:	10/18/2023
Media:	AIR
Comments:	Title V Permit Modification and Prevention of Significant Deterioration (PSD) Permit Modification

SHINTECH LOUISIANA, LLC
PLAQUEMINE ETHYLENE PLANT 1
WEST BATON ROUGE PARISH and IBERVILLE PARISH, LOUISIANA

SHINTECH

TITLE V AIR PERMIT MINOR MODIFICATION APPLICATION

AGENCY INTEREST NO. 126578

OCTOBER 2023

Providence Engineering and Environmental Group LLC
1201 Main Street
Baton Rouge, LA 70802
(225) 766-7400
www.providenceeng.com
Providence Project No: 039-091-016

PROVIDENCE

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SECTION 1.0

INTRODUCTION

1.0 INTRODUCTION

1.1 Background

Shintech Louisiana, LLC (Shintech), a wholly owned subsidiary of C-K Tech, Inc., owns and operates the ethylene production facility, Shintech Plaquemine Ethylene Plant 1 (PEP-1), as part of the Shintech Plaquemine Plant (SPP) Complex located on the west bank of the Mississippi River near Plaquemine, Iberville Parish, Louisiana. The SPP Complex includes the following facilities:

- SPP-1 – Authorized by Prevention of Significant Deterioration (PSD) Permit No. PSD-LA-709 (M-4) and Clean Air Act (CAA) Title V Permit No. 1280-00118-V9, issued on December 16, 2021, by the Louisiana Department of Environmental Quality (LDEQ),
- Hydrochloric Acid Plant (HAPF-1) – Authorized by PSD Permit No. PSD-LA-738 issued on February 27, 2009 and CAA Title V Permit No. 3064-V4 issued on November 28, 2018, by the LDEQ,
- SPP-2 – Authorized by PSD Permit No. PSD-LA-731(M-2) issued on March 19, 2020, and CAA Title V Permit No. 3063-V6 issued on March 19, 2020, by the LDEQ,
- HAPF-2 – Authorized by PSD Permit No. PSD-LA-739 issued on June 29, 2010, and CAA Title V Permit No. 3066-V4 issued on January 22, 2020, by the LDEQ,
- HAPF-3 – Authorized by CAA Title V Permit No. 3110-V3 issued on August 30, 2023, by the LDEQ,
- PEP-1 – Authorized by PSD Permit No. PSD-LA-788(M-5) and CAA Title V Permit No. 3129-V6 issued on June 23, 2023, by the LDEQ, and
- SPP-3 – Authorized by PSD Permit No. PSD-LA-817(M-2) and CAA Title V Permit No. 3164-V4 issued on October 20, 2022, by the LDEQ.

A Site Location Map is provided as **Figure 1**.

1.2 Project Description

Shintech is submitting this application in accordance with Louisiana Administrative Code (LAC) 33:III.525 to address the following minor modifications to the sources described below:

- The addition of Emission Point Number (EPN) EU-11 HP Steam Boiler Package C. This boiler will not be included in the existing boiler cap.

- The revision of the process description from two boilers to three.

- The addition of a new emission point, emission point number (EPN) EU-14, for railcar loading. Emissions associated with this source are 100% controlled by capture in a closed vent system and routing to the Gas Thermal Oxidizers (GTOs). Emissions are already accounted for in the permitted GTO emissions, so there will be no increase in emissions with this change; however, the applicability of LAC 33:III.2107 and of 40 Code of Federal Regulations (CFR) 63 Part YY needs to be documented in the permit. Please note, Shintech has been complying with Subpart YY for railcar loading; however, would like the requirements represented in the permit for clarification.

- The addition of 40 CFR 63 Subpart YY applicability for the cracking heaters (EPNs EP-1 – EP-7 and EPN EP-CAP) for consistency with the Notification of Compliance. There are no changes to any permitted emissions associated with this regulatory update.

- Update General Condition XVII Activity #3 to:
  - Update the source name from ~~Purge Before Tank Car Loading~~ to Purge Related to Tank Car Loading,
  - Update the source description, and
  - Update emissions to include propylene loading operations.

1.3 Process Description

The Shintech PEP-1 is designed to produce polymer grade ethylene production by thermal cracking of an ethane feedstock.

Cracking Section

The fresh ethane and recycled ethane stream from the process along with a dilution steam are fed to cracking heaters to heat the ethane to cracking temperature. Propane and butane obtained from the byproducts of cracking may be recycled in heaters for cracking. The cracked gas from the heaters is then sent to the quench tower.

Quench Section

The cracked gas from the heater is cooled and partially condensed by re-circulating water in the quench tower. The condensed heavy hydrocarbons and dilution steam along with quench water are separated subsequently and the non-condensable gas exits the top of the quench tower.

Separated water is processed in the Dilution Steam Generator and reused as dilution steam in the cracking heaters.

Compression Section

The quench tower overhead vapors are compressed in the multiple stage centrifugal charge gas compressors.

The acid gas removal section consists of caustic/water wash tower to provide removal of the acid gases. Acid gases are removed from the charge gas during the compression stage.

After acid gas removal, charge gas is dried in a drying system and then the effluent is chilled by refrigerants such as propylene refrigerant, ethylene refrigerant, *etc.*

Recovery Section

The feeds from the charge gas chilling train are sent to the series of distillation columns such as demethanizer, deethanizer, debutanizer, and ethylene fractionator. By going through those columns, charge gas is separated into products/byproducts such as ethylene, ethane, hydrogen/methane off gas, propylene, propane, crude butadiene, and pyrolysis gasoline. The ethylene product is sent to the VCM (Vinyl Chloride Monomer) plant as the raw material for PVC product. Ethane is recycled back to the cracking heaters after it is combined with the ethane feed.

Hydrogen/methane off gas and propane are used as fuel.

Propylene and crude butadiene are either exported or converted to propane and butane by hydrogenation and recycled to heaters for cracking. Pyrolysis gasoline is either exported or used internally as fuel for the boilers.

Refrigeration Systems

The ethylene plant features two refrigerant systems: a propylene refrigerant system and an ethylene refrigerant system. Both systems utilize a steam turbine-driven centrifugal compressor to provide refrigeration at various levels.

Flare System

A flare system provides a means to collect and burn hydrocarbon process streams that have been relieved or drained to the flare headers during start-up, turnaround, and emergency situations.

Cooling Tower

One cooling tower provides cooling of various process streams.

Storage Tank

The facility has two spherical tanks to store propylene, two spherical tanks to store crude butadiene, and two internal floating roof tanks to store pyrolysis gasoline. Off-spec materials are returned to the process.

Loading Facilities

Propylene, crude butadiene, and pyrolysis gasoline are sent from each storage tank to rail cars at loading facilities for external shipment.

Steam Boilers

Three steam boilers generate steam for use in the ethylene plant.

Thermal Oxidizers

Two thermal oxidizers are used to burn off gas from the spent caustic oxidation unit, storage tanks, and loading facilities.

1.4 Air Emissions

Emissions from the facility primarily result from fuel combustion in seven cracking heaters (EPN EP-1 – EPN EP-7). Other primary air emission sources include three boilers (EPN EU-1, EPN EU-2, and EU-11), two thermal oxidizers (EPN EU-4 and EPN EU-5), a flare (EPN EU-3), a cooling tower (EPN EU-6), an emergency diesel generator (EPN EU-7), three fire pump engines (EPN EU-8, EPN EU-9, and EPN EU-13), emissions from a wastewater pit (EPN EU-10), and fugitive emissions from equipment leaks (EPN FUG).

The primary pollutants emitted from the facility are carbon monoxide (CO), nitrogen oxides (NOx), volatile organic compounds (VOCs), and greenhouses gases. Other pollutants include particulate matter (PM_{10} and $PM_{2.5}$), sulfur dioxide (SO_2), benzene, chlorine, and ammonia.

Emission calculations are in **Section 5.**

SECTION 2.0

APPLICATION FORM

Department of Environmental Quality Office of Environmental Services Air Permits Division P.O. Box 4313 Baton Rouge, LA 70821-4313 (225) 219-3417	**LOUISIANA** **Application for Approval of Emissions of Air Pollutants from Part 70 Sources**	DEQ LOUISIANA

PLEASE TYPE OR PRINT

1. Facility Information [LAC 33:III.517.D.1]

Facility Name or Process Unit Name (if any) Plaquemine Ethylene Plant 1 (PEP-1)	☐ All Process Units ■ Process Unit-Specific Permit
Agency Interest Number (A.I. Number) 126578	**Currently Effective Permit Number(s)** 3129-V6; PSD-LA-788(M-5)
Company - Name of Owner Shintech Louisiana, LLC	
Company - Name of Operator (if different from Owner)	
Parent Company (if Company – Name of Owner given above is a division) C-K Tech, Inc.	
Federal Tax-ID 74-1750521	

● corporation, partnership, or sole proprietorship ○ regulated utility ○ municipal government
○ state government ○ federal government ○ other, specify

2. Physical Location and Process Description [LAC 33:III.517.D.18, unless otherwise stated]

What does this facility produce? Add more rows as necessary

This is an ethylene production facility.

What modifications/changes are proposed in this application? Add more rows as necessary.

See Section 1.2

Nearest town (in the same parish as the facility):	Parish(es) where facility is located:
Plaquemine	Iberville

Distance To (mi):	155	Texas	195	Arkansas	90	Mississippi	165	Alabama
Latitude Front Gate:	30	Deg	16	Min	23	Sec	0	Hundredths
Longitude Front Gate:	91	Deg	10	Min	24	Sec	0	Hundredths

Distance from nearest Class I Area 212 Kilometers

Add physical address and description of location of the facility below. If the facility has no address, provide driving directions. Add more rows as necessary.

26270 Highway 405, Plaquemine, LA 70764

Map attached (required per LAC 33:III.517.D.1)

Description of processes and products attached (required per LAC 33:III.517.D.2)

Introduction/Description of the proposed project attached (required per LAC 33:III.517.D.5)

3. Confidentiality [LAC 33.I.Chapter 5]

Are you requesting confidentiality for any information except air pollutant emission rates ?	○ Yes ● No
If "yes," list the sections for which confidentiality is requested below. Add rows as necessary. Confidentiality requests require a submittal that is separate from this application. Information for which confidentiality is requested should not be submitted with this application. Consult instructions.	

4. Type of Application [LAC 33:III.517.D]

Check all that apply

☐ Renewal

Select one, if applicable:

☐ Entirely new facility

☐ Significant modification or expansion of existing facility (may also include reconciliations) [LAC 33:III.527]

■ Minor modification or expansion of existing facility (may also include reconciliations) [LAC 33:III.525]

☐ Reconciliation only

NSR Analysis:

☐ Prevention of Significant Deterioration (PSD)

☐ Nonattainment New Source Review (NNSR)

Does this submittal update or replace an application currently under review?	○ Yes ● No
If yes, provide date that the prior application was submitted:	

Select one if this application is for an existing facility that does not have an air quality permit:

☐ Previously Grandfathered (LAC 33:III.501.B.6)

☐ Previously Exempted (e.g., Small Source Exemption; LAC 33:III.501.B.2.d)

☐ Previously Unpermitted

5. Fee Information [LAC 33:III.517.D.17]

Fee Parameter: If the fee code is based on an operational parameter (such as number of employees or capital cost), enter that parameter here.	

Industrial Category: Enter the Standard Industrial Classification (SIC) and North American Industry Classification (NAICS) Codes that apply to the facility.

Primary SICC: 2869 **NAICS Code:** 325199

Secondary SICC(s):

Project Fee Calculation: Enter fee code, permit type, production capacity/throughput, and fee amount pursuant to LAC 33:III.Chapter 2. Add rows to this table as needed. Include with the application the amount in the Grand Total blank as the permit application fee.

FEE CODE	TYPE	EXISTING CAPACITY	INCREMENTAL INCREASE	SURCHARGE				TOTAL AMOUNT
				MULTIPLIER	NSPS	PSD	TOXICS	
635	Minor	1477			☐	■	☐	$ 2,053.00
					☐	☐	☐	
							GRAND TOTAL	$ 2,053.00

Optional Fee Explanation: Use the space provided to give an explanation of the fee determination displayed above. Using this area will help avoid confusion.

Electronic Fund Transfer (EFT): If paying the permit application fee using an Electronic Fund Transfer (EFT), please include the EFT Transaction Number, the Date that the EFT was made, and the total dollar amount submitted in the EFT. If not paying the permit application fee using EFT, leave blank.

EFT Transaction Number	Date of Submittal	Total Dollar Amount

6. Key Dates

Estimated date construction will commence:	N/A
Estimated date operation will commence:	N/A

7. Pending Permit Applications – For Process Unit-Specific Permits Only [LAC 33:III.517.D.18]

List all other process units at this facility for which Part 70 permit applications have been submitted, but have not been acted upon by LDEQ as of the date of submittal of this application. If none, state "none" in the table. **It is not necessary to update this table during the permit review process, unless requested by LDEQ.**

Process Unit Name	Permit Number	Date Submitted

8. LAC 33:I.1701 Requirements – Answer all below for new sources and permit renewals ■ N/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 Louisiana or 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.)	○ Yes ○ No
If yes, list States:	
Do you owe any outstanding fees or final penalties to the Department? If yes, explain below. Add rows if necessary.	○ Yes ○ No
Is your company a corporation or limited liability company? If yes, attach a copy of your company's Certificate of Registration and/or Certificate of Good Standing from the Secretary of State. The appropriate certificate(s) should be attached to the end of this application as an appendix.	○ Yes ○ No

9. Permit Shield Request [LAC 33:III.517.E.7]

If yes, check the appropriate boxes to indicate the type of permit shield being sought. Include the specific regulatory citation(s) for which the shield is being requested. Give an explanation of the circumstances that will justify the permit shield request. Attach additional pages if necessary. If additional pages are used, attach them directly behind this page and enter "See Attached Pages" into the Explanation field.	○ Yes ● No

Type of Permit Shield request (check all that apply):

Non-applicability determination	Specific Citation(s)	Explanation
☐ 40 CFR 60		
☐ 40 CFR 61		
☐ 40 CFR 63		
☐ PSD		
☐ NNSR		
Interpretation of monitoring/recordkeeping/ reporting and/or means of compliance for:	Specific Citation(s)	Explanation
☐ 40 CFR 60		
☐ 40 CFR 61		
☐ 40 CFR 63		
☐ PSD		
☐ NNSR		
☐ State Implementation Plan (SIP) Regulation(s) referenced in 40 CFR 52 Subpart T		

10. Certification of Compliance with Applicable Requirements

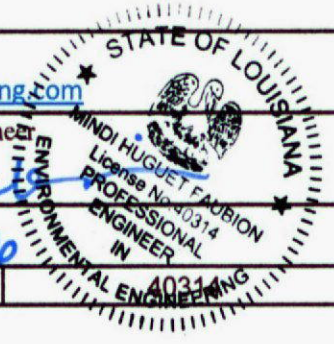
Statement for Applicable Requirements for Which the Company and Facility Referenced In This Application Is In Compliance

Based on information and belief, formed after reasonable inquiry, the company and facility referenced in this application is in compliance with and will continue to comply with all applicable requirements pertaining to the sources covered by the permit application, as outlined in Tables 1 and 2 in the permit application. For requirements promulgated as of the date of this certification with compliance dates effective during the permit term, I further certify that the company and facility referenced in this application will comply with such requirements on a timely basis and will continue to comply with such requirements.

For corporations only: By signing this form, I certify that, in accordance with the definition of Responsible Official found in LAC 33:III.502, (1) I am a president, secretary, treasurer, or vice-president in charge of a principal business function, or other person who performs similar policy or decision-making functions; or (2) I am a duly authorized representative of such person; am responsible for the overall operation of one or more manufacturing, production, or operating facilities addressed in this permit application; and either the facilities employ more than 250 persons or have gross annual sales or expenditures exceeding $25 million (in second quarter 1980 dollars); or the delegation of authority has been approved by LDEQ prior to this certification.*

*Approval of a delegation of authority can be requested by completing a Duly Authorized Representative Designation Form (Form_7218) available on LDEQ's website at: http://www.deq.louisiana.gov/portal/tabid/2758/Default.aspx

CERTIFICATION: I certify, under provisions in Louisiana and United States law which provide criminal penalties for false statements, that based on information and belief formed after reasonable inquiry, the statements and information contained in this Application for Approval of Emissions of Air Pollutants from Part 70 Sources, including all attachments thereto and the compliance statement above, are true, accurate, and complete.			CERTIFICATION: I certify that the engineering calculations, drawings, and design are true and accurate to the best of my knowledge.		
a. Responsible Official			**b. Professional Engineer**		
Name Daniel Cedotal			Name Mindi H. Faubion, PE		
Title Vice President of Manufacturing			Title Air Quality Director		
Company Shintech Louisiana, LLC			Company Providence Engineering and Environmental Group LLC		
Suite, mail drop, or division			Suite, mail drop, or division		
Street or P.O. Box P.O. Box 358			Street or P.O. Box 1201 Main Street		
City Addis	State LA	Zip 70710	City Baton Rouge	State LA	Zip 70802
Business phone (225) 687-2105			Business phone (225) 766-7400		
Email Address dcedotal@shin-tech.com			Email Address mindifaubion@providenceeng.com		
Signature of responsible official (See 40 CFR 70.2)			Signature of Professional Engineer Mindi Faubion		
Date			Date 2023.10.16		
			Louisiana Registration No.	40314	



10. Certification of Compliance with Applicable Requirements

Statement for Applicable Requirements for Which the Company and Facility Referenced In This Application Is In Compliance

Based on information and belief, formed after reasonable inquiry, the company and facility referenced in this application is in compliance with and will continue to comply with all applicable requirements pertaining to the sources covered by the permit application, as outlined in Tables 1 and 2 in the permit application. For requirements promulgated as of the date of this certification with compliance dates effective during the permit term, I further certify that the company and facility referenced in this application will comply with such requirements on a timely basis and will continue to comply with such requirements.

For corporations only: By signing this form, I certify that, in accordance with the definition of Responsible Official found in LAC 33:III.502, (1) I am a president, secretary, treasurer, or vice-president in charge of a principal business function, or other person who performs similar policy or decision-making functions; or (2) I am a duly authorized representative of such person; am responsible for the overall operation of one or more manufacturing, production, or operating facilities addressed in this permit application; and either the facilities employ more than 250 persons or have gross annual sales or expenditures exceeding $25 million (in second quarter 1980 dollars); or the delegation of authority has been approved by LDEQ prior to this certification.*

*Approval of a delegation of authority can be requested by completing a Duly Authorized Representative Designation Form (Form_7218) available on LDEQ's website at: http://www.deq.louisiana.gov/portal/tabid/2758/Default.aspx

CERTIFICATION: I certify, under provisions in Louisiana and United States law which provide criminal penalties for false statements, that based on information and belief formed after reasonable inquiry, the statements and information contained in this Application for Approval of Emissions of Air Pollutants from Part 70 Sources, including all attachments thereto and the compliance statement above, are true, accurate, and complete.			CERTIFICATION: I certify that the engineering calculations, drawings, and design are true and accurate to the best of my knowledge.		
a. Responsible Official			**b. Professional Engineer**		
Name Daniel Cedotal			Name Mindi H. Faubion, PE		
Title Vice President of Manufacturing			Title Air Quality Director		
Company Shintech Louisiana, LLC			Company Providence Engineering and Environmental Group LLC		
Suite, mail drop, or division			Suite, mail drop, or division		
Street or P.O. Box P.O. Box 358			Street or P.O. Box 1201 Main Street		
City Addis	State LA	Zip 70710	City Baton Rouge	State LA	Zip 70802
Business phone (225) 687-2105			Business phone (225) 766-7400		
Email Address dcedotal@shin-tech.com			Email Address mindifaubion@providenceeng.com		
Signature of responsible official (See 40 CFR 70.2) Daniel Cedotal			Signature of Professional Engineer		
Date 10/16/23			Date		
			Louisiana Registration No.	40314	

11. Personnel [LAC 33:III.517.D.1]

a. Manager of Facility who is located at plant site

Name ○ Primary Contact		
Chet Peterson		
Title		
PVC/Ethylene Production Manager		
Company		
Shintech Louisiana, LLC		
Suite, mail drop, or division		
Street or P.O. Box		
P.O. Box 358		
City	State	Zip
Addis	LA	70710
Business phone		
(225) 685-1199 ext. 4472		
Email Address		
cpeterson@shin-tech.com		

b. On-site contact regarding air pollution control

Name ● Primary Contact		
Timothy Bergeron		
Title		
Environmental Manager		
Company		
Shintech Louisiana, LLC		
Suite, mail drop, or division		
Street or P.O. Box		
P.O. Box 358		
City	State	Zip
Addis	LA	70710
Business phone		
(225) 687-2105 ext. 5620		
Email Address		
tbergeron@shin-tech.com		

c. Person to contact with written correspondence

Name ○ Primary Contact		
Timothy Bergeron		
Title		
Environmental Manager		
Company		
Shintech Louisiana, LLC		
Suite, mail drop, or division		
Street or P.O. Box		
P.O. Box 358		
City	State	Zip
Addis	LA	70710
Business phone		
(225) 687-2105 ext. 5620		
Email Address		
tbergeron@shin-tech.com		

d. Person who prepared this report

Name ○ Primary Contact		
Madison Kirkland		
Title		
Air Quality Specialist		
Company		
Providence Engineering and Environmental Group LLC		
Suite, mail drop, or division		
Street or P.O. Box		
1201 Main Street		
City	State	Zip
Baton Rouge	LA	70802
Business phone		
(225) 766-7400		
Email Address		
madisonkirkland@providenceeng.com		

e. Person to contact about Annual Maintenance Fees	See "b"	
Name	Street or P.O. Box	
Title	City	State / Zip
Company	Business phone	
Suite, mail drop, or division	Email Address	

12. Proposed Project Emissions [LAC 33:III.517.D.3]

List the total emissions following the proposed project for this facility or process unit (for process unit-specific permits). Speciate all criteria pollutants, TAP, and HAP for the proposed project.

Pollutant	Proposed Emission Rate (tons/yr)
$PM_{2.5}$	49.92
PM_{10}	62.30
SO_2	25.17
NOx	128.61
CO	416.13
VOC Total	135.82
CO_2e	925,529
1,3-Butadiene	8.88
1,4-Dichlorobenzene	0.01
Ammonia	34.79
Benzene	6.42
Chlorine	1.72
Ethyl benzene	0.09
Ethylene oxide	0.002
Formaldehyde	0.53
n-Hexane	13.11
Hydrogen sulfide	0.02
Naphthalene (and Methylnaphthalenes)	0.01
Styrene	0.38
Sulfuric acid	0.04
Toluene	0.95
Xylene	0.12

13. History of Permitted Emissions [LAC 33:III.517.D.18]

List each of the following in chronological order:

• The Permit Number and Date Action Issued for each air quality permit that has been issued to this facility or process unit (for process unit-specific permits) within the last ten (10) years.

• All small source exemptions, authorizations to construct, administrative amendments, case-by-case insignificant activities, and changes of tank service that have been approved since the currently effective Title V Operating Permit or State Operating Permit was issued to this facility or process unit (for process unit-specific permits). It is not necessary to list any such activities issued prior to the issuance of the currently effective Title V Operating Permit or State Operating Permit, if one exists.

Permit Number	Date Action Issued
3129-V6	June 23, 2023
3129-V5AA	December 9, 2021
3129-V5	November 11, 2021
PSD-LA-788(M-4)	November 11, 2021
Regulatory Permit (PER202000018)	November 23, 2020
Sulfuric Acid CBC IA	June 17, 2020
3129-V4	December 12, 2019
PSD-LA-788(M-3)	December 12, 2019
3129-V3 AA	May 17, 2018
3129-V3	February 28, 2018
PSD-LA-788(M-2)	February 28, 2018
3129-V2	June 20, 2016
PSD-LA-788(M-1)	June 20, 2016
3129-V1	June 11, 2015
3129-V0	December 4, 2014
PSD-LA-788	December 4, 2014

14.a. Enforcement Actions [LAC 33:III.517.D.18]

If yes, list all federal and state air quality enforcement actions, settlement agreements, and consent decrees received for this facility and/or process unit (for process unit-specific permits) since the issuance of the currently effective Title V Operating Permit or State Operating Permit. For each action, list the type of action (or its tracking number), the regulatory authority or authorities that issued the action, and the date that the action was issued. Summarize the conditions imposed by the enforcement action, settlement agreement, and consent decree in Section 22, Table 2. It is not necessary to submit a copy of the referenced action. Add rows to table as necessary.			● Yes ○ No
Type of Action or Tracking Number	Issuing Authority	Date Action Issued	Summary of Conditions Included?
AE-CN-19-00561	LDEQ	October 29, 2021	○ Yes ● No

14.b. Schedule for Compliance [LAC 33:III.517.E.4]

If the facility or process unit for which application is being made is not in full compliance with all applicable regulations, give a description of how compliance will be achieved, including a schedule for compliance below. Add rows as necessary. See instructions.	○ Yes ○ No

15. Letters of Approval for Alternate Methods of Compliance

If yes, list all correspondence with LDEQ, EPA, or other regulatory bodies that provides for or supports a request for alternate methods of compliance with any applicable regulations for this facility or process unit (for process unit-specific permits). List the date of issuance of the letter and the regulation referenced by the letter. Attach as an appendix a copy of all documents referenced in this table. Letters that are not included may not be incorporated into a final permit. Add rows to table as necessary.			● Yes ○ No
Date Letter Issued	Issuing Authority	Referenced Regulation(s)	Copy of Letter Attached?
July 19, 2019	LDEQ	40 CFR 60.18(c)(3)(ii); 40 CFR 63 Subpart CC	○ Yes ● No

16. Initial Notifications and Performance Tests [LAC 33:III.517.E.1]

If yes, list any initial notifications that have been submitted or one-time performance tests that have been performed for this facility or process unit (for process unit-specific permits) since the issuance of the currently effective Title V Operating Permit or State Operating Permit in order to satisfy regulatory requirements. Any initial notification or one-time performance test requirements that have not been satisfied should be listed in Section 22, Table 2 of this application. Any notifications or performance tests that recur periodically should also be properly noted in Section 22, Table 2 of this application. Add rows to table as necessary.			○ Yes ● No
Initial Notification or One-time Performance Test?	Regulatory Citation Satisfied	Applicable Source(s)	Date Completed/Approved

17. Existing Prevention of Significant Deterioration or Nonattainment New Source Review Limitations [LAC 33:III.517.D.18]

Do one or more emissions sources represented in this permit application currently operate under one or more NSR permits? If "yes," summarize the limitations from such permit(s) in the following table. Add rows to table as necessary. Be sure to note any annual emissions limitations from such permit(s) in Sections 13 and 14 of this application.	● Yes ○ No

Permit No.	Date Issued	EPN	Pollutant	BACT/LAER Limit[1]	Averaging Period	Description of Control Technology/Work Practice Standards
PSD-LA-788(M-5)	6/23/2023	EU-1 & EU-2 (Normal Operations)	$PM_{2.5}$	0.0119 lb/MMBtu	N/A	Good Combustion Practices; Natural gas during normal operations
			PM_{10}	0.0120 lb/MMBtu	N/A	Good Combustion Practices; Natural gas during normal operations
			CO	0.033 lb/MMBtu	N/A	Good Combustion Practices
			NOx	0.021 lb/MMBtu	N/A	Low NOx burners and SCR
			CO_{2e}	N/A	N/A	Improved combustion measures; Insulation; Minimization of air infiltration; reduced carbon feedstock and fuel
		EU-1 & EU-2 (Non-Normal Operations)	$PM_{2.5}$	0.0119 lb/MMBtu	N/A	Good combustion practices and use of natural gas and/or hydrogen rich fuel gas during startup
			PM_{10}	0.0120 lb/MMBtu	N/A	Good combustion practices and use of natural gas and/or hydrogen rich fuel gas during startup
			CO	0.033 lb/MMBtu	N/A	Good Combustion Practices
			CO_{2e}	N/A	N/A	Energy efficiency measures
		EU-3	$PM_{2.5}$	2.497 lb/MMscf	N/A	Comply with 40 CFR 63.11
			PM_{10}	2.497 lb/MMscf	N/A	Comply with 40 CFR 63.11
			CO	0.31 lb/MMBtu	N/A	Good Operating Practices
			NOx	0.027 lb/MMBtu	N/A	Good Operating Practices
			CO_{2e}	41,149 tons/yr	N/A	Energy efficiency measures
		EU-4	$PM_{2.5}$	0.08 lb/hr	N/A	Good Operating Practices
			PM_{10}	0.08 lb/hr	N/A	Good Operating Practices
			CO	3.92 lb/hr	N/A	Good Operating Practices
			NOx	0.027 lb/MMBtu	N/A	Good Operating Practices
			CO_{2e}	N/A	N/A	Energy efficiency measures
		EU-5	$PM_{2.5}$	0.08 lb/hr	N/A	Good Operating Practices
			PM_{10}	0.08 lb/hr	N/A	Good Operating Practices
			CO	3.92 lb/hr	N/A	Good Operating Practices
			NOx	0.027 lb/MMBtu	N/A	Good Operating Practices
			CO_{2e}	N/A	N/A	Energy efficiency measures
		EU-6	$PM_{2.5}$	0.0005% drift	N/A	Drift Eliminator
			PM_{10}	0.0005% drift	N/A	Drift Eliminator
		EU-7	$PM_{2.5}$	0.00033 lb/hp-hr	N/A	Compliance with 40 CFR 60 Subpart IIII
			PM_{10}	0.00033 lb/hp-hr	N/A	Compliance with 40 CFR 60 Subpart IIII
			CO	0.0058 lb/MMBtu	N/A	Good Combustion Practices
			NOx	0.011 lb/hp-hr	N/A	Good Combustion Practices
			CO_{2e}	26 tons/yr	N/A	Energy efficiency measures

PSD-LA-788(M-4)	11/11/2021	EU-8[2]	$PM_{2.5}$	0.00033 lb/hp-hr	N/A	Compliance with 40 CFR 60 Subpart IIII
			PM_{10}	0.00033 lb/hp-hr	N/A	Compliance with 40 CFR 60 Subpart IIII
			CO	0.0057 lb/MMBtu	N/A	Good Combustion Practices
			NOx	0.0066 lb/hp-hr	N/A	Good Combustion Practices
			VOC	0.0054 lb/MMBtu	N/A	Good Combustion Practices
			CO_{2e}	11 tons/yr	N/A	Energy efficiency measures
		EU-9	$PM_{2.5}$	0.00033 lb/hp-hr	N/A	Compliance with 40 CFR 60 Subpart IIII
			PM_{10}	0.00033 lb/hp-hr	N/A	Compliance with 40 CFR 60 Subpart IIII
			CO	0.0057 lb/MMBtu	N/A	Good Combustion Practices
			NOx	0.0066 lb/hp-hr	N/A	Good Combustion Practices
			CO_{2e}	11 tons/yr	N/A	Energy efficiency measures
		EU-13	$PM_{2.5}$	0.00033 lb/hp-hr	N/A	Compliance with 40 CFR 60 Subpart IIII
			PM_{10}	0.00033 lb/hp-hr	N/A	Compliance with 40 CFR 60 Subpart IIII
			CO	0.0057 lb/MMBtu	N/A	Good Combustion Practices
			NOx	0.0066 lb/hp-hr	N/A	Good Combustion Practices
			CO_{2e}	11 tons/yr	N/A	Energy efficiency measures
		EP-1, EP-2, EP-3, EP-4, EP-5, EP-6, EP-7 (Normal Operations)	$PM_{2.5}$	0.006 lb/MMBtu	N/A	Good Combustion Practices; Natural gas and fuel gas during normal operations
			PM_{10}	0.008 lb/MMBtu	N/A	Good Combustion Practices; Natural gas and fuel gas during normal operations
			CO	0.0425 lb/MMBtu	N/A	Good Combustion Practices
			NOx	0.01 lb/MMBtu	N/A	Low NOx burners and SCR
			CO_{2e}	805,203 tons/yr	N/A	Energy efficiency measures
		EP-1, EP-2, EP-3, EP-4, EP-5, EP-6, EP-7 (Non-Normal Operations)	$PM_{2.5}$	0.025 lb/MMBtu	N/A	Good Combustion Practices; Natural gas and/or hydrogen rich fuel gas during startup
			PM_{10}	0.042 lb/MMBtu	N/A	Good Combustion Practices; Natural gas and/or hydrogen rich fuel gas during startup
			CO	0.0425 lb/MMBtu	N/A	Good Combustion Practices
			CO_{2e}	N/A	N/A	Energy efficiency measures
		EP-CAP	$PM_{2.5}$	36.25 tons/yr	N/A	N/A
			PM_{10}	47.95 tons/yr	N/A	N/A
			CO	252.39 tons/yr	N/A	N/A
			CO_{2e}	776,232 tons/yr	N/A	N/A
		EU-CAP(1)	$PM_{2.5}$	3.71 tons/yr	N/A	N/A
			PM_{10}	3.72 tons/yr	N/A	N/A
			CO	22.28 tons/yr	N/A	N/A
			CO_{2e}	89,042 tons/yr	N/A	N/A
		EU-CAP(2)	$PM_{2.5}$	0.41 tons/yr	N/A	N/A
			PM_{10}	0.41 tons/yr	N/A	N/A
			CO	17.15 tons/yr	N/A	N/A
			CO_{2e}	7,228 tons/yr	N/A	N/A
		Fugitives	CO_{2e}	53 tons/yr	N/A	N/A

[1]For example, lb/MM Btu, ppmvd @ 15% O2, lb/ton, lb/hr

18. Air Quality Dispersion Modeling [LAC 33:III.517.D.15]

Was Air Quality Dispersion Modeling as required by LAC 33:III performed in support of this permit application? (Air Quality Dispersion Modeling is only required when applying for PSD permits and as requested by LDEQ.)	○ Yes ● No
Has Air Quality Dispersion Modeling completed in accordance with LAC 33:III ever been performed for this facility in support of a air permit application previously submitted for this facility or process unit (for process unit-specific permits) or as required by other regulations AND approved by LDEQ?	● Yes ○ No
If yes, enter the date the most recent Air Quality Dispersion Modeling results as required by LAC 33:III were submitted:	*May 7, 2021*

If the answer to either question above is "yes," enter a summary of the most recent results in the following table. If the answer to both questions is "no," enter "none" in the table. Add rows to table as necessary.

Pollutant	Time Period	Calculated Maximum Ground	TAP AAS or NAAQS
$PM_{2.5}$	24-hour	1.017 µg/m^3*	35 µg/m^3
$PM_{2.5}$	Annual	10.61 µg/m^3	12 µg/m^3
PM_{10}	24-hour	126.63 µg/m^3	150 µg/m^3
NOx	1-hour	5.091 µg/m^3*	188 µg/m^3
Ammonia	8-Hour	7.43 µg/m^3	640 µg/m^3
Benzene	Annual	0.18 µg/m^3	12 µg/m^3
Chlorine	8-Hour	1.92 µg/m^3	35.7 µg/m^3

*The project only maximum modeled concentration of the refined model.

19. General Condition XVII Activities

Enter all activities that qualify as Louisiana Air Emissions Permit General Condition XVII Activities.
- *Expand this table as necessary to include all such activities.*
- *See instructions to determine what qualifies as a General Condition XVII Activity.*
- *Do not include emissions from General Condition XVII Activities in the proposed emissions totals for the permit application.*

● Yes ○ No
○ No Changes Requested

Work Activity	Schedule	Emission Rates – TPY					
		PM_{10}	SO_2	NO_X	CO	VOC Total	Other
Purge Related to Tank Car Loading	1232.4 event per year	0.003	-	0.037	0.424	0.331	0.003 (PM2.5)

20. Insignificant Activities [LAC 33:III.501.B.5]

Enter all activities that qualify as Insignificant Activities.
- *Expand this table as necessary to include all such activities.*
- *For sources claimed to be insignificant based on size or emission rate (LAC 33:III.501.B.5.A), information must be supplied to verify each claim. This may include but is not limited to operating hours, volumes, and heat input ratings.*
- *If aggregate emissions from all similar pieces of equipment claimed to be insignificant are greater than 5 tons per year for any pollutant, then the activities can not be claimed as insignificant and must be represented as permitted emission sources. Aggregate emissions shall mean the total emissions from a particular insignificant activity or group of similar insignificant activities (e.g., A.1, A.2, etc.) within a permit per year.*

○ Yes ○ No
● No Changes Requested

EPN	Description	Physical/Operating Data	Citation
No changes			

21. Regulatory Applicability for Commonly Applicable Regulations [LAC 33:III.517.D.10]

Does this facility contain asbestos or asbestos containing materials? *If "yes," the facility or any portion thereof may be subject to 40 CFR 61, Subpart M, LAC 33:III.Chapter 27, and/or LAC 33:III.5151 and this application must address compliance as stated in Section 23 of this application.*	○ Yes ● No
Is the facility or process unit represented in this permit subject to 40 CFR 68, or is any other process unit located at the same facility as the process unit represented in this application subject to 40 CFR 68? *If "yes," the entire facility is subject to 40 CFR 68 and LAC 33:III.Chapter 59 and this application must address compliance as stated in Section 23 of this application.*	● Yes ○ No
Is the facility listed in LAC 33:III.5611	
Table 5	● Yes ○ No
Table 6	● Yes ○ No
Table 7	● Yes ○ No
Does the applicant own or operate commercial refrigeration equipment normally containing more than 50 pounds of refrigerant at this facility or process unit? *If "yes," the entire facility is subject to 40 CFR 82, Subpart F and this application must address compliance as stated in Section 22 of this application.*	● Yes ○ No

22. Applicable Regulations, Air Pollution Control Measures, Monitoring, and Recordkeeping

Important points for Table 1 [LAC 33:III.517.D.10]:

- List in Table 1, by Emission Point ID Number and Descriptive Name of the Equipment, state and federal pollution abatement programs and note the applicability or non-applicability of the regulations to each source.
- Adjust the headings for the columns in Table 1 as necessary to reflect all applicable regulations, in addition to any regulations that do not apply but need an applicability determination to verify this fact.
- For each piece of equipment, enter "1" for each regulation that applies. Enter "2" for each regulation that applies to this type of source, but from which this source of emissions is exempt. Enter "3" for equipment that is subject to a regulation, but does not have any applicable requirements. Also, enter "3" for each regulation that have applicable requirements that apply to the particular emission source but the regulations currently do not apply due to meeting a specific criterion, such as it has not been constructed, modified or reconstructed since the regulations have been in place.
- Leave the spaces blank when the regulations clearly would not apply under any circumstances to the source. For example, LAC 33:III.2103 – Storage of Volatile Organic Compounds would never apply to a steam generating boiler, no matter the circumstances.
- Consult instructions.

Important points for Table 2 [LAC 33:III.517.D.4; LAC 33:III.517.D.7; LAC 33:III.517.D.10]:

- For each piece of equipment listed in Table 2, include all applicable limitation, recordkeeping, reporting, monitoring, and testing requirements. Also include any one-time notification or one-time tests performance test requirements that have not been fulfilled.
- Each of these regulatory aspects (limitation, recordkeeping, reporting, etc.) should be addressed for each regulation that is applicable to each emissions source or emissions point.
- For each regulation that provides a choice regarding the method of compliance, indicate the method of compliance that will be employed. It is not sufficient to state that all compliance options will be employed, though multiple compliance options may be approved as alternative operating scenarios.
- Consult instructions.

Important points for Table 3 [LAC 33:III.517.D.16]:

- Each time a 2 or a 3 is used to describe applicability of a source in Table 1, an entry should be made in Table 3 that explains the exemption or non-applicability status of the regulation to that source.
- Fill in all requested information in the table.
- The exact regulatory citation that provides for the specific exemption or non-applicability determination should be entered into the Citation Providing for Exemption or Non-applicability column.
- Consult Instructions.

Important points for Table 4 [LAC 33:III.517.D.18]

- List any single emission source that routes its emissions to another point where these emissions are commingled with the emissions of other sources before being released to the atmosphere. Do not list any single emission source in this table that does not route its emissions in this manner.
- List any and all emission sources that are routed as described above. This includes emission sources that do not otherwise appear in this permit application.
- Consult instructions.

23. Emissions Inventory Questionnaire (EIQ) Forms [LAC 33:III.517.D.3; 517.D.6]

Complete one (1) EIQ for:

- Each emission source. If two emission sources have a common stack, the applicant may submit one EIQ sheet for the common emissions point. Note any emissions sources that route to this common point in Table 4 of the application.
- Each emissions CAP that is proposed. In general, this applies to each source that is part of the CAP.
- Each alternate operating scenario that a source may operate under. Some common scenarios are:
  1. Sources that combust multiple fuels
  2. Sources that have Startup/Shutdown max lb/hr emission rates higher than the max lb/hr for normal operating conditions would need an EIQ for the Startup/Shutdown emission rates for those sources
- Fugitive emissions releases. One (1) EIQ should be completed for each of the following types of fugitive emissions sources or emissions points:
  1. Equipment leaks.
  2. Non-equipment leaks (i.e. road dust, settling ponds, etc.).

For each EIQ:

- Fill in all requested information.
- Speciate all Toxic Air Pollutants and Hazardous Air Pollutants emitted by the source.
- Use appropriate significant figures.
- Consult instructions.

The EIQ is in Microsoft Word Excel. Click on this link to get to the EIQ form.
http://deq.louisiana.gov/page/air-permit-applications

24. NSR Applicability Summary [LAC 33:III.504 and LAC 33:III.509]

■ N/A

This section consists of seven subsections, A-G, and is applicable only to new and existing major stationary sources (as defined in LAC 33:III.504 or in LAC 33:III.509) proposing to permit a physical change or change in the method of operation. It would also apply to existing minor stationary sources proposing a physical change or change in the method of operation where the change would be a major source in and of itself. Add rows to each table as necessary. Provide a written explanation of the information summarized in these tables. Consult instructions.

24.A. Project Summary

EPN	Description	A New, Modified, Affected, or Unaffected*	B Pre-Project Allowables (TPY)	C Baseline Actual Emissions (TPY)	D Projected Actuals (TPY)	E Post-Project PTE (TPY)	F Change (TPY)
Pollutant: PM_{25}	24-Month Baseline Period:						
						PM_{25} Change:	
Pollutant: PM_{10}	24-Month Baseline Period:						
						PM_{10} Change:	

*Unaffected emissions units are not required to be listed individually. By choosing not to list unaffected emissions units, the applicant asserts that all emissions units not

24.B. Creditable Contemporaneous Changes

■ N/A

Contemporaneous Period:	

EPN	Description	A Date of Modification	B Pre-Project Allowables (TPY)	C Baseline Actual Emissions (TPY)	D 24-Month Period	E Post-Project PTE (TPY)	F Change (TPY)
Pollutant: PM_{25}							
						PM_{25} Change:	

24.C. BACT/LAER Summary ■ N/A

For each source identified as "New" or "Modified" in Section 24.A, complete the following table for each pollutant that will trigger NSR. If LAER is not required per LAC 33:III.504.D.3, indicate such.

EPN	Pollutant	BACT/ LAER	Limitation	Averaging Period	Description of Control Technology/Work Practice Standard(s)

24.D. PSD Air Quality Analysis ■ N/A

Pollutant	Averaging Period	A	B	C	D	F	G	H	I
		Screening Results ($\mu g/m^3$)	SIL ($\mu g/m^3$)	SMC ($\mu g/m^3$)	Background ($\mu g/m^3$)	NAAQS Result + "D" ($\mu g/m^3$)	NAAQS ($\mu g/m^3$)	Increment Result ($\mu g/m^3$)	Class II Increment ($\mu g/m^3$)

24.E Nonattainment New Source Review Offsets [LAC 33:III.517.D.16, LAC 33:III.504.D.4 & 5] ■ N/A

Complete this section only if the proposed project triggers Nonattainment New Source Review (NNSR).

This project triggers NNSR review for: □ NOx □ VOC □ SO_2

NO_X:

Is the applicant proposing to use internal offsets?		○ Yes ● No
If not, identify the source of the offsets.	Company:	
	Facility/Unit:	
	Permit No.:	
Is an ERC Bank Application included with this application, or has an application already been submitted to LDEQ?		○ Yes ● No
If the ERC application has already been submitted, give the date:		
Identify the emissions units from which the offsets will be obtained (reference specific Emission Point ID numbers).		

VOC:

Is the applicant proposing to use internal offsets?		○ Yes ● No
If not, identify the source of the offsets.	Company:	
	Facility/Unit:	
	Permit No.:	
Is an ERC Bank Application included with this application, or has an application already been submitted to LDEQ?		○ Yes ● No
If the ERC application has already been submitted, give the date:		
Identify the emissions units from which the offsets will be obtained (reference specific Emission Point ID numbers).		

SO_2:

Is the applicant proposing to use internal offsets?		○ Yes ● No
If not, identify the source of the offsets.	Company:	
	Facility/Unit:	
	Permit No.:	
Is an ERC Bank Application included with this application, or has an application already been submitted		○ Yes ● No
If the ERC application has already been submitted, give the date:		
Identify the emissions units from which the offsets will be obtained (reference specific Emission Point ID numbers).		

In order to expedite processing, please be sure the ERC Bank Application is completed properly. In the case of NOX, the document should clearly differentiate between ozone season and non-ozone season actual emissions during the baseline period. Regarding NOX and VOC, be sure to indicate if a portion of the reductions are no longer surplus (e.g., due to new or revised federal or state regulations, use in a netting analysis, etc.).

24.F. Economic Impact ■ N/A

Answer the following questions.

How many temporary jobs will be added as a result of this project?	
How many permanent jobs will be added as a result of this project?	

24.G Notification of Federal Land Manager [LAC 33:III.504.E.1, LAC 33:III.509.P.1] ■ N/A

Complete this section only if the proposed project triggers NNSR or PSD.

a. Is the proposed facility or modification located within 100 kilometers of a Class I Area?	○ Yes ● No

If Yes, determination of Q/d is not required; skip to the next question. If No, complete the Q/d equation below:

$$Q/d = \frac{PM_{10\,(NEI)} + SO_{2\,(NEI)} + NO_{X\,(NEI)} + H_2SO_{4\,(NEI)}}{\text{Class I km}}$$

$PM_{10\,(NEI)}$ = net emissions increase of PM_{10}[1,2]

$SO_{2\,(NEI)}$ = net emissions increase of SO_2[1,2]

$NO_{X\,(NEI)}$ = net emissions increase of NO_X[1,2]

$H_2SO_{4\,(NEI)}$ = net emissions increase of H_2SO_4[1,2]

Class I km = distance to nearest Class I Area3

Q/d = _____ =

If Q/D < 10, proceed to Section 26. If Q/D ≥10, complete the remainder of this Section.

initial permitting project.

b. Has the applicant provided a copy of the application to the Federal Land Manager?	○ Yes ● No
c. Does the application contain modeling that demonstrates no adverse impact on Air Quality Related	○ Yes ● No
d. If Yes, indicate the model used: □ VISCREEN □ PLUVUE II □ CALPUFF □ Other[4]:	
e. Has the Federal Land Manager concurred that the proposed project will not adversely impact any AQRVs? If Yes, please attach correspondence.	○ Yes ● No

[1]If the net emissions increase of any pollutant is negative, enter "0."

[2]If the project did not trigger a netting analysis, use the project increase. In this case, the value will be less than the pollutant's

[3]In kilometers.

[4]Model must be approved by LDEQ and the Federal Land Manager.

25. Environmental Assessment Statement (EAS or "IT" Question Responses) [La. R.S. 30:2018]

This section is required when applying for new Part 70 operating permits and/or major modifications. Any applications for these permit types that do not include answers to these questions will not be considered to be administratively complete.	○ Yes ● No

For new Part 70 operating permits and/or major modifications, answers to these questions must be provided by the applicant to the

Name of Local Governing Authority			Name of Designated Public Library		
City	State	Zip Code	City	State	Zip Code

Answer the following five questions on separate pages using full and complete answers. Include as many pages as necessary in order to provide full and complete answers. This information is required per Louisiana Revised Statutes 30:2018 (La. R.S. 30:2018).

Question 1: Have the potential and real adverse environmental effects of the proposed facility been avoided to the maximum extent possible? (This question requires the permittee to identify adverse environmental effects, both potential and real.)

Question 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? (This question requires the permittee to perform a cost-benefit analysis, or at least a quantitative indication of the economic benefits and a qualitative description of the negative impacts expected from the permittee's operation. The latter should come from the answer to Question 1.)

Question 3: Are there alternative projects which would offer more protection to the environment than the proposed facility without unduly curtailing non-environmental benefits? (This question requires the permittee to demonstrate having considered alternate technologies.)

Question 4: Are there alternative sites which would offer more protection to the environment than the proposed facility site without unduly curtailing non-environmental benefits? (This is the question that deals directly with siting criteria.)

Question 5: Are there mitigating measures which would offer more protection to the environment than the facility as proposed without unduly curtailing non-environmental benefits? (This question requires the permittee to demonstrate having considered the most stringent techniques for reducing or more efficiently handling waste.)

PART 70 OPERATING PERMIT APPLICATION COMPLETENESS CHECKLIST

Instructions: Complete this checklist and submit with the completed air permit application.

LAC 33:III.	Completeness Questions Relative to the Part 70 Permit Application	Yes	No	N/A	Location Within the Permit Application
517.A Timely Submittal	Was a Copy of the Application Also Submitted to EPA?	●	○	○	—
517.B.1,2 Certification	Does the Application include a Certification by a Responsible Official?	●	○	○	Section 2.10
517.B.3 Certification	Does the Application Include Certification by a Professional Engineer or their Designee:	●	○	○	Section 2.10
517.D.1 Identifying Information	Does the Application Include:				
	1. Company Name, Physical and Mailing Address of Facility?	●	○	○	Section 2.1
	2. Map showing Location of the Facility?	●	○	○	Figure 1
	3. Owner and Operator Names and Agent?	●	○	○	Section 2.1
	4. Name and Telephone Number of Plant Manager or Contact?	●	○	○	Section 2.11
517.D.2 SIC Codes, Source Categories	Does the Application Include a Description of the Source's Processes and Products?	●	○	○	Section 1.3
	Does the Application Include the Source's SIC Code?	●	○	○	Section 2.5
	Does the Application Include EPA Source Category of HAPs if applicable?	○	○	●	—
517.D.3.6 EIQ Sheets	Has an EIQ Sheet been Completed for each Emission Point whether an Area or Point Source?	●	○	○	Section 4.0
517.D.4 Monitoring Devices	Does the Application Include Identification and Description of Compliance Monitoring Devices or Activities?	●	○	○	Section 3.0
517.D.5 Revisions and Modifications Only	For Revisions or Modifications, Does the Application include a Description of the Proposed Change and any Resulting Change in Emissions?	●	○	○	Sections 4.0 and 5.0
517.D.7 General Information	Does the Application Include Information Regarding Fuels, Fuel Use, Raw Materials, Production Rates, and Operating Schedules as necessary to substantiate emission rates?	●	○	○	Sections 4.0 and 5.0
517 D.8 Operating Limitations	Has Information Regarding any Limitations on Source Operation or any Applicable Work Practice Standards been Identified?	●	○	○	Section 3.0
517.D.9 Calculations	Are Emission Calculations Provided?	●	○	○	Section 5.0
517.D.10 Regulatory Review	Does the Application Include a Citation and Description of Applicable Louisiana and Federal Air Quality Requirements and Standards?	●	○	○	Section 3.0
517.D.11 Test Methods	Has a Description of or a Reference to Applicable Test Methods Used to Determine Compliance with Standards been Provided?	●	○	○	Section 3.0
517.D.12 Major Sources of TAPs	Does the Application include Information Regarding the Compliance History of Sources Owned or Operated by the Applicant (per LAC 33.III.5111)?	●	○	○	Section 2.22
517.D.13 Major Sources of TAPs	Does the Application include a Demonstration to show that the Source Meets all Applicable MACT and Ambient Air Standard Requirements?	●	○	○	Section 2.22

PART 70 OPERATING PERMIT APPLICATION COMPLETENESS CHECKLIST

Instructions: Complete this checklist and submit with the completed air permit application.

LAC 33:III.	Completeness Questions Relative to the Part 70 Permit Application	Yes	No	N/A	Location Within the Permit Application
517.D.14 PSD Sources Only	If Required by DEQ, Does the Application Include Information Regarding the Ambient Air Impact for Criteria Pollutants as Required for the Source Impact Analysis per LAC 33:III.509.K, L, and M?	○	○	●	—
517 D.15 PSD Sources Only	If Required by DEQ, Does the Application Include a Detailed Ambient Air Analysis?	○	○	●	—
517.D.16, 18	Has any Additional Information been Provided?	○	○	●	—
517.D.17 Fees	Has the Fee Code been Identified?	●	○	○	Section 2.5
	Is the Applicable Fee Included with the Application?	●	○	○	Attached
517.E.1 Additional Part 70 Requirements	Does the Certification Statement Include a Description of the Compliance Status of Each Emission Point in the Source with All Applicable Requirements?	●	○	○	Section 2.10
517E.2 Additional Part 70 Requirements	Does the Certification Statement Include a Statement that the Source will continue to Comply with All Applicable Requirements with which the Source is in Compliance?	●	○	○	Section 2.10
517.E.3 Additional Part 70 Requirements	Does the Certification Statement Include a Statement that the Source will, on a timely basis, meet All Applicable Requirements that will Become Effective During the Permit Term?	●	○	○	Section 2.10
517.E.4 Additional Part 70 Requirements	Are there Applicable Requirements for which the Source is not in Compliance at the Time of Submittal?	○	○	●	—
	Does the Application include a Compliance Plan Schedule?	○	○	●	—
	Does the Schedule Include Milestone Dates for which Significant Actions will occur?	○	○	●	—
	Does the Schedule Include Submittal Dates for Certified Progress Reports?	○	○	●	—
517.E.5 Additional Part 70 Requirements Acid Rain	Is this Source Covered by the Federal Acid Rain Program?	○	●	○	—
	Are the Requirements of LAC 33.III.517.E 1-4 included in the Acid Rain Portion of the Compliance Plan?	○	○	●	—
517.E.6 Additional Part 70 Requirements	Have any Exemptions from any Applicable Requirements been Requested?	○	●	○	—
	Is the List and explanations Provided?	○	○	●	—
517.E.7 Additional Part 70 Requirements	Does the Application Include a Request for a Permit Shield?	○	●	○	—
	Does the Request List those Federally Applicable Requirements for which the Shield is Requested along with the Corresponding Draft Permit Terms and conditions which are Proposed to Maintain Compliance?	○	○	●	—
517.E.8 Additional Part 70 Requirements	Does the Application Identify any Reasonably Anticipated Alternative Operating Scenarios?	●	○	○	Sections 4.0 and 5.0
	Does the Application include Sufficient Information to Develop permit Terms and Conditions for Each Scenario, Including Source Process and Emissions Data?	●	○	○	Sections 4.0 and 5.0

PART 70 OPERATING PERMIT APPLICATION COMPLETENESS CHECKLIST

Instructions: Complete this checklist and submit with the completed air permit application.

LAC 33:III.	Completeness Questions Relative to the Part 70 Permit Application	Yes	No	N/A	Location Within the Permit Application
517.F Confidentiality	Does the Application Include a Request for Non-Disclosure (Confidentiality)?	○	●	○	—
525.B. Minor Permit Modifications	Does the Application Include a Listing of New Requirements Resulting from the Change?	●	○	○	Sections 2.0 and 3.0
	Does the Application Include Certification by the Responsible Official that the Proposed Action Fits the Definition of a Minor Modification as per LAC 33:III.525.A?	●	○	○	Section 2.0 Item 10
	Does the Certification also Request that Minor Modification Procedures be Used?	●	○	○	Section 2.0
	Does the Application, for Part 70 Sources, Include the Owner's Suggested Draft Permit and Completed Forms for the Permitting Authority to Use to Notify Affected States?	○	●	○	—
La. R.S. 30:2018 – PSD/NNSR only	Has a copy of the answers to the questions posed in the Environmental Assessment Statement (Section 25) been sent to the local governing authority at no cost to the local governing authority?	○	○	●	—
	Has a copy of the answers to the questions posed in the Environmental Assessment Statement (Section 25) been sent to the designated public library at no cost to the designated public library?	○	○	●	—

SECTION 3.0

REGULATORY TABLES

TABLE 1: APPLICABLE LOUISIANA AND FEDERAL AIR QUALITY REQUIREMENTS

Source ID	Source Description	LAC 33:III.Chapter																
		5	9	11	13	15	2103	2104	2107	2111	2113	2115	2122	2147	22	29	51	56
EP-CAP	Cracking Heater CAP	1		1	1	3								3	2		3	
EP-1	Cracking Heater A	1		1	1	3								3	2		3	
EP-2	Cracking Heater B	1		1	1	3								3	2		3	
EP-3	Cracking Heater C	1		1	1	3								3	2		3	
EP-4	Cracking Heater D	1		1	1	3								3	2		3	
EP-5	Cracking Heater E	1		1	1	3								3	2		3	
EP-6	Cracking Heater F	1		1	1	3								3	2		3	
EP-7	Cracking Heater G	1		1	1	3								3	2		3	
EU-11	HP Steam Boiler Package C	1		1	1	3									2		3	
EU-14	Railcar Loading and Off-Loading								1									
Facility Wide	Plaquemine Ethylene Plant 1 (PEP-1)	No Changes																

Source ID	Source Description	40 CFR 60					40 CFR 61			40 CFR 63								40 CFR	
		A	Kb	Db	Dc	IIII	A	F	V	A	Q	XX	UU	SS	VVa	5D	YY	64	68
EP-CAP	Cracking Heater CAP				3											3	3		
EP-1	Cracking Heater A				3											3	3		
EP-2	Cracking Heater B				3											3	3		
EP-3	Cracking Heater C				3											3	3		
EP-4	Cracking Heater D				3											3	3		
EP-5	Cracking Heater E				3											3	3		
EP-6	Cracking Heater F				3											3	3		
EP-7	Cracking Heater G				3											3	3		
EU-11	HP Steam Boiler Package C			1												1			
EU-14	Railcar Loading and Off-Loading													1			1		
Facility Wide	Plaquemine Ethylene Plant 1 (PEP-1)	1								1					1		1		

KEY TO MATRIX

1 (Applicable) The regulations have applicable requirements that apply to this particular emissions source. This includes any monitoring, recordkeeping, or reporting requirements.

2 (Exempt) The regulations apply to this general type of emission source (i.e. vents, furnaces, towers, and fugitives) but do not apply to this particular emission source.

3 (Does Not Apply) The regulations do not apply to this emissions source. The regulations may have applicable requirements that could apply to this emissions source but the requirements do not currently apply to the source due to meeting a specific criterion, such as it has not been constructed, modified or reconstructed since the regulations have been in place.

Blank – The regulations clearly do not apply to this type of emission source.

TABLE 2: STATE AND FEDERAL AIR QUALITY REQUIREMENTS

Source ID	Applicable Requirement	Compliance Method/Provision	Compliance Citation	Averaging Period/Frequency	State Only Requirement
EU-14 Railcar Loading and Off-Loading	*Requirements that limit emissions or operations -*				
	LAC 33:III.Chapter 21	VOC, Total >=90% DRE.	LAC 33:III.2107.B	Continuous	Yes
	40 CFR 63 Subpart YY	Reduce emission of organic HAP by 98 weight percent or reduce organic HAP or TOC to a concentration of 20 parts per million by volume, whichever is less stringent by venting ethylene process vent emissions through a closed vent system to any combination of control devices and meet the requirements specified in §63.982(b) and (c)(2).	40 CFR 63.1101(e) Table 7	N/A	No
	40 CFR 63 Subpart YY	Equip with one of the control options listed in 40 CFR 63.1105(a)(1) through (a)(4). Subpart YY.	63.1105(a)	Continuous	No
	40 CFR 63 Subpart SS	For process vents and high throughput transfer racks, the owner or operator shall meet the requirements applicable to the control devices being used in § 63.995; the applicable general monitoring requirements of § 63.996 and the applicable performance test requirements and procedures of § 63.997; and the monitoring, recordkeeping and reporting requirements referenced therein.	63.982(c)(2)	Continuous	No
	40 CFR 63 Subpart SS	Owners or operators that route emissions to a fuel gas system or to a process shall meet the requirements in § 63.984, the monitoring, recordkeeping, and reporting requirements referenced therein, and the applicable recordkeeping and reporting requirements of §§ 63.998 and 63.999. No other provisions of this subpart apply to emissions being routed to a fuel gas system or process.	63.982(d)	Continuous	No
	Requirements that specify monitoring -				
	LAC 33:III.Chapter 21	No liquid or gaseous leaks shall exist during loading or unloading operations. Inspection for visible liquid leaks, visible fumes, or significant odors resulting from VOC dispensing operations shall be conducted by the owner or operator of the VOC loading facility or the owner or operator of the tank, truck, or trailer. VOC loading or unloading through the affected transfer lines shall be discontinued immediately when a leak is observed and shall not be resumed until the observed leak is repaired.	LAC 33:III.2107.C	During loading or unloading operations	Yes

TABLE 2: STATE AND FEDERAL AIR QUALITY REQUIREMENTS

Source ID	Applicable Requirement	Compliance Method/Provision	Compliance Citation	Averaging Period/Frequency	State Only Requirement
EU-14 Railcar Loading and Off-Loading	*Requirements that specify records to be kept and requirements that specify record retention time -*				
	LAC 33:III.Chapter 21	1. a daily record of the total throughput of VOC loaded at the facility; and 2. for VOC loading operations subject to the requirements of this Section: a. a daily record of the number of delivery vessels loaded at the facility and the quantity and type of VOC loaded to each delivery vessel; b. a record of any leaks found at the facility in accordance with the provisions specified in Subsection C of this Section and the corrective action taken; c. a record of the results of any testing conducted at the facility in accordance with the provisions specified in Subsection E of this Section. 3. For vapor disposal systems, the following information shall be recorded: a. daily measurements of the exhaust gas temperature immediately downstream of a direct-flame incinerator; b. daily measurements of the inlet and outlet temperature of a chiller or catalytic incinerator; and c. breakthrough of VOCs in a carbon adsorption unit. 4. The date and reason for any maintenance and repair of the applicable control devices and the estimated quantity and duration of volatile organic compound emissions during such activities shall be recorded.	LAC 33:III.2107.D	Daily	Yes
	Requirements that specify reports to be submitted -				
	N/A				
	Requirements that specify performance testing -				
	LAC 33:III.Chapter 21	Determine compliance with LAC 33:III.2107.B using the methods in LAC 33:III.2107.E.1.a through E.1.e, as appropriate.	LAC 33:III.2107.E	30 days prior to test, 60 days after test	Yes

TABLE 2: STATE AND FEDERAL AIR QUALITY REQUIREMENTS

Source ID	Applicable Requirement	Compliance Method/Provision	Compliance Citation	Averaging Period/Frequency	State Only Requirement
EP-1, EP-2 EP-3, EP-4 EP-5, EP-6 EP-7 Cracking Heaters A-G	*Requirements that limit emissions or operations -*				
	LAC 33:III.Chapter 11	Control of Smoke. The emission of smoke generated by the burning of fuel or combustion of waste material in a combustion unit shall be controlled so that the shade or appearance of the emission is not darker than 20 percent average opacity, except that such emissions may have an average opacity in excess of 20 percent for not more than one six-minute period in any 60 consecutive minutes. Determine opacity by using Method 9 of 40 CFR Part 60, Appendix A.	LAC 33:III.1101.B	6-minute period	No
	LAC 33:III.Chapter 13	Total suspended particulate <= 0.6 lb/MMBTU of heat input.	LAC 33:III.1313.C	All Year	No
	40 CFR 63 Subpart YY	Beginning no later than the compliance dates specified in 40 CFR 63.1102(c), the owner or operator must comply with 40 CFR 63.1103(e)(7)(i) and also use at least two of the control measures specified in 40 CFR 63.1103(e)(7)(ii) through (v) to minimize coke combustion emissions from the decoking of the radiant tube(s) in each ethylene cracking furnace.	40 CFR 63.1103(e)(7)	All Year	No
	Requirements that specify monitoring -				
	40 CFR 63 Subpart YY	Beginning no later than the compliance dates specified in 40 CFR 63.1102(c), the owner or operator must conduct ethylene cracking furnace isolation valve inspections as specified in 40 CFR 63.1103(e)(8)(i) and (ii).	40 CFR 63. 1103(e)(8)	All Year	No
	Requirements that specify records to be kept and requirements that specify record retention time -				
	N/A				
	Requirements that specify reports to be submitted -				
	N/A				
	Requirements that specify performance testing -				
	N/A				

TABLE 2: STATE AND FEDERAL AIR QUALITY REQUIREMENTS

Source ID	Applicable Requirement	Compliance Method/Provision	Compliance Citation	Averaging Period/Frequency	State Only Requirement
EU-11 HP Steam Boiler Package C	*Requirements that limit emissions or operations -*				
	LAC 33:III.Chapter 11	Control of Smoke. The emission of smoke generated by the burning of fuel or combustion of waste material in a combustion unit shall be controlled so that the shade or appearance of the emission is not darker than 20 percent average opacity, except that such emissions may have an average opacity in excess of 20 percent for not more than one six-minute period in any 60 consecutive minutes. Determine opacity by using Method 9 of 40 CFR Part 60, Appendix A.	LAC 33:III.1101.B	6-minute period	No
	LAC 33:III.Chapter 13	Total suspended particulate <= 0.6 lb/MMBTU of heat input.	LAC 33:III.1313.C	All Year	No
	40 CFR 60 Subpart Db	Nitrogen oxides <=0.2 lb/MMBtu heat input (expressed as NO_2 except as provided in 40 CFR 60.44b(k). The nitrogen oxide standards apply at all times, including periods of startup, shutdown, or malfunction.	40 CFR 60.44b(a)	All Year	No
	40 CFR 60 Subpart Db	Determine compliance with the NOx standards in 40 CFR 60.44b through performance testing under 40 CFR 60.46b(e) or (f), or under 40 CFR 60.46(g) or (h), as applicable.	40 CFR 60.46b(c)	All Year	No
	40 CFR 63 Subpart DDDDD	Conduct a tune-up every 5 years as specified in 40 CFR 63.7540.	40 CFR 63.7500(a)(1) 40 CFR 63.7540(a)(12) Table 3 No. 1	Every 5 years	No
	40 CFR 63 Subpart DDDDD	Operate and maintain at all times any affected source, including associated air pollution control equipment and monitoring equipment, in a manner consistent with safety and good air pollution control practices for minimizing emissions.	40 CFR 63.7500(a)(3)	N/A	No

TABLE 2: STATE AND FEDERAL AIR QUALITY REQUIREMENTS

Source ID	Applicable Requirement	Compliance Method/Provision	Compliance Citation	Averaging Period/Frequency	State Only Requirement
EU-11 HP Steam Boiler Package C	40 CFR 63 Subpart DDDDD	Ensure that each 5-year tune-up specified in 40 CFR 63.7540(a)(12) is conducted no more than 61 months after the previous tune-up. For a new or reconstructed affected source (as defined in 40 CFR 63.7490), ensure that the first annual, biennial, or 5-year tune-up is no later than 13 months, 25 months, or 61 months, respectively, after the initial startup of the new or reconstructed affected source.	40 CFR 63.7515(d)	Every 5 years	No
	40 CFR 63 Subpart DDDDD	Conduct a tune-up within 30 calendar days of startup, if the unit is not operating on the required date for a tune-up.	40 CFR 63.7540(a)(13)	N/A	No
	Requirements that specify monitoring -				
	40 CFR 60 Subpart Db	Nitrogen oxides monitored by CMS continuously. Calculate nitrogen oxides emission rates as specified in 40 CFR 60.48b(d), except as provided in 40 CFR 60.48b(g), (h), and (i).	40 CFR 60.48b(b)(1)	1-hour average	No
	40 CFR 60 Subpart Db	Oxygen or carbon dioxide monitored by CMS continuously, except as provided in 40 CFR 60.48b(g), (h), and (i).	40 CFR 60.48b(b)(1)	1-hour average	No
	40 CFR 60 Subpart Db	When nitrogen oxides emission data are not obtained because of continuous monitoring system breakdowns, repairs, calibration checks, and zero and span adjustments, obtain emission data by using standby monitoring systems, 40 CFR 60, Appendix A, Method 7, Method 7a, or other approved reference methods to provide emission data for a minimum of 75 percent of the operating hours in each steam generating unit operating day, in at least 22 out of 30 successive steam generating unit operating days.	40 CFR 60.48b(f)	N/A	No
	40 CFR 60 Subpart Db	Operate NOx continuous monitoring systems and record data during all periods of operation except for CEMS breakdowns and repairs. Record data during calibration checks, and zero and span adjustments.	40 CFR 60.48b(c)	Continuous	No
	Requirements that specify records to be kept and requirements that specify record retention time -				
	40 CFR 60 Subpart Db	NOx and O2 (or CO2) recordkeeping by CEMS continuously.	40 CFR 60.48b(b)(1)	Continuous	No
	40 CFR 60 Subpart Db	Fuel rate recordkeeping by electronic or hard copy daily. Record the amounts of each fuel combusted during each day and calculate the annual capacity factor individually for coal, distillate oil, residual oil, natural gas, wood, and municipal-type solid waste for the reporting period. Determine the annual capacity factor on a 12-month rolling average basis with a new annual capacity factor calculated at the end of each calendar month. If the facility is not required to continuously monitor any emissions (excluding opacity) or parameters indicative of emissions, the facility may record the amount of each fuel combusted during each calendar month.	40 CFR 60.49b(d)(1)	Daily	No

TABLE 2: STATE AND FEDERAL AIR QUALITY REQUIREMENTS

Source ID	Applicable Requirement	Compliance Method/Provision	Compliance Citation	Averaging Period/Frequency	State Only Requirement
EU-11 HP Steam Boiler Package C	40 CFR 60 Subpart Db	Equipment/operational data recordkeeping by electronic or hard copy at the regulation's specified frequency. Maintain records of the information listed in 40 CFR 60.49b(g)(1) through (g)(10) for each steam generating unit operating day, except as provided under 40 CFR 60.49b(p).	40 CFR 60.49b(g)	Daily	No
	40 CFR 60 Subpart Db	Maintain all records required under 40 CFR 60.49b for a period of 2 years following the date of such record.	40 CFR 60.49b(o)	N/A	No
	40 CFR 63 Subpart DDDDD	Keep a copy of each notification and report that you submitted to comply with this subpart, including all documentation supporting any Initial Notification or Notification of Compliance Status or semiannual compliance report that you submitted,	40 CFR 63.7555(a)(1)	N/A	No
	40 CFR 63 Subpart DDDDD	Keep records in a form suitable and readily available for expeditious review, according to 40 CFR 63.10(b)(1).	40 CFR 63.7650(a)	N/A	No
	40 CFR 63 Subpart DDDDD	Keep each record for 5 years following the date of each occurrence, measurement, maintenance, corrective action, report, or record, as specified in 40 CFR 63.10(b)(1).	40 CFR 63.7560(b)	N/A	No
	40 CFR 63 Subpart DDDDD	Keep record on site, or ensure that they are accessible from on site (for example, through a computer network), for at least 2 years after the date of each occurrence, measurements, maintenance, correction action, report, or record, according to 40 CFR 63.10(b)(1). The remaining 3 years may be kept offsite.	40 CFR 63.7560(c)	N/A	No
	Requirements that specify reports to be submitted -				
	40 CFR 60 Subpart Db	Submit notification: Due as provided by 40 CFR 60.7. Submit a notification of the actual date of initial startup including design heat input capacity of the affected facility, identification of fuels to be combusted, copy of any federally enforceable requirement limiting annual capacity factor, and all other data as specified in 40 CFR 60.49b(a)(1) through (a)(4).	40 CFR 60.49b(a)	N/A	No
	40 CFR 60 Subpart Db	Submit the performance test data from the initial performance test and the performance evaluation of the CEMS using the applicable performance specifications in 40 CFR 60 Appendix B to DEQ.	40 CFR 60.49b(b)	N/A	No
	40 CFR 60 Subpart Db	Submit excess emissions report: Due by the 30th day following the end of each six-month period. Report any excess emissions which occurred during the reporting period.	40 CFR 60.49b(h)	N/A	No
	40 CFR 60 Subpart Db	Submit reports containing the nitrogen dioxide emission rate information recorded under 40 CFR 60.49b(g).	40 CFR 60.49b(i)	N/A	No

TABLE 2: STATE AND FEDERAL AIR QUALITY REQUIREMENTS

Source ID	Applicable Requirement	Compliance Method/Provision	Compliance Citation	Averaging Period/Frequency	State Only Requirement
EU-11 HP Steam Boiler Package C	40 CFR 63 Subpart DDDDD	Submit to DEQ all of the applicable notifications in 40 CFR 63.7(b) and (c), 40 CFR 63.(e), (f)(4) and (f)(6), and 40 CFR 63.9(b) through (h) by the dates specified.	40 CFR 63.7545(a)	N/A	No
	40 CFR 63 Subpart DDDDD	Submit Initial Notification: Due not later than 15 days after the actual date of startup of the affected source, as specified in 40 CFR 63.9(b)(4) and (b)(5).	40 CFR 63.7545(c)	N/A	No
	40 CFR 63 Subpart DDDDD	Submit compliance status report: Due semiannually, by the 31st of January and July, according to the requirements of 40 CFR 63.7550(b). Submit the information specified in 40 CFR 63.7550(c)(1) through (c)(5), as applicable. Include the information specified in 40 CFR 63.7530(d)(1) through (d)(3) for each deviation from an emission limit or operating limit in 40 CFR 63 Subpart DDDDD that occurs where a CMS is not being used to comply with that emission limit or operating limit.	40 CFR 63.7550(a), (b) Table 9	Semiannual	No
	Requirements that specify performance testing -				
	40 CFR 60 Subpart Db	Determine compliance with the NOx standards in 40 CFR 60.44b through performance testing under 40 CFR 60.46b(e) or (f), or under 40 CFR 60.46b(g) or (h), as applicable.	40 CFR 60.46b(c)	N/A	No
Facility Wide	*Requirements that limit emissions or operations -*				
	LAC 33:III.Chapter 2	Failure to pay the prescribed application fee or annual fee as provided herein, within 90 days after the due date, will constitute a violation of these regulations and shall subject the person to applicable enforcement actions under the Louisiana Environmental Quality Act including, but not limited to, revocation or suspension of the applicable permit, license, registration, or variance.	LAC 33:III.219	N/A	No
	LAC 33:III.Chapter 5	Comply with the Part 70 General Conditions as set forth in LAC 33:III.535 and the Louisiana General Conditions as set forth in LAC 33:III.537.	LAC 33:III.535 LAC 33:III.537	N/A	No
	LAC 33:III.Chapter 11	Emissions of smoke which pass onto or across a public road and create a traffic hazard by impairment of visibility are prohibited.	LAC 33:III.1103	N/A	No
	LAC 33:III.Chapter 11	Outdoor burning of waste material or other combustible material is prohibited.	LAC 33:III.1109.B	N/A	No

TABLE 2: STATE AND FEDERAL AIR QUALITY REQUIREMENTS

Source ID	Applicable Requirement	Compliance Method/Provision	Compliance Citation	Averaging Period/Frequency	State Only Requirement
Facility Wide	LAC 33:III.Chapter 13	Emissions of particulate matter which pass onto or across a public road and create a traffic hazard by impairment of visibility or intensify an existing traffic hazard condition are prohibited.	LAC 33:III.1303.B	N/A	No
	LAC 33:III.Chapter 21	Maintain best practical housekeeping and maintenance practices at the highest possible standards to reduce the quantity of organic compounds emissions. Good housekeeping shall include, but not be limited to, the practices listed in LAC 33:III.2113.A.1-5	LAC 33:III.2113.A	N/A	No
	LAC 33:III.Chapter 51	Emits Class I and/or Class II TAP less than the MER (facility-wide). Chapter 51 MACT is not required include emissions of all toxic air pollutant listed in LAC 33:III.5112, Table 51.1 or 51.3 in the Annual Emissions Report unless exempted under LAC 33:III.5105.B	LAC 33:III.5107.A.2	N/A	Yes
	LAC 33:III.Chapter 51	Submit Annual Emissions Report: Due annually, the 30th of the April unless otherwise directed by DEQ, to the Office of Environmental Services in a format specified by DEQ. Identify the quantity of emissions in the previous calendar year for any toxic air pollutant listed in Table 51.1 or Table 51.3.	LAC 33:III.5107.A	N/A	Yes
	LAC 33:III.Chapter 56	Activate the preplanned abatement strategy listed in LAC 33:III.5611.Table 5 when the administrative authority declares an Air Pollution Alert. Activate the preplanned strategy listed in LAC 33:III.5611.Table 6 when the administrative authority declares an Air Pollution Warning. Activate the preplanned abatement strategy listed in LAC 33:III.5611.Table 7 when the administrative authority declares an Air Pollution Emergency.	LAC 33:III.5609.A	N/A	No
	LAC 33:III.Chapter 56	Prepare a standby plan for the reduction or elimination of emissions during an air pollution alert, air pollution warning, or air pollution emergency.	LAC 33:III.5609.A	N/A	No
	LAC 33:III.Chapter 59	Comply with the provisions in 40 CFR 68, except as specified in LAC 33:III.5901.	LAC 33:III.5901.A	N/A	No
	LAC 33:III.Chapter 59	Identify hazards that may result from accidental releases of the substances listed in 40 CFR 68.130, Table 59.0 of LAC 33:III.5907, or Table 59.1 of LAC 33:III.5913 using appropriate hazard assessment techniques, design and maintain a safe facility, and minimize the off-site consequences of accidental releases of such substances that do occur.	LAC 33:III.5907	N/A	No
	40 CFR 60 Subpart A	All affected facilities shall comply with all applicable provisions in 40 CFR 60 Subpart A.	40 CFR 60 Subpart A	N/A	No

TABLE 2: STATE AND FEDERAL AIR QUALITY REQUIREMENTS

Source ID	Applicable Requirement	Compliance Method/Provision	Compliance Citation	Averaging Period/Frequency	State Only Requirement
Facility Wide	40 CFR 63 Subpart A	All affected facilities shall comply with all applicable provisions in 40 CFR 63 Subpart A.	40 CFR 63 Subpart A	N/A	No
	40 CFR 63 Subpart YY	Unless an extension is requested in accordance with the provisions in 40 CFR 63.6(i) of subpart A, beginning no later than the compliance dates specified in 40 CFR 63.1102(c), an owner or operator may designate an ethylene process vent as a maintenance vent if the vent is only used as a result of startup, shutdown, maintenance, or inspection of equipment where equipment is emptied, depressurized, degassed, or placed into service. The owner or operator must comply with the applicable requirements in paragraphs 40 CFR 63.1103(e)(5)(i) through (iii) for each maintenance vent.	40 CFR 60.1103(e)(5)	N/A	No
	40 CFR 63 Subpart YY	Beginning on the compliance dates specified in 40 CFR 63.1102(c), the use of a bypass line at any time on a closed vent system to divert emissions subject to the requirements in Table 7 to 40 CFR 63.1103(e) to the atmosphere or to a control device not meeting the requirements specified in Table 7 of 40 CFR 63 Subpart YY is an emissions standards violation. If the owner or operator is subject to the bypass monitoring requirements of 40 CFR 63.983(a)(3) of Subpart SS, then the owner or operator must continue to comply with the requirements in 40 CFR 63.983(a)(3) of subpart SS and the recordkeeping and reporting requirements in 40 CFR 63.998(d)(1)(ii) and 40 CFR 63.999(c)(2) of subpart SS, in addition to paragraph 40 CFR 63.1103(e)(9), the recordkeeping requirements specified in 40 CFR 63.1109(g), and the reporting requirements specified in 40 CFR 63.1110(e)(6). For purposes of compliance with this paragraph, the phrase "Except for equipment needed for safety purposes such as pressure relief devices, low leg drains, high point bleeds, analyzer vents, and open-ended valves or lines" in 40 CFR 63.983(a)(3) does not apply; instead, the exemptions specified in paragraph 40 CFR 63.1103(e)(6)(i) and (ii).	40 CFR 60.1103(e)(6)	N/A	No

TABLE 2: STATE AND FEDERAL AIR QUALITY REQUIREMENTS

Source ID	Applicable Requirement	Compliance Method/Provision	Compliance Citation	Averaging Period/Frequency	State Only Requirement
Facility Wide	40 CFR 63 Subpart YY	Until July 6, 2023, if a startup, shutdown, malfunction or period of non-operation of one portion of an affected source does not affect the ability of a particular emission point to comply with the specific provisions to which it is subject, then that emission point shall still be required to comply with the applicable provisions of 40 CFR 63 Subpart YY and any of the subparts that are referenced by 40 CFR 63 Subpart YY during startup, shutdown, malfunction, or period of non-operation.	40 CFR 63.1108(a)(1)	N/A	No
	40 CFR 63 Subpart YY	Beginning July 6, 2023, the emission limitations and established parameter ranges of 40 CFR 63 Subpart YY shall apply at all times except during periods of non-operation of the affected source (or specific portion thereof) resulting in cessation of the emissions to which 40 CFR 63 Subpart YY applies. Equipment leak requirements shall apply at all times except during periods of non-operation of the affected source (or specific portion thereof) in which the lines are drained and depressurized resulting in cessation of the emissions to which the equipment leak requirements apply.	40 CFR 63.1108(a)(4)	N/A	No
	40 CFR 63 Subpart YY	Until July 6, 2023, implement, to the extent reasonably available, measures to prevent or minimize excess emissions during startups, shutdowns, and malfunctions. Identify the measures to be taken in the startup, shutdown, and malfunction plan (if applicable).	40 CFR 63.1108(a)(5)	N/A	No
	40 CFR 63 Subpart YY	Correct malfunctions as soon as practical after their occurrence.	40 CFR 63.1108(a)(6)	N/A	No
	40 CFR 63 Subpart YY	Comply with the emission limitations and established parameter ranges at all times except during periods of startup, shutdown, malfunction, or nonoperation of the affected source (or specific portion thereof) resulting in cessation of the emissions to which 40 CFR 63 Subpart YY applies, except as specified in 40 CFR 63.1108(a)(2).	40 CFR 63.1108(a)(1)	N/A	No

TABLE 2: STATE AND FEDERAL AIR QUALITY REQUIREMENTS

Source ID	Applicable Requirement	Compliance Method/Provision	Compliance Citation	Averaging Period/Frequency	State Only Requirement
Facility Wide	40 CFR 63 Subpart YY	Correct malfunctions as soon as practical after their occurrence.	40 CFR 63.1108(a)(6)	N/A	No
	40 CFR 63 Subpart YY	Until July 6, 2023, develop a written startup, shutdown, and malfunction plan that describes, in detail, procedures for operating and maintaining the affected source during periods of startup, shutdown, and malfunction. Include a program of corrective action for malfunctioning process and air pollution control equipment used to comply with the relevant standards under 40 CFR 63 Subpart YY. Address in the plan routine or otherwise predictable CPMS malfunctions. Develop this plan by the compliance date.	40 CFR 63.1111(a)(1)	N/A	No
	40 CFR 63 Subpart YY	Until July 6, 2023, operate and maintain the affected source (including associated air pollution control equipment and CPMS) in a manner consistent with safety and good air pollution control practices for minimizing emissions to the extent practical.	40 CFR 63.1111(a)(2)	N/A	No
	40 CFR 63 Subpart YY	Until July 6, 2023, revise the startup, shutdown, and malfunction plan within 45 days after an event to include detailed procedures for operating and maintaining the affected source during similar malfunction events and a program of corrective action for similar malfunctions of process or air pollution control equipment or CPMS, if the startup, shutdown, and malfunction plan fails to address or inadequately addresses an event that meets the characteristics of a malfunction but was not included in the startup, shutdown, and malfunction plan at the time the plan was developed.	40 CFR 63.1111(a)(5)	N/A	No
	40 CFR 63 Subpart YY	Until July 6, 2023, if actions during a startup, shutdown, and malfunction of an affected source, or of a control device or monitoring system required for compliance (including actions taken to correct a malfunction) are consistent with the procedures specified in the plan, state such information in a startup, shutdown, and malfunction report. Submit the startup, shutdown, and malfunction report by the 30th day following the end of each calendar half (or other calendar reporting period, as appropriate), unless the information is submitted with the Periodic Report. Include the information specified in 40 CFR 63.1111(b)(1)(i) through (b)(1)(iv).	40 CFR 63.1111(b)(1)	N/A	No

TABLE 2: STATE AND FEDERAL AIR QUALITY REQUIREMENTS

Source ID	Applicable Requirement	Compliance Method/Provision	Compliance Citation	Averaging Period/Frequency	State Only Requirement
Facility Wide	40 CFR 63 Subpart YY	Until July 6, 2023, any time an action taken during a startup, shutdown, or malfunction (including actions taken to correct a malfunction) during which excess emissions occur is not consistent with the procedures specified in the affected source's plan, report the actions taken for that event within 2 working days after commencing actions inconsistent with the plan, followed by a letter delivered or postmarked within 7 working days after the end of the event. Include in the immediate report the name, title, and signature of the owner or operator or other responsible official who is certifying its accuracy, explaining the circumstances of the event, the reasons for not following the startup, shutdown, and malfunction plan, and whether any excess emissions and/or parameter monitoring exceedances are believed to have occurred.	40 CFR 63.1111(b)(2)	N/A	No
	40 CFR 68	Comply with all applicable requirements in 40 CFR Part 68.	40 CFR 68	N/A	No
	Requirements that specify monitoring -				
	40 CFR 60 Subpart VVa	Valves in gas/vapor service and in light liquid service (difficult-to-monitor): VOC, Follow a written plan that requires monitoring of the valve at least once per calendar year. Comply with this requirement instead of the requirements in 40 CFR 60.482-7a(a). Subpart VVa. [40 CFR 60.482-7a(h)(3)]	40 CFR 60.482-7a	Annual	No
	Requirements that specify records to be kept and requirements that specify record retention time -				
	40 CFR 63 Subpart YY	Keep copies of notifications, reports and records required by 40 CFR 63 Subpart YY and subparts referenced by 40 CFR 63 Subpart YY for at least 5 years, unless otherwise specified, except as provided in 40 CFR 63.1109(b).	40 CFR 63.1109(a)	N/A	No
	40 CFR 63 Subpart YY	Comply with the recordkeeping requirements of 40 CFR 63.1109(c), (d), (e), (f), (g), (h), and (i).	40 CFR 63.1109	N/A	No
	40 CFR 63 Subpart YY	Beginning July 6, 2023, comply with the malfunction recordkeeping and reporting requirements of 40 CFR 63.1111(c).	40 CFR 63.1111(c)	N/A	No
	LAC 33:III.Chapter 56	Prepare a standby plan for the reduction or elimination of emissions during an air pollution alert, air pollution warning, or air pollution emergency.	LAC 33:III.5609	N/A	No
	LAC 33:III.Chapter 56	During an Air Pollution Alert, Air Pollution Warning, or Air Pollution Emergency, make the standby plan available on the premises to any person authorized by the department to enforce these regulations.	LAC 33:III.5611.B	N/A	No

TABLE 2: STATE AND FEDERAL AIR QUALITY REQUIREMENTS

Source ID	Applicable Requirement	Compliance Method/Provision	Compliance Citation	Averaging Period/Frequency	State Only Requirement
Facility Wide	*Requirements that specify reports to be submitted -*				
	40 CFR 63 Subpart YY	Comply with the reporting requirements of 40 CFR 63.1110(a), (d), (e), (f), and (g).	40 CFR 63.1110	N/A	No
	40 CFR 63 Subpart YY	Beginning July 6, 2023, comply with the malfunction recordkeeping and reporting requirements of 40 CFR 63.1111(c).	40 CFR 63.1111(c)	N/A	No
	LAC 33:III.Chapter 9	Submit Emission Inventory (EI)/Annual Emissions Statement: Due annually, by the 30th of April for the period January 1 to December 31 of the previous year unless otherwise directed. Submit emission inventory data in the format specified by the Office of Environmental Assessment. Include all data applicable to the emissions sources, as specified in LAC 33:III.919.A-D.	LAC 33:III.919.D	N/A	No
	LAC 33:III.Chapter 9	Report the unauthorized discharge of any air pollutant into the atmosphere in accordance with LAC 33:I.Chapter 39, Notification Regulations and Procedures for Unauthorized Discharges. Submit written reports to the department pursuant to LAC 33:I.3925. Submit timely and appropriate follow-up reports detailing methods and procedures to be used to prevent similar atmospheric releases.	LAC 33:III.927	N/A	No
	LAC 33:III.Chapter 51	Submit Annual Emissions Report: Due annually, by the 30th of April unless otherwise directed by DEQ, to the Office of Environmental Services in a format specified by DEQ. Identify the quantity of emissions in the previous calendar year for any toxic air pollutant listed in Table 51.1 or Table 51.3.	LAC 33:III.5107.A	Annual	Yes
	LAC 33:III.Chapter 51	Include a certification statement with the annual emission report and revisions to any emission report that attests that the information contained in the emission report is true, accurate, and complete, and that is signed by a responsible official, as defined in LAC 33:III.502. Include the full name of the responsible official, title, signature, date of signature, and phone number of the responsible official.	LAC 33:III.5107.A.2	Annual	Yes
	LAC 33:III.Chapter 51	Submit notification: Due to the Department of Public Safety 24-hour Louisiana Emergency Hazardous Materials Hotline in accordance with LAC 33:I.3915.A, after any discharge of a toxic air pollutant into the atmosphere that results or threatens to result in an emergency condition, as defined in LAC 33:I.3905.A.	LAC 33:III.5107.B.1	N/A	Yes

TABLE 2: STATE AND FEDERAL AIR QUALITY REQUIREMENTS

Source ID	Applicable Requirement	Compliance Method/Provision	Compliance Citation	Averaging Period/Frequency	State Only Requirement
Facility Wide	LAC 33:III.Chapter 51	Submit notification: Due to SPOC, except as provided in LAC 33:III.5107.B.4, immediately, but in no case later than 24 hours after any unauthorized discharge of a toxic air pollutant into the atmosphere that does not cause an emergency condition, the rate or quantity of which is in excess of that allowed by permit, compliance schedule, or variance, or for upset events that exceed the reportable quantity in LAC 33:I.3931. Submit notification in the manner provided in LAC 33:I.3923.	LAC 33:III.5107.B.2	N/A	Yes
	LAC 33:III.Chapter 51	Submit written report: Due by certified mail to SPOC within seven calendar days of learning of any such discharge or equipment bypass as referred to in LAC 33:III.5107.B.1 and B.2 Include the information specified in LAC 33:III.5107.B.3.a.i through B.3.a.vii.	LAC 33:III.5107.B.3	N/A	Yes
	LAC 33:III.Chapter 56	Submit standby plan for the reduction or elimination of emissions during an Air Pollution Alert, Air Pollution Warning, or Air Pollution Emergency. Due within 30 days after requested by the administrative authority.	LAC 33:III.5611.A	N/A	No
	LAC 33:III.Chapter 59	Submit registration: Due January 31, 1998, or within 60 days after the source becomes subject to LAC 33:III.Chapter 59, whichever is later. Include the information listed in LAC 33:III.5911.B, and submit to the Office of Environmental Compliance.	LAC 33:III.5911.A	N/A	No
	LAC 33:III.Chapter 59	Submit amended registration: Due to the Office of Environmental Compliance within 60 days after the information in the submitted registration is no longer accurate.	LAC 33:III.5911.C	N/A	No
	Requirements that specify performance testing -				
	N/A				
* There are no other changes in requirements for any other sources.					

TABLE 3: EXPLANATION FOR EXEMPTION STATUS OR NON-APPLICABILITY OF A SOURCE

Source ID	Requirement	Exempt or Does Not Apply	Explanation	Citation Providing for Exemption or Non-applicability
HP Steam Boiler Package C EU-11	LAC 33:III.Chapter 15	Does Not Apply	Sulfur dioxide emissions less than 5 tons per year.	LAC 33:III.1502.A.3
	LAC 33:III.Chapter 51	Exempt	Emits Class III TAPs only. Chapter 51 MACT is not required. Include emissions of all toxic air pollutants listed in LAC 33:III.5112, Table 51.1 or 51.3 in the Annual Emissions Report unless exempted under LAC 33:III.5105.B.	LAC 33:III.5107.A.2
	LAC 33:III Chapter 22	Exempt	LAER limit is more stringent than the NOx emission limit for Industrial Boilers.	LAC 33:III.2201.C
	40 CFR 63 Subpart YY	Does Not Apply	Boilers are not an affected source under the ethylene production portion of this Subpart.	40 CFR 63.1103(e)(1)(i)
Cracking Heaters EP-CAP, EP-1, EP-2, EP-3, EP-4, EP-5, EP-6, EP-7	LAC 33:III.Chapter 15	Does Not Apply	Sulfur Dioxide emissions less than 5 tons per year.	LAC 33:III.1502.A.3
	LAC 33:III.2147	Does Not Apply	Vent streams are controlled via combustion.	LAC 33:III.2147.A
	LAC 33:III.Chapter 22	Exempt	LAER limit is more stringent than the NOx emission limit for Process Heaters/Furnaces - All Others.	LAC 33:III.2201.C.15
	LAC 33:III.Chapter 51	Exempt	Emits Class III TAP only. Chapter 51 MACT is not required. Include emissions of all toxic air pollutants listed in LAC 33:III.5112, Table 51.1 or 51.3 in the Annual Emissions Report unless exempted under LAC 33:III.5105.B.	LAC 33:III.5107.A.2
	40 CFR 60 Subpart Dc	Does Not Apply	Units do not meet the definition of a steam generating unit as defined in Subpart Dc.	40 CFR 60.40c
	40 CFR 63 Subpart DDDDD	Exempt	Sources are ethylene cracking furnaces covered by 40 CFR 63 Subpart YY.	40 CFR 63.7491(f)

TABLE 4: EQUIPMENT LIST

Enter each single emission point that routes its emissions to another source (i.e., a control device) or a common stack, or is part of an Emissions Cap. List the emissions source to which each single emission point is routed or the Cap of which the source is a member, if applicable. Consult instructions.

Source ID	Description	Construction Date	Routes to:	Operating Rate/Volume	Applicable Requirement(s)?
EU-14	Railcar Loading and Off-Loading	2017	EU-CAP (2)	129 hrs/yr	Y/N

SECTION 4.0

EMISSIONS INVENTORY QUESTIONNAIRE (EIQ) FORMS

State of Louisiana
Emissions Inventory Questionnaire (EIQ) for Air Pollutants

Date of Submittal: **October 2023**

Emission Point ID No. (Designation)	Descriptive Name of the Emissions Source (Alt. Name)	Approximate Location of Stack or Vent (see instructions)
EU-11	HP Steam Boiler Package C	Method: N/A; Datum: NAD 83; UTM Zone: 15; Horizontal: 674,967 mE; Vertical: 3,348,511 mN; Latitude: 30 degrees 15 min 20 sec 5 hundredths; Longitude: 91 degrees 10 min 52 sec 9 hundredths
TEMPO Subject Item ID No.: **TBD**		

Stack and Discharge Physical Characteristics Change?	Diameter or Stack Discharge Area	Height of Stack Above Grade	Stack Gas Exit Velocity	Stack Gas Flow at Conditions, not at Standard	Stack Gas Exit Temperature	Normal Operating Time (hours per year)	Date of Construction or Modification	Percent of Annual Throughput through This Emission Point			
								Jan - Mar	Apr - Jun	Jul - Sep	Oct - Dec
Yes	5.58 ft²	213.00 ft	41.24 ft/sec	60,520 ft³/min	348 °F	8,760	Proposed	25%	25%	25%	25%

Type of Fuel Used and Heat Input (see instructions)

Fuel	Type of Fuel	Heat Input (MM Btu/hr)
a	H2 Rich Fuel Gas	180.13
b	Fuel Oil	90.93
c		

Notes

Operating Parameters (include units)

	Value/Parameter	Description
Normal Operating Rate/Throughput Maximum Operating Rate/Throughput Design Capacity/Volume	180.13 MMBTU/hr	
Shell Height (ft) Tank Diameter (ft) Roof Type		
Date Engine Ordered Date Engine Built by Manufacturer		Engine Model Year SI Engines:

Emission Point ID No. (Alternate ID): **EU-11**

Air Pollutant Specific Information

Pollutant	Control Equipment Code	Control Equipment Efficiency	HAP/TAP CAS Number	Proposed Emission Rates: Average (lb/hr)	Maximum (lb/hr)	Annual (tons/yr)	Permitted Emission Rate (tons/yr)	Add, Change, Delete, or Unchanged	Continuous Compliance Method	Concentration in Gases Exiting at Stack
$PM_{2.5}$	000		N/A	1.78	1.78	7.80	-	A		
PM_{10}	000		N/A	1.79	1.79	7.84	-	A		
SO_2	000		7446-09-5	3.92	4.70	17.17	-	A		
NOx	065	90.0%	N/A	6.06	6.06	26.54	-	A		
CO	000		630-08-0	5.94	7.13	26.02	-	A		
VOC Total	000		N/A	0.49	0.59	2.15	-	A		
Ammonia	000		7664-41-7	0.72	0.86	3.15	-	A		
Formaldehyde	000		50-00-0	0.01	0.01	0.04	-	A		
n-Hexane	000		110-54-3	0.32	0.38	1.40	-	A		
CO_2e	000		N/A	-	-	11,766	-	A		

SECTION 5.0

EMISSION CALCULATIONS

COMPANY		FACILITY NAME	
Shintech Louisiana, LLC		Plaquemine Ethylene Plant 1 (PEP-1)	
DESCRIPTIVE NAME OF EMISSION POINT	EMISSION POINT ID	TEMPO ID	Project No.: 039-091-016
HP Steam Boiler Package C	EU-11	TBD	Date: Oct 2023
			By: MLK

Source Description:

The facility currently has two identical HP Steam Boiler Packages, A & B (EPNs EU-1 and EU-2), which are covered under an emissions CAP (EPN EU-CAP(1)). The facility is proposing to add a third boiler (EPN EU-11) which will be identical to the two current boilers. The new boiler will not be included in the boiler CAP.

Application Updates:

This is a new source.

Operating Data			
Heat Input	Normal Operation MMBTU/hr	Start up Operation MMBTU/hr	Mixed Fuel Operation MMBTU/hr
Total	180.13	45.60	149.54
Process Off Gas	0.00	0.00	90.93
Natural Gas	180.13	45.60	58.61
Operating Hours		8,760	hr/yr

Normal Operations Emissions by Natural Gas:					
Pollutant	Emission Factor	Reference	Emission Rates[4] Avg (lb/hr)	Max (lb/hr)	Annual (tons/yr)
$PM_{2.5}$	0.0061 lb/MMBtu	See Note 1	1.10	1.10	4.82
PM_{10}	0.0061 lb/MMBtu	See Note 1	1.10	1.10	4.82
SO_2	0.0074 lb/MMBtu	See Note 1	1.33	1.60	5.83
NOx	0.021 lb/MMBtu	See Note 1	3.78	3.78	16.56
CO	0.033 lb/MMBtu	See Note 1	5.94	7.13	26.02
VOC Total	0.0027 lb/MMBtu	See Note 1	0.49	0.59	2.15
Ammonia	0.0040 lb/MMBtu	See Note 2	0.72	0.86	3.15
Formaldehyde	0.0001 lb/MMBtu	See Note 3	0.01	0.01	0.04
n-Hexane	0.0018 lb/MMBtu	See Note 3	0.32	0.38	1.40
Start up Operations Emissions by Natural Gas:					
Pollutant	Emission Factor	Reference	Emission Rates[4] Avg (lb/hr)	Max (lb/hr)	Annual (tons/yr)
$PM_{2.5}$	0.0061 lb/MMBtu	See Note 1	0.28	0.28	1.23
PM_{10}	0.0061 lb/MMBtu	See Note 1	0.28	0.28	1.23
SO_2	0.0074 lb/MMBtu	See Note 1	0.34	0.41	1.49
NOx	0.1330 lb/MMBtu	See Note 1	6.06	6.06	26.54
CO	0.0330 lb/MMBtu	See Note 1	1.50	1.80	6.57
VOC Total	0.0027 lb/MMBtu	See Note 1	0.12	0.14	0.53
Ammonia	0.0040 lb/MMBtu	See Note 2	0.18	0.22	0.79
Formaldehyde	0.0001 lb/MMBtu	See Note 3	0.000	0.000	0.000
n-Hexane	0.0018 lb/MMBtu	See Note 3	0.08	0.10	0.35

Normal Operations by Mix Fuel:					
Pollutant	Emission Factor	Reference	Emission Rates[4] Avg (lb/hr)	Max (lb/hr)	Annual (tons/yr)
$PM_{2.5}$	0.0119 lb/MMBtu	See Note 1	1.78	1.78	7.80
PM_{10}	0.0120 lb/MMBtu	See Note 1	1.79	1.79	7.84
SO_2	0.0262 lb/MMBtu	See Note 1	3.92	4.70	17.17
NOx	0.021 lb/MMBtu	See Note 1	3.14	3.14	13.75
CO	0.0330 lb/MMBtu	See Note 1	4.93	5.92	21.59
VOC Total	0.0021 lb/MMBtu	See Note 1	0.32	0.38	1.40
Ammonia	0.0040 lb/MMBtu	See Note 2	0.60	0.72	2.63
Formaldehyde	0.0001 lb/MMBtu	See Note 3	0.01	0.01	0.04
n-Hexane	0.0018 lb/MMBtu	See Note 3	0.26	0.31	1.14

Greenhouse Gases: Natural Gas				
Pollutant	Emission Factor[5]	GHG Mass Emission Rates[6] Annual (tons/yr)	GWP[7]	CO_2e Emission Annual (tons/yr)
CO_2	59.00 kg/MMBtu	11715.13	1	11,715
CH_4	0.003 kg/MMBtu	0.60	25	15
N_2O	0.0006 kg/MMBtu	0.12	298	36
CO_2e				11,766
Greenhouse Gases: Mixed Fuel				
Pollutant	Emission Factor[5]	GHG Mass Emission Rates[6] Annual (tons/yr)	GWP[7]	CO_2e Emission Annual (tons/yr)
CO_2	59.00 kg/MMBtu	9725.59	1	9,726
CH_4	0.003 kg/MMBtu	0.49	25	12
N_2O	0.0006 kg/MMBtu	0.10	298	29
CO_2e				9,768

Emission Totals:			
Pollutant	Emission Rates		
	Avg (lb/hr)	Max (lb/hr)	Annual (tons/yr)
$PM_{2.5}$	1.78	1.78	7.80
PM_{10}	1.79	1.79	7.84
SO_2	3.92	4.70	17.17
NOx	6.06	6.06	26.54
CO	5.94	7.13	26.02
VOC Total	0.49	0.59	2.15
CO_2e	-	-	11,766
Ammonia	0.72	0.86	3.15
Formaldehyde	0.01	0.01	0.04
n-Hexane	0.32	0.38	1.40

REFERENCE/NOTES

1) Emission factor based on manufacturer data.

2) Emission factor based on ammonia EF for other two boilers at PEP-1.

3) Emission factor based on EPA's AP-42 Section 1.4 (Natural Gas Combustion), Table 1.4-3 (7/98). All quantitative emissions have been accounted for.

4) Emission rates (ER) calculated for the boiler is based on licenser's recommendation as follows:

ER_{avg} (lb/hr) = Total Heat Input (MMBtu/hr) * Emission Factor (lb/MMBtu)

For PM and NOx: ER_{max} (lb/hr) = Firing Rate (MMBtu/hr) * Emission Factor (lb/MMBtu)

For SO_2, CO, VOC, and NH_3: ER_{max} (lb/hr) = Firing Rate (MMBtu/hr) * Emission Factor (lb/MMBtu) * 1.2

ER_{annual} (tons/yr) = ER_{avg} (lb/hr) / 2000 (lb/ton) * Operating Hours (hr/yr)

5) Emission factors for CH4 and N2O based on 40 CFR 98, Tables C-1 and C-2, for Fuel Gas..

6) Emission rates (ER) calculated as specified in 40 CFR 98 Subpart C as follows:

GHG: ER (tons/yr) = (Total) Firing Rate (MMBtu/hr) * Emission Factor (kg/MMBtu) * 0.0011023 (ton/kg) * Operating Hours (hr/yr)

CO_2e: ER (tons/yr) = GHG Mass Emission Rate * GWP

7) GWPs based on 40 CFR 98, Table A-1.

COMPANY		FACILITY NAME	
Shintech Louisiana, LLC		Plaquemine Ethylene Plant 1 (PEP-1)	
DESCRIPTIVE NAME OF EMISSION POINT	EMISSION POINT ID	TEMPO ID	Project No.: 039-091-016
Purge Related to Tank Car Loading	GCXVII #3	N/A	Date: Oct 2023
			By: MLK

Activity Description:
This activity represents emissions associated with purges related to tank car loading.

Application Updates:
With this application, emissions associated with purges related to tank car loading have been clarified based on the following:
(A) For propylene loading:
(1) Preparation before loading: There is no propylene purging before loading
(2) During loading: Propylene is vented to the flare (EPN EU-3).
(3) Nitrogen purge (after loading): The vent is going to the quench column at "nitrogen purge (after loading)"; there are no emissions from this activity.
(4) Depressurizing nitrogen in line: The vent is going to GTO at "depressurizing nitrogen in line" after propylene loading; The emissions generated from this activity are covered under these calculations.
(B) For butadiene loading:
(1) Preparation before loading: The vent is going to the quench column at "preparation before butadiene loading"; there are no emissions from this activity.
(2) During loading: The vent is going to the quench column at "during loading"; there are no emisssions from this activity.
(3) Nitrogen purge (after loading): The vent is going to the quench column at "nitrogen purge (after loading)"; there are no emisssions from this activity.
(4) Depressurizing nitrogen in line: The vent is going to GTO at "depressurizing nitrogen in line" after butadiene loading; The emissions generated from this activity are covered under these calculations.
(C) For pygas loading:
(1) Preparation before loading: This vent is going to the GTO at "preparation before pygas loading"; The emissions generated from this activity are covered under these calculations.
(2) During loading: Pygas is vented to the GTO (EPN EU-CAP(2)).
(3) Nitrogen purge (after loading): The vent is going to the GTO at "nitrogen purge (after loading)" after pygas loading; The emissions generated from this activity are covered under these calculations.
(4) Depressurizing nitrogen in line: The vent is going to GTO at "depressurizing nitrogen in line" after pygas loading; The emissions generated from this activity are covered under these calculations.

Emission Factors for GTO Combustion	
$PM_{2.5}$	0.00245 lb/MMBtu
PM_{10}	0.00245 lb/MMBtu
NOx	0.027 lb/MMBtu
CO	0.31 lb/MMBtu
VOC	99.5 %

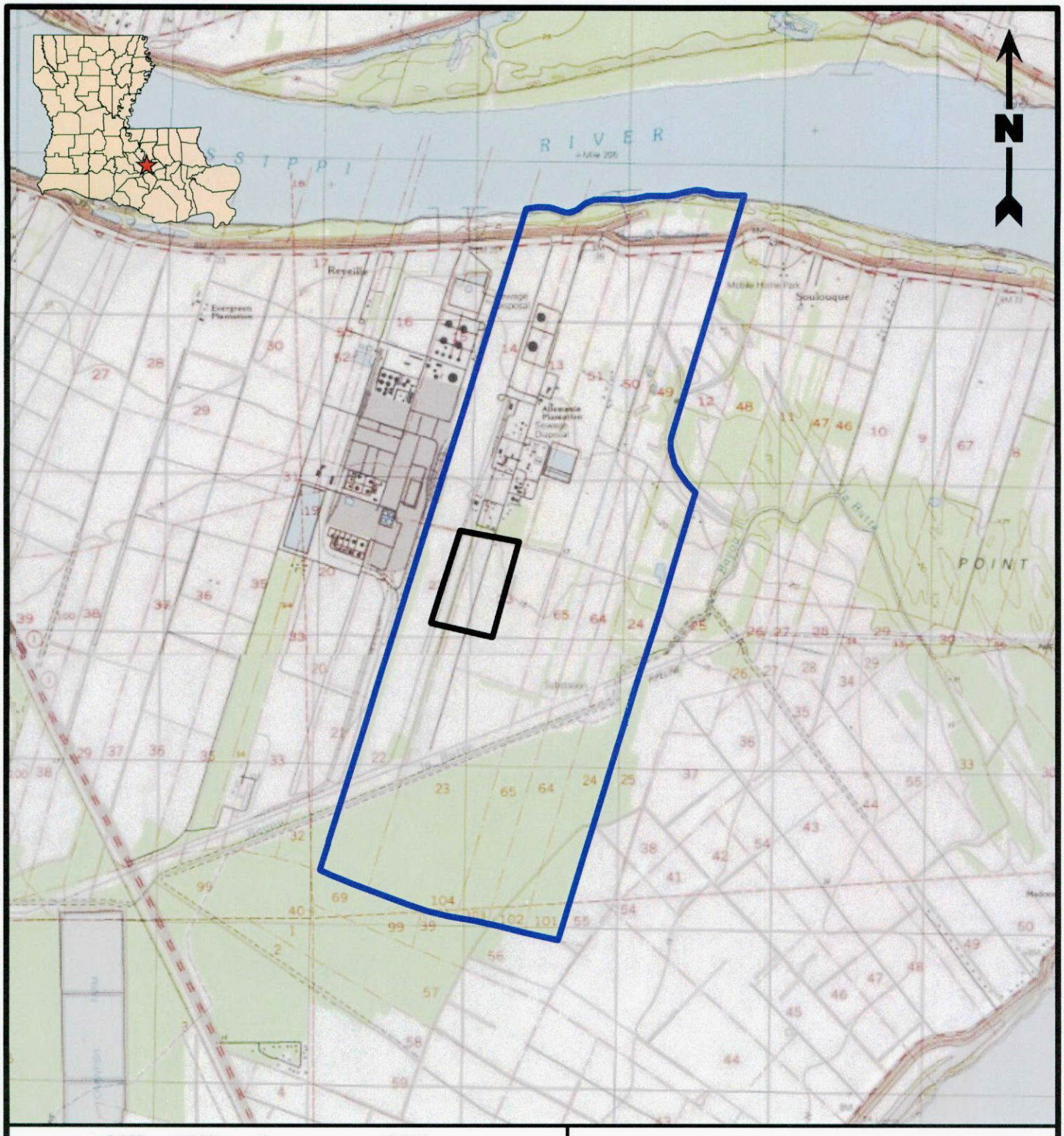
Total Emissions from Loading Operations:

	Vent to	Product	Tank Car Vol	Loading Frequency	Purge Frequency	Amount of Purged HC	Amount of Purged HC	HHV	Heat Input	$PM_{2.5}$	PM_{10}	NOx	CO	VOC
	-	Gal/Year	Gal/car	Times/Year	Times/Year	lb/Purge	lb/Year	Btu/lb	MMBtu/Year	ton/year	ton/year	ton/year	ton/year	ton/year
Propylene	GTO	8,409,600	32,006	263	316	160	50,496	20,870	1,053.8	0.001	0.001	0.014	0.163	0.126
Crude Butadiene	GTO	10,512,000	31,822	331	397	200	79,440	20,558	1,633.1	0.002	0.002	0.022	0.253	0.199
Pyrolysis Gasoline	GTO[1]	13,560,480	31,350	433	520	5	2,568	19,446	49.9	6.11E-05	6.11E-05	6.74E-04	7.74E-03	6.42E-03
Total										**0.003**	**0.003**	**0.037**	**0.424**	**0.331**

REFERENCE/NOTES
1) Amount of purged hydrocarbon considers two times margin for calculated amount, which is calculated using vapor pressure of Pyrolysis Gasoline (6.2 psiA).

FIGURE 1

SITE LOCATION MAP



3,000 1,500 0 3,000 Feet

Legend

- Property Boundary
- PEP-1 Boundary

Reference

Base map comprised of U.S.G.S. 7.5-minute topographic maps, "Plaquemine, LA" and "White Castle, LA".

Site Location Map

Title V Minor Modification Application
Plaquemine Ethylene Plant 1 (PEP-1)

Shintech Louisiana, LLC
Plaquemine, West Baton Rouge and Iberville Parish, Louisiana

PROVIDENCE

Drawn By	CMM	08/18/23
Checked By	MK	08/18/23
Approved By	LLW	08/18/23

Project Number: 039-091-016

Drawing Number: 039-091-016-A001

1 Figure

APPENDIX A

CERTIFICATE OF GOOD STANDING

State of Louisiana Secretary of State

COMMERCIAL DIVISION
225.925.4704

Fax Numbers
225.932.5317 (Admin. Services)
225.932.5314 (Corporations)
225.932.5318 (UCC)

Name	Type	City	Status
SHINTECH LOUISIANA, LLC	Limited Liability Company (Non-Louisiana)	DOVER	Active

Previous Names

Business: SHINTECH LOUISIANA, LLC
Charter Number: 34873998Q
Registration Date: 12/30/1999

Domicile Address
9 EAST LOOCKERMAN STREET
DOVER, DE 19901

Mailing Address
C/O DAVID TIDHOLM
1000 MAIN STREET, 36TH FLOOR
HOUSTON, TX 77002

Principal Business Office
3 E. GREENWAY PLAZA
SUITE 1150
HOUSTON, TX 77046

Registered Office in Louisiana
8550 UNITED PLAZA BUILDING II, STE. 305
BATON ROUGE, LA 70809

Principal Business Establishment in Louisiana
9750 HIGHWAY 1 SOUTH
ADDIS, LA 70710

Status

Status: **Active**
Annual Report Status: **In Good Standing**
Qualified: 12/30/1999
Last Report Filed: 2/8/2023
Type: Limited Liability Company (Non-Louisiana)

Registered Agent(s)

Agent: CAPITOL CORPORATE SERVICES, INC.
Address 1: 8550 UNITED PLAZA BUILDING II, STE. 305
City, State, Zip: BATON ROUGE, LA 70809

Appointment Date:	12/30/1999

Officer(s)

Additional Officers: No

Officer:	DAVID TIDHOLM
Title:	Manager
Address 1:	1000 MAIN ST.
Address 2:	36TH FLOOR
City, State, Zip:	HOUSTON, TX 77046

Amendments on File

No Amendments on file

Print